

ECOLOGICAL FACTORS AFFECTING HISPANIC URBAN
MIDDLE SCHOOL AND HIGH SCHOOL ADOLESCENTS'
COLLEGE AND CAREER ASPIRATIONS

A Dissertation

by

JUDY ANN HOSTRUP

Submitted to the Office of Graduate Studies of
Texas A&M University
in partial fulfillment of the requirements for the degree of

DOCTOR OF PHILOSOPHY

May 2011

Major Subject: Curriculum and Instruction

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ABSTRACT

Ecological Factors Affecting Hispanic Urban
Middle School and High School Adolescents'
College and Career Aspirations. (May 2011)

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This mixed methods study investigates how ecological factors influence the decisions urban Hispanic middle school and high school adolescents make concerning their college and career aspirations. I examine the academic aspirations, career aspirations, the influence of peers, teachers, and parents of seventh-, eighth-, ninth-, and tenth-grade urban Hispanic adolescents, and gender roles in college and career aspirations through the lens of Bronfenbrenner's ecological subsystems theory.

Participants took the Student Career Assessment (SCA) survey consisting of Likert-type multiple choice questions and open-ended questions to assess their college and career aspirations. Quantitatively analyzed data examined the extent urban Hispanic middle school and high school adolescents were influenced by items on scales of encouragement, literacy, and education and whether there were differences by gender and grade level. Student responses as to why they chose a specific career were analyzed qualitatively.

Combined results for urban Hispanic middle school and high school adolescents show a) both genders are interested in finishing high school and going to college, b) Hispanic females are encouraged more than males to pursue their college and career aspirations, c) more females than males know their career aspiration, but the majority of students do not know how to prepare for their chosen career, e) females have more confidence in their literacy skills than males. The more confidence Hispanic high school students have in their literacy skills, the more likely they are to graduate from high school.

Implications for future research should involve conducting studies in the areas of college and career aspirations of urban Hispanic adolescents using random sampling. More gender studies involving the college and career aspirations of urban Hispanic adolescents would significantly add to the current body of knowledge.

DEDICATION

To my husband,

Kai R. Hostrup ('75)

who has been the most wonderful and encouraging best friend

anyone could ever dream of having.

Together, we share the bond of Aggies forever.

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Thank you to Dr. Hersh Waxman and Dr. Yolanda Padrón for becoming my committee co-chairs when I needed your expertise and encouragement. A very special thank you goes to Dr. Waxman for teaching me how to conduct research through the Education Research Center (ERC) at Texas A&M University. I feel honored being given the chance to become involved in various research projects from beginning to end. I would like to thank Dr. Patricia Goodson for asking me to volunteer with P.O.W.E.R. Writing Services. Thank you to Dr. Janet Hammer for giving me the chance to educate undergraduate pre-service teachers about English language learners. I am grateful to all my committee members who continually offered valuable suggestions and helpful feedback.

A very special “thank you” goes to my husband, Kai ('75), who has been my best friend and confidant every day without fail. Your caring and encouraging words have motivated me to finish my degree and finally become an Aggie.

To my daughters, Karissa and Cecily, their husbands, Sigi and Austin, and my four grandchildren, Boen, Clara, Cadee, and Baby, I want to thank you for your laughter, sharing your lives with me, and keeping me grounded.

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CHAPTER I

INTRODUCTION

In today's technological and knowledge-based global society, educated workers are needed to help our nation continue to be productive and competitive throughout the 21st century and beyond. Recent research suggests that workers should be prepared to solve problems, collaborate, adapt, initiate, communicate effectively, analyze situations, and build on their imagination in the workplace (Partnership for 21st Century Skills, 2008; Wagner, 2008). Ultimately, the job of high schools and colleges is to prepare all students for competitive careers in the U.S. and internationally (Wagner, 2008). For most high school students, preparation in learning these job skills will be completed with college graduation.

On the other hand, preparing linguistically and culturally diverse Hispanic adolescents to be ready for college and a career can be challenging for even the most willing educators. According to Crawford (2004), several challenges faced by educators concerning Hispanic students are related to understanding the academic and social needs of English language learners (ELLs). Many school-age ELLs have different English language proficiency levels, live in low-income ethnic neighborhoods where English is not spoken frequently, and their parents have limited education and high rates of illiteracy (Crawford, 2004; Garcia, 2003; Gottlieb, 2006; O'Malley & Pierce, 1996).

This dissertation follows the style of the *American Educational Research Journal*.

Another challenge to educators is how much schooling some ELLs have had before they entered U.S. schools. ELLs who enter U.S. schools at the elementary grades have a better chance of catching up with their peers linguistically and academically than ELLs who enter American schools in middle school or high school grades (Crawford, 2004; Garcia, 2003; Gottlieb, 2006; O'Malley & Pierce, 1996). ELLs can master social language in six months to a year after entering U.S. schools, but mastering academic language in subject content areas can take up to five or seven years (Brisk, 2006; Crawford, 2004; Cummins, 1979; Garcia, 2003; Gottlieb, 2006; O'Malley & Pierce, 1996; Peregoy & Boyle, 2005). Crawford (2004) suggests that ELLs entering the ninth grade may not master academic language by twelfth grade in order to meet graduation requirements. This often leads to ELLs remaining in high school longer than their same age peers and often dropping out of high school (Crawford, 2004).

Not only do students of Hispanic descent constitute the largest ethnic enrollment in the first to the eighth grade, but around the ninth and tenth grades, their drop-out numbers increase (Fry & Gonzales, 2008). About 42% of all Hispanic students drop out of high school every year compared to 22% White students dropping out (Diplomas Count, 2008; Fry & Gonzales, 2008; National Center for Education Statistics, 2006).

In Texas, which is one of the five states with the largest population of Hispanics, the current trend has been a marked decrease in high school enrollment of Hispanic students beginning in the ninth grade and continuing through the twelfth grade (Gottlieb, 2006; Texas Education Agency, 2007; 2008; 2009). This dichotomy results in Hispanic adolescents being the largest ethnic group with the highest drop out numbers and the

lowest high school graduation rates (Fry & Gonzales, 2008; National Center for Education Statistics, 2006). Conversely, Hispanic ELLs who graduate from high school and enroll in college find the challenges of the college environment to be too overwhelming for them to finish their degree (Fry, 2009).

Less than 25% of Hispanic students enrolled in colleges and universities receive their diploma (Fry, 2009). Some of the low-college and university graduation rates for Hispanic students can be attributed to language proficiency barriers and lack of college readiness because they attended high schools in high-poverty areas which provided a low quality education, unqualified teachers, school climate of low expectations, or schools that offered little or no assistance in how to navigate college courses and class assignments (Crawford, 2004; Padrón, Waxman, & Rivera, 2002; Gasbarra & Johnson, 2008; Valenzuela, 1999). To offset low high school graduation rates and diminish the perceived challenges of a college environment, some high schools have created ways for teachers and administrators to promote college-going through activities such as a college newsletter or creating a “Wall of Honor” which shows the photos and names of students who are admitted to college (Corwin & Tierney, 2007).

College-going activities in some high schools are connected with an overall college-going culture or a special college-going program (Corwin & Tierney, 2007). A college-going culture is an atmosphere of encouragement in a school beginning with a mission statement stating a plan of high expectations for all students (Corwin & Tierney, 2007). When all stakeholders including parents, teachers, and administrators create an atmosphere of high expectations, students are more likely to finish school and go to

college (Corwin & Tierney, 2007; Woolley, Kol, & Bowen, 2009). Teachers who discuss their own college experiences with their students and prepare them academically to enroll in college create an atmosphere of college-going (Corwin & Tierney, 2007). Teacher support and high expectations, along with parental support and encouragement, motivates students to enroll in institutions of higher education (Alfaro, Umana-Taylor, & Bamaca, 2006; Azmitia, Cooper, & Brown, 2009; Bullington & Arbonna, 2001; Plunkett, Henry, Houlberg, Sands, & Abarca-Mortensen, 2008; Woolley et al., 2009; Zarate & Gallimore, 2005).

A positive college-going culture is made up of teachers, administrators, and parents who collaborate to help students make the difficult transition from high school to college (Corwin & Tierney, 2007). High schools with a college-going culture can influence and guide students on college and career preplanning and planning. Consequently, Hispanic students who do not have the benefit of a college-going culture find it difficult to navigate a university system without support from educators and parents (Corwin & Tierney, 2007).

A college-going program often includes a college-going center inside the high school that has a room specifically dedicated to providing information on how to apply for college entrance, how to apply and receive financial aid assistance, and activities involving college and career interests (Corwin & Tierney, 2007). Several urban middle schools and high schools in Texas have college-going centers conveniently located for students inside the school. These centers, some privately funded by the Bill and Melinda Gates Foundation (Gates GO Centers) and others funded by the school district, are often

housed in a room in the school or on school property. These centers also usually include computers that are available to assist students applying for college, finding financial aid information, and conducting research about colleges and universities. Written information and pamphlets bearing information about different colleges and universities also are included. Often but not always, these college-going centers are staffed by a person who can offer assistance and counseling to students who are interested in furthering their education (Corwin & Tierney, 2007). Research has found that significantly more Hispanic females than males enrolled in college when they received college counseling help in high school (Zarate & Gallimore, 2005). For many Hispanic students, they are the first in their family to consider going to college and their parents are unfamiliar with the college-going process. For this reason, the school community including parents, teachers, administrators, and school staff can stress the importance of going to college and provide the information in college-going centers (Corwin & Tierney, 2007).

Several research studies on Hispanic middle school and high school students relate the importance of parents, peers, and teachers influence on an adolescents' college and career aspirations (Alfaro et al., 2006; Azmitia et al., 2009; Bullington & Arbonna, 2001; Ceja, 2004; Hill, Ramirez, & Dumka, 2003; Keller & Whiston, 2008; Murray, 2009; Ojeda & Flores, 2008; Plunkett et al., 2008; Reyes, Kobus, & Gillock, 1999; Woolley et al., 2009; Zarate & Gallimore, 2005). Even though Hispanic adolescents will aspire to reach a career which requires a graduate school diploma, their decision to be motivated to achieve that education and career is largely dependent on the supportive

people in their environment (Bronfenbrenner, 1979; 1994; Hill et al., 2003; Reyes et al., 1999; Yowell, 2000). Along with the challenges educators have of preparing linguistically and culturally diverse Hispanic ELL students to graduate from high school and enroll in college, they must also find ways to connect with parents who influence their children's college and career aspirations. Ecological factors such as family, school, and cultural beliefs can possibly affect a developing adolescent's choices about college and a career (Bronfenbrenner, 1979; 1994). Urie Bronfenbrenner's (1979; 1994) ecological theory suggests a child's development is influenced by "subsystems" in their environment. These "subsystems" or ecological factors in a child's environment can possibly contribute to the decisions an adolescent makes concerning finishing high school, going to college, and pursuing a career (Bronfenbrenner, 1979; 1994; Hill et al., 2003; Reyes et al., 1999; Yowell, 2000). Joint collaborative effort between the school community and parents can possibly have a positive effect on influencing adolescent Hispanic ELLs to finish high school, enroll in college, and reach their career aspirations. The purpose of this study is to investigate how ecological factors affect the decisions urban Hispanic middle school and high school adolescents' make concerning their college and career aspirations.

Theoretical Framework

Social development theorist, Urie Bronfenbrenner (1979; 1994) maintains that human development encompasses the environment or ecological system in which a developing child experiences emotional, physical, and cognitive growth. These environments or "subsystems" influence human growth. The five "subsystems" include

microsystems, mesosystems, exosystems, macrosystems, and chronosystems. Inside each of these “subsystems” are relationships with settings that include parents, peers, school, culture, chronological time, and environmental changes. Bronfenbrenner (1979; 1994) suggests that all five subsystems are like a “nested arrangement” with each subsystem fitting inside the other. Following are brief definitions of Bronfenbrenner’s subsystems.

Bronfenbrenner’s Five Subsystems

A (1) *microsystem* can be explained as relationships and experiences with the ecological environment settings of home and school where a developing adolescent can have personal interactions (Bronfenbrenner, 1979; 1994). Hispanic middle school and high school students have face-to-face relationships and experiences with their family, school community, and peer group.

A (2) *mesosystem* refers to the “interrelations among two or more settings which the developing person actively participates” (Bronfenbrenner, 1979, p. 39; 1994, p. 25). Mesosystems are comprised of microsystems and involve interconnections with the developing person and more than one microsystem. A Hispanic middle school or high school student’s mesosystem can involve communication between the home and school environments which can impact decisions made by a developing adolescent.

An (3) *exosystem* refers to a subsystem that consists of two or more settings and their activities, but at least one of the settings does not include the developing adolescent. The activities indirectly influence the setting in the developing adolescent’s life, such as the parents’ workplace. (Bronfenbrenner, 1979; 1994). Hispanic adolescents can be

influenced by how their parents view their own jobs, whether their parents or a sibling went to college, and teacher's perceptions of higher education for linguistically and culturally diverse students.

A (4) *macrosystem* consists of the microsystems, mesosystems, and exosystems in a developing adolescent's culture (Bronfenbrenner, 1979; 1994). The macrosystem consists of the beliefs and structures embedded in a specific culture. The Hispanic culture influences the way an adolescent feels about their family, their friends, and their teachers.

A (5) *chronosystem* involves consistencies over time in the developing adolescent and in their surrounding environment (Bronfenbrenner, 1979; 1994). Hispanic students experience changes in family structure, transitioning from middle school to high school, and possibly the unemployment of a parent. In general, each of these "subsystems" explains how a child's growth and development can be affected by interconnections and cultural beliefs in their environment.

Purpose of the Study

The purpose of this study was to investigate how ecological factors influence the decisions urban-middle school and high school Hispanic students make concerning their college and career aspirations. Ecological factors (i.e., human ecology) are defined as parents, peers, teachers, gender roles, cultural beliefs, and other environmental factors within our changing global society (Bronfenbrenner, 1979; 1994). I examine the academic aspirations, career aspirations, the influence of peers, teachers, and parents of

adolescent Hispanic students, and gender roles in college and career aspirations through the lens of Bronfenbrenner's (1979; 1994) ecological theory.

The aim of this study is to contribute findings about ecological factors that influence the college and career aspirations of urban-middle school and high school Hispanic adolescents. Further, the study examined gender differences in the careers Hispanic adolescents chose, and whether they could list steps to prepare for this career while they were still in school.

This study is different from previous studies because I examine college and career aspirations from both adolescent development areas (a) middle school and (b) high school. Most studies have examined Hispanic adolescents' college and career aspirations using samples from either middle school or high school. Included in the review of research are two previous studies that examined college and career aspirations of both high school and middle school students using a longitudinal approach (Azmitia et al., 2009; Zarate & Gallimore, 2005). Also, I will be analyzing the data quantitatively and qualitatively through the use of surveys from both, middle school and high school students. Data collected from a sample of students in survey form can help researchers infer generalizations about trends occurring in the population (Patten, 2007). Both of the longitudinal studies conducted interviews as a method of collecting data (Azmitia et al., 2009; Zarate & Gallimore, 2005). Few studies have researched how gender roles affect the college and career aspirations of Hispanic students. This is important because society tends to place females or males in certain stereotypical college and career roles. Trends in choices students make by gender can be observed to determine future planning and

courses that would help students reach their aspired goals. This study also examines the career paths the participating Hispanic adolescents have chosen beginning with seventh-grade students and ending with tenth-grade students.

Research Questions

The following questions were addressed in this study:

1. What are Hispanic students' college aspirations?
2. What are Hispanic students' career aspirations?
3. To what extent do ecological factors influence Hispanic students' college and career aspirations?
4. Are there differences by sex and grade level (i.e., middle and high school) with regards to ecological factors affecting Hispanic students' career and college aspirations?

Definition of Terms

The following definitions include terms as they are referred to within this study.

Linguistically and culturally diverse student: A school-aged child exposed to another language and culture other than English in their home environment (Gottlieb, 2006).

English language learner (ELL): A subgroup of linguistically and culturally diverse students who have been assessed and qualify for support services because of their limited English proficiency level (Gottlieb, 2006).

Limited English proficient (LEP): Federal legislation label for English language learner (ELL) used in previous years (Gottlieb, 2006).

Adolescents: Middle and high school grade-level students who are approximately 10 to 18 years old (American Psychological Association, 2002).

Middle School Students: Usually grades seven and eight, but sometimes grade six is included.

High School Students: Usually grades nine to twelve, but sometimes includes only grades ten to twelve.

Aspirations: Targeted college and career goals aimed for by students participating in this study.

Summary

The success of our knowledge-based economy depends on citizens who have the workforce skills to be competitive (Wagner, 2008). Middle school and high school teachers are facing challenges in preparing all students to be ready for college and a career. Some of the challenges these teachers face are relating to the social and academic needs of Hispanic students who are English language learners.

The older an ELL student is when they begin their schooling in the U.S., the more difficult it is for them to catch up to their peers academically (Crawford, 2004). When students experience challenges in language proficiency it affects their success on large-scale assessments as well as success in the classroom and many students begin to drop out. From 1980-2007, Hispanic adolescents had the highest high school drop out rate in the U.S. The percentage of Hispanic students between 16 and 24 years of age who were not enrolled in high school and who did not have a high school graduation credential was 21.4% compared to White students at 5.3% and Black students at 8.4% (National Center

for Education Statistics, 2009). Somewhere between the ninth and twelfth grade, the drop out rates in Texas high schools increase dramatically (Texas Education Agency, 2007; 2008). Hispanic adolescent drop out percentages from seventh to the twelfth grade are all above 50% with ninth grade being the grade with the highest percentage of Hispanic dropouts, 61.6% (Texas Education Agency, 2009).

Limitations of the Study

Every attempt was made to design this study to eliminate threats to validity. Nevertheless, this study being part of a larger study had characteristics that created limitations. The first limitation concerns the sample. The issue with the sample was that it was not random. The Student Career Assessment (SCA) pencil-and-paper survey was given to a large urban school district college and career coordinator who then distributed the surveys to schools and principals who, at their discretion, passed the surveys on to teachers and then students. This limitation is important because teachers decided who received the SCA survey and the data is only representative of the students who took the survey.

A second limitation of the study was that Hispanic students who participated in the study were not identified by their language proficiency level. For the purposes of this study, ELL answers were not separated from Hispanic students who are native English speakers. Therefore, it is possible that students with low levels of English language proficiency did not fully understand the questions but answered them anyway.

A third limitation of the study was that Hispanic students who participated in the study were not identified as to whether they were foreign-born or born in the U.S.

Foreign-born Hispanic adolescents may have begun their schooling in the U.S. in middle school or high school which would possibly limit their English proficiency or the level of their understanding of the questions asked on the SCA survey. Therefore, the answers provided by the Hispanic middle school and high school students who took the Student Career Assessment (SCA) survey cannot be generalized to all students of Hispanic descent. This study explores trends in Hispanic adolescents' college and career aspirations at five participating urban schools.

CHAPTER II

REVIEW OF RESEARCH

This chapter reviews previous research on ecological factors that influence the college and career aspirations of middle school and high school Hispanic adolescents. More specifically, I examined previous studies concerning the academic aspirations, career aspirations, parents, peers, and teachers' encouragement, and gender roles with regards to career aspirations of middle school and high school students and how these components contribute to the decisions adolescents make concerning their college and career. The review of the research is presented in three tables.

Discussion of Tables

Table 1 is a summary of 14 studies from 1999 to 2009. These studies were chosen because they involve Hispanic adolescents' academic aspirations, career aspirations, influence of parents, peers and teachers, and gender roles in career decisions. At a glance, Table 1 shows the purpose of each study including characteristics of the sample, methodology, analysis, and findings. The studies are listed in chronological order beginning with Reyes, Kobus, and Gillock (1999) and ending with Azmitia, Cooper, and Brown (2009). In this section, I will first present a brief summary of each study, then, I will discuss how the studies are related to other studies in Table 1. Table 2 is a comparison of studies and Table 3 is a chronological map of studies including gender characteristics.

Table 1
Summary of Studies on Academic Aspirations, Career Aspirations, Parents, Peers, and Teachers' Encouragement, and Gender Roles in Career Aspirations

Study	Purpose of Study	Sample/Method/Analysis	Findings
Reyes, Kobus, & Gillock (1999)	Explore gender differences (female focus) in career aspirations and associated factors	162 Hispanic 9 th & 10 th graders 100 females, 62 males 50 minute structured interviews	Females aspired to non traditional careers involving higher education/graduate school.
Yowell (2000)	Explore future aspirations of Latino boys and girls	38 Latino males and females, 8 th grade, low-income, two Midwestern urban schools interviews & survey questions about college & career plans. five coded domains: education, occupation, family, personal well-being, and friendship. analysis of variance	Education highest priority for females, males prioritize occupation then education & other domains equally. Careers: doctor, lawyer, athlete. Females/graduate degree. Friends & family influence
Bullington & Arbonna (2001)	Explore Mexican adolescents' career aspirations/development	Case studies of 4 (2 male, 2 female) Mexican high school adolescents interviews	Students depended on teachers, school counselors, parents, other family members, career fairs, and friends for career information. Chose careers based on college education or higher. Parent encouragement/sibling motivation.
Hill, Ramirez, & Dumka (2003)	Explore early adolescent career aspirations, barriers, & family influence	31 early adolescents, three ethnic groups, 16 females/15 males interviews	Career goals influenced by family. Academic achievement leads to career success. Did not know how to reach career goal.

Table 1 continued

Study	Purpose of Study	Sample/Method/Analysis	Findings
Ceja (2004)	Examine influence of parents on Chicana college aspirations	20 Chicana high school seniors interviews/themes/quotes	Hispanic parents impt. educational influence/parents lived stories/explains Chicana education success
Kochar (2005)	Examine occupational status and mobility of Hispanic workers 1990-2000	Theoretical/ using three sources: Census Bureau, University of Michigan and National Science Foundation	Hispanics concentrated in low paying, low education requirement jobs. Job success improves with more education and better English proficiency.
Zarate & Gallimore (2005)	Examine factors that significantly contribute to college enrollment and teacher assessments/student access to college counselors/language proficiency measurements	15 year longitudinal study 83 students/PreK-college parents & teachers interviews/achievement data	Latinos: academic achievement, parent influence, language proficiency predict college enrollment/ Latinas: classroom performance, college counseling in high school Significantly more Latinas enrolled in college.
Alfaro, Umana-Taylor, Bamaca (2006)	Examine extent parents, teachers, & peers influence Latino academic aspirations	310 9 th & 10 th graders (154 boys, 156 girls) Hispanic (<i>n</i> =67) Mexican (<i>n</i> = 122), Mexican American (<i>n</i> = 17) surveys path analysis	Mothers' and teachers' support related to girls' academic motivation/fathers' and teachers support related to boys' academic motivation Peer influence was not significantly related
Keller & Whiston (2008)	Identify parenting variables influencing career decisions	282 6 th , 7 th , 8 th graders, 147 parents surveys, regression analysis	Parental behaviors influence career decisions of early adolescents

Table 1 continued

Study	Purpose of Study	Sample/Method/Analysis	Findings
Perez & McDonough (2008)	Examine influence of family, peers, & high school staff on adolescents' college going aspirations.	106 11 th & 12 th graders (<i>n</i> = 54) Latina, (<i>n</i> = 52) Latino 63 counselors, 87 parents focus groups/interviews	Students influenced by parents, family members, extended family, friends, & high school staff for college and career planning.
Plunkett, Henry, Houlbert, Sands, Abarca-Mortensen (2008)	Identify academic encouragement from parents, teachers, & peers in relation to academic success and educational resilience	216 9th graders Mexican 47% males 57% females surveys & GPA dominance analysis	Parents & teachers influence academic success in both genders. Peers influence in academics least imp.
Ojeda & Flores (2008)	Examine influence of gender, generation level, parents' education level, and perceived educational barriers on academic aspirations	186 Hispanic 9 th , 10 th , 11, 12 th graders, 2 Texas high schools 53% female, 47% male surveys hierarchical regression analysis	Perceived educational barriers significantly predicted students' academic aspirations
Woolley, Kol, & Bowen (2009)	Examine relationships between parents, friends, & teachers to determine their affects on academic performance	848 Latino middle school students School Success Profile (SSP) structured equation modeling	Teacher, parents, & peers support important to student academic outcomes. Parent/teacher relationships important for student goals.
Azmitia, Cooper, & Brown (2009)	Examine parent, peers, sibling, & teacher influence from elementary to junior high school	Longitudinal 31 families + 6 th & 7 th graders, 20 males/11 females Path of Life Interview (both) MANOVA, hierarchical regression	Youth perceive parents, siblings, & friends as most important sources of support and guidance. Teachers more for academic support.

Table 2
Comparison of College and Career Aspiration Studies of Hispanic Middle School and High School Adolescents

Study	HS	MS	Interviews	Surveys	Parents/Family	School Staff	Friends	Gender
Reyes, Kobus, & Gillock (1999)	X		X					X
Yowell (2000)		X	X	X	X		X	X
Bullington & Arbonna (2001)	X		X		X	X	X	
Hill, Ramirez, & Dumka (2003)		X	X		X			
Ceja (2004)	X		X		X			
Zarate & Gallimore (2005)	Longitudinal		X	Ach. Data	X	X		X
Alfaro, Umana-Taylor, Bamaca (2006)	X			X	X	X	x	X
Keller & Whiston (2008)		X+		X	X			
Perez & McDonough (2008)	X+		X/FG		X	X	X	
Plunkett, Henry, Houltbert, Sands, Abarca-Mortensen (2008)	X			X	X	X	x	
Ojeda & Flores (2008)	X			X				X
Woolley, Kol, & Bowen (2009)		X		X	X	X	X	
Azmitia, Cooper, & Brown (2009)	Longitudinal+		X+		X	x	X	

+ plus family/teachers

X/FG interviews and focus groups

x minor role with regards to influence

Table 3
**Chronological Map of College & Career Aspiration Studies
 Based on Gender Differences of Hispanic Middle School and High School
 Adolescents**

2008, Ojeda & Flores
 perceived educational barriers
 predict students' educational aspirations
 above and beyond gender

1999 –Reyes, Kobus, & Gillock,
 Hispanic females/graduate school,
 non-traditional careers

**Gender
 College & Career
 Aspirations**

2000-Yowell
 Hispanic females highest
 priority education/
 graduate degree careers
 Hispanic males highest priority
 occupation

2006, Alfaro, Umana-Taylor, & Bamaca
 teachers support impt both genders
 same sex parent support impt for both genders

2005-Zarate & Gallimore
 Hispanic females: class performance
 college counseling/staff
 significantly more Latina enroll in college
 Hispanic males: academic achievement/parent influence/
 language proficiency predicts college enrollment

The following paragraphs present a brief summary of each of the 14 studies in chronological order. Reyes et al. (1999) study focuses on exploring gender differences in career aspirations and associated factors affecting career choice. A sample of 162 Hispanic male and female high school adolescents were interviewed with results showing females aspiring to non-traditional careers were more acculturated, had higher GPAs, and held higher educational aspirations and expectations along with an awareness of the steps to achieve their career goals.

Yowell's (2000) study explored future college and career aspirations of 38 Latino eighth grade boys and girls through interviews and survey questions. Answers to interviews were coded into five domains which resulted in females regarding education as their highest priority and males prioritizing career aspirations higher than educational aspirations. This study also found more females were interested in pursuing careers that required graduate school degrees. Findings from Yowell's (2000) study found that friends and family influenced the decisions these middle school students made concerning their future plans.

Bullington and Arbonna (2001) conducted case studies of four male and female Mexican high school students to determine the extent that family and ethnic factors contributed to career development. Results showed these high school students depended on the school community for career information. Parent encouragement and sibling motivation were influential in college and career choices.

Findings of Hill, Ramirez, and Dumka (2003) study show 31 adolescents from three ethnic groups to be influenced by family when choosing career goals. These students

perceived academic achievement to lead to career success, but were unaware of how to reach their career goals.

Ceja's (2004) study examined the influence of parents on the college aspirations of 20 Chicana high school seniors. Data was collected from interviews with the Chicana seniors. Results of the Ceja (2004) study indicate parents share stories about their careers that influence their daughters to make college and career decisions.

Kochar's (2005) study theoretically examined the occupational status of Hispanic workers using secondary data analysis. Findings show a large majority of Hispanic workers to be concentrated in low paying jobs requiring less education. According to Kochar (2005) job success increased with more education and better English proficiency.

In a longitudinal study culminating in 2004, Zarate and Gallimore (2005) examined factors that significantly contributed to the college enrollment of 83 Hispanic students. Beginning with Prekindergarten and extending to college, researchers collected student achievement data and conducted interviews with students, parents, and teachers. The intent of this study was to explore factors influencing ELLs to go to college and the experiences these students had in school that encouraged or discouraged college enrollment. Within this research, Zarate and Gallimore (2005) found that significantly more Latinas enrolled in college than Latinos. Further investigation shows Hispanic female participants visited college counselors more than Hispanic males.

Alfaro, Umana-Taylor, and Bamaca (2006) study examined the extent family, teachers, and friends influenced the academic motivation of Hispanic high school adolescents. Participants included 310 Latino ninth-and tenth-grade males and females in

the Midwest. It was determined that boys' academic motivation was influenced by fathers and teachers. Girls' academic motivation was influenced by mothers and teachers. Peers played a minor role in influencing either gender. Findings suggest that teachers are a significant influence in the academic motivation of both Hispanic males and females.

Participants in the Keller and Whiston (2008) study were approximately 300 middle school students. This study focused on parental behaviors that related to the career development of sixth-, seventh-, eighth-, and ninth-grade adolescents. Results of the study indicate that positive parental support behaviors relating to career development are important to middle school adolescents. It was noted that personal parental support and encouragement in career decisions was more meaningful to adolescents than supplying them with information on specific careers.

A study conducted in the western region of the U.S. by Perez and McDonough (2008) collected data by using interviews and focus groups with 106 Hispanic high school students. Perez and McDonough (2008) analyzed data to determine the extent students' college and career planning was influenced by family members, extended family, friends, and high school staff. From the transcripts of the interviews and focus groups, results show Latina/o students were influenced by college information received from parents, school counselors, siblings, relatives, and peers. It was noted that college choice guidance was often based on the experience of the individual giving advice and could be biased.

Another study focusing on academic encouragement from parents, teachers, and peers in relation to academic success was conducted in 2008 by Plunkett, Henry, Houlberg, Sands, and Mortensen. Participants in this study were 216 Hispanic ninth-grade students. Data was collected from student questionnaires and grade point averages. Findings show parents' and teachers' influence in academic success to be important to both genders, peers' influence is minor in comparison.

The influence of gender, generation level, parents' educational level, and perceived educational barriers on academic aspirations was examined in a study by Ojeda and Flores (2008). Participants in this study were 186 Hispanic high school students in two high schools in Texas. Results show educational aspirations were significantly predicted by gender, generation level, parents' education level, and perceived educational barriers. Ojeda and Flores (2008) suggested that career counselors could employ strategies that would assist Hispanic students in becoming more self-confident in their pursuit of achieving their career goals.

Woolley, Kol, and Bowen (2009) study suggests teachers and parents should collaborate and build relationships that will strengthen the success of Latino middle school adolescents. Participants in this study include 848 Hispanic middle school students. Relationships with parents, peers, and teachers were examined to determine how these variables influence the education of Hispanic adolescents. Findings show relationships with parents, peers, and teachers are associated with student behavior and achievement.

Encouragement Latino middle school students received from families, friends, and teachers in predicting math achievement was the focus of Azmitia, Cooper, and Brown's (2009) study. This longitudinal study included 31 Hispanic middle school adolescents and their families as participants. More specifically this study looked at whether encouragement from parents, siblings, friends, and teachers changed when participants transitioned from elementary school to middle school. Results show that the adolescents perceived parents, siblings, and friends as the most important sources of support and guidance in both elementary school and middle school. Students felt teacher support was more closely tied to classroom academic situations.

The studies in Table 1 show related trends and common characteristics. By looking at the studies chronologically, an interesting difference shows in the purpose of each study. The purpose of the first four studies, Reyes et al. (1999), Yowell (2000), Bullington and Arbonna (2001), and Hill et al. (2003) was to examine career aspirations of Hispanic middle school and/or high school students. The purpose of the research focus appeared to change from Hispanic adolescents' career aspirations to the ecological factors that influence Hispanic adolescents' education. Beginning with Ceja (2004) and ending with Azmitia et al. (2009) the purpose of the studies was to examine the influence of ecological factors on Hispanic adolescents' academic aspirations. The purpose of the studies changed from career aspirations to influence on educational aspirations when Hill et al. (2003) researched both. The research conducted by Hill et al. (2003) examined both career aspirations and family influence, but the characteristics of the sample included three ethnic groups.

Gender related findings dealing with college and/or career aspirations appeared in several of the studies. The career aspirations of Hispanic females were taken into account in two early studies, Reyes et al. (1999) and Yowell (2000), two later studies Zarate and Gallimore (2005) and Alfaro et al. (2006), and one recent study Ojeda and Flores (2008). Ceja (2004) study included only Chicana females. No other study focused on only one gender.

Most of the studies have collected data from either middle school or high school students with sample size ranges from four participants, (i.e., Bullington & Arbonna, 2001) to 848 participants, (i.e., Woolley et al., 2009). Two studies, (i.e., Azmitia et al., 2009 and Zarate & Gallimore, 2005) used a longitudinal approach interviewing students in both middle school and high school. Parents, school staff, and students were participants in Keller and Whiston (2008), Perez and McDonough (2008) and Azmitia et al. (2009) studies. Findings suggest Hispanic adolescents at all ages are influenced by parents, peers, and teachers in their college and career decisions.

Table 2 compares college and career aspiration studies of Hispanic middle school and high school adolescents. The studies are listed in chronological order beginning with Reyes et al. (1999) and ending with Azmitia et al. (2009). The comparison makes more evident the similarities and differences in students' school level, how data was collected, influential ecological factors, and whether gender was part of the study.

Seven of the studies were similar in that they focused specifically on high school students as participants, (i.e., Alfaro et al., 2006; Arbonna, 2001; Bullington & Ceja, 2004; Ojeda & Flores, 2008; Perez & McDonough, 2008; Plunket et al., 2008; Reyes et

al., 1999). Perez and McDonough (2008) interviewed parents and counselors along with high school students. Zarate and Gallimore (2005) and Azmitia et al. (2009) were longitudinal studies. Azmitia et al. (2009) longitudinal study collected data from students and their families. Four studies were similar in that they collected data only from middle school students, (i.e., Hill et al., 2003; Keller & Whiston, 2008; Woolley et al., 2009; Yowell, 2000). Keller and Whiston (2008) study also included a checklist for parents to complete.

Interviews were the most frequently used method of collecting data. A few interesting differences were noted with Zarate and Gallimore (2005) including the collection of achievement data with their study which no other study incorporated. Another difference regarding methods of collecting data pertains to Perez and McDonough (2008) who incorporated both interviews and focus groups, and Azmitia et al. (2009) who interviewed family members along with student interviews. Interviewing seemed to be the more popular method of collecting data up until 2006 and then surveys became more frequently used until 2009. This suggests that most data was probably analyzed qualitatively until 2006 and then quantitative analysis began to be used more frequently.

When comparing who is influential in the career and college aspirations of Hispanic adolescents, parents and family members show strong influence in most studies. School staff and peers are influential in approximately half of the studies. There appears to be no difference according to influence whether a student is in high school or middle school. Both of the longitudinal studies, Zarate and Gallimore (2005), and Azmitia et al. (2009)

similarly collected data using interviews and found parents and family members to be influential in career and college aspirations of Hispanic adolescents. Although Zarate and Gallimore (2005) found parents and school staff to be influential in college and career decisions, Azmitia et al. (2009) instead found parents and peers to have a stronger influence on a Hispanic adolescent.

Five studies examined gender differences in college and career aspirations, (i.e., Alfaro et al., 2006; Ojeda & Flores, 2008; Reyes et al., 1999; Yowell, 2000; Zarate & Gallimore, 2005;). Four of these five studies collected data from high school students, (i.e. Alfaro et al., 2006; Ojeda & Flores, 2008; Reyes et al., 1999; Zarate & Gallimore, 2005;). Zarate and Gallimore (2005) was a longitudinal study including middle school and high school. Of the studies based on gender, only Yowell (2000) focused on middle school students

Table 3 is a chronological mapping of five studies focusing on gender differences based on college and career aspirations. This chronological map shows the findings of studies that have included gender differences with regards to career and college aspirations. In chronological order these five studies, Reyes et al. (1999), Yowell (2000), Zarate and Gallimore (2005), Alfaro et al. (2006), and Ojeda and Flores (2008) found Hispanic females aspired to careers that require graduate school because they had the support of teachers with high expectations and strong parental influence. The Reyes et al. (1999) and Yowell (2000) studies suggest that females chose careers requiring graduate school unlike the Hispanic males in Yowell's (2000) study who placed a high priority on getting a job. Zarate and Gallimore (2005) found that when Hispanic females had college

counseling or visited with college counseling staff significantly more Hispanic females enrolled in college than Hispanic males. For Hispanic males, language proficiency seemed to be a predictor of college enrollment along with parental influence (Zarate & Gallimore, 2005).

Alfaro et al. (2006) examined the extent parents, teachers, and peers influence Latino college and career aspirations. Findings show same sex parent to be influential to their child and teacher support to be influential to both genders (Alfaro et al., 2006). Ojeda and Flores (2008) found no gender differences in perception of barriers toward educational aspirations. Both males and females were negatively influenced when they believed there were barriers to reaching their educational goals (Ojeda & Flores, 2008). Ojeda and Flores (2008) suggest that career centers and school staff encourage Hispanic adolescents to reach their college and career aspirations and educate students about how to reach their goals despite perceived barriers.

CHAPTER III

METHODS

This chapter describes the methods that were used in this study. To examine ecological influences on urban middle school and high school Hispanic students' college and career aspirations, data were gathered and then analyzed using a mixed-methods approach. The quantitative data in this study helped determine the college and career aspirations of urban middle school and high school Hispanic students and the extent parents and peers influence urban middle school and high school Hispanic students to finish high school and go to college. The qualitative data were used to understand the career aspirations of male and female urban middle school and high school Hispanic adolescents.

Participants

Participants in the study were students enrolled in participating middle schools or high schools located in a large urban school district in Texas. The participating school district is the largest school district in Texas and seventh largest district in the United States. Approximately 200,000 students are enrolled in 296 schools with a district accountability rating of Academically Acceptable according to the Texas Education Agency accountability rating system (Texas Education Agency, 2009). The Texas Education Agency rates school districts as Academically Unacceptable, Acceptable, Recognized, or Exemplary based on standardized test scores, completion rates, and annual drop out rates.

District ethnicity demographics include 61.1% Hispanic, 27.8% African American, 3.2% Asian, .1% Native American, and 7.8% White students. There are 30.8% students participating in the Limited English Proficient (LEP) program, 8.2% participating in the English as a Second Language (ESL) program, 20.3% students participating in a bilingual program. Approximately 81% of the students enrolled in this district are economically disadvantaged meeting federal criteria for free and reduced-price lunches. According to the statewide standardized test, Texas Assessment of Knowledge and Skills (TAKS), students in this district score the highest in writing and social studies. The lowest TAKS test scores are in science. In 2007, 64.3% of the students enrolled in this district graduated. Of the graduates, 86.8% were White, 87.8% Asian, 66.7% African American, and 55.6% Hispanic. The ethnicity with the highest drop out rate in 2007 in this urban school district was Hispanics with 26.8% (Texas Education Agency, 2008). Participants in this study were part of a larger study funded by the Bill and Melinda Gates Foundation.

Middle Schools

Middle School A

The enrollment at middle school “A” is approximately 900 students with 99% Hispanic students, .5% African American, .3% White, and .1% Asian ethnicities. Approximately 92% of the students are classified as economically disadvantaged and 29.2% of the students are classified as Limited English Proficient (LEP). The attendance rate is 95.3%. Middle school “A” has been given a rating of Academically Acceptable by

the Texas Education Agency based on its state standardized test scores (Texas Education Agency, 2009).

Middle School B

Total student enrollment at middle school “B” is approximately 1,000 students with 64% Hispanic students, 22% African American, 12.6% White, and .2% Native American, and 1.2% Asian. Seventy-five percent of the students are classified as economically disadvantaged and 26.3% are Limited English Proficient. The attendance rate is 95% and middle school “B” has been given a rating of Recognized by the Texas Education Agency based on its state-wide standardized test scores (Texas Education Agency, 2009).

Middle School C

There are approximately 1,600 students enrolled in middle school “C”. Linguistically and culturally diverse students include 69.6% Hispanic students, 29.6% African American, .6% White, .1% Native American, and .1% Asian. Economically disadvantaged students account for 91.6% and 13% of the students are classified as Language English Proficient (LEP). Middle school “C” has been given an accountability rating of Academically Acceptable by the Texas Education Agency based on its state-wide standardized test scores (Texas Education Agency, 2009).

High Schools

High School A

The enrollment for high school “A” is nearly 2,000 students with 88% Hispanic, 7% African American, 4% White, and .7% Asian. Eighty-one percent of the students are

considered economically disadvantaged, 7.9% are Language English Proficient, and approximately 30% go to college. The attendance rate is 93%, the drop out rate is 5.1% and the accountability rating is Academically Acceptable based on its state-wide standardized test scores. Some of the educational programs at this high school include health science technology, trade and industrial education, career and technical education, and marketing education (Texas Education Agency, 2009).

High School B

High school “B” enrollment is approximately 900 students who are from ethnically diverse backgrounds representing 58% Hispanic, 29% African American, 12% White, .1% Native American, and 1.2% Asian. Approximately 70% of the students are economically disadvantaged and 12% of the enrollment is classified as Limited English Proficient. Less than one-fourth of the graduating seniors enroll in college. The attendance rate at this high school is 92% with a drop out rate of 4.3%. High school “B’s” website includes its’ mission which is to enroll all students in college upon graduation. High school “B’s” 2009 accountability rating is Academically Acceptable based on its state-wide standardized test scores. Some of the educational programs offered at this high school include landscaping and architectural design, business education, marketing education, and technology education (Texas Education Agency, 2009).

Middle School Students

The participants in the current study were 1,309 students from three middle schools located in a large urban school district in the south central region of the United

States. Participants included 474 (36.2%) students from School “A”, 283 (21.6%) students from School “B”, and 552 (42.2%) students from School “C”. The ethnic demographics of these students were 1,026 (78.4%) Hispanic, 176 (13.4%) Black/African American, 67 (5.1%) White, 2 (.2%) Native American, 10 (.8%) Asian/Pacific Islander, 15 (1.1%) Other, and 13 (1%) did not list their ethnicity. Students from these three urban middle schools feed into high schools with some of the lowest college-going rates in Texas (Texas Education Agency, 2008). Student participant demographics include students from 11 to 21 years of age, with a mean age of 14 ($M = 13.59$, $SD = .89$) and enrolled in the seventh or eighth grade. Of special interest is the fact that 90 (6.9%) of the students did not indicate an age on the SCA survey. There were 643 (49.1%) males and 641 (49%) females and 25 (1.9%) students who did not indicate either sex.

Since this study is based on ecological factors that affect Hispanic students, only students who indicated on the SCA survey that they were Hispanic were included in the study. There were 1,026 urban middle school Hispanic students participating in this study.

Hispanic seventh-and-eighth grade urban middle school students made up the final sample included in the current study. Participants included were 454 (44.2%) from School “A”, 208 (20.3%) from School “B”, and 364 (35.5%) from School “C”. Students ranged in age from 11 to 16 with a mean age of 14 ($M = 13.58$, $SD = .87$). There were 515 (50.2%) males, 497 (48.4%) females and 14 (1.4%) students who did not indicate a gender. There were 426 (41.5%) seventh-grade Hispanic students and 557 (54.3%) eighth-grade Hispanic students participating in the final study. Forty-three (4.2%) did not

provide specific grade level data. Students who had participated in special programs included 287 (28%) Gifted and Talented, 280 (27.3%) Bilingual, 271 (26.4%) English as a Second Language (ESL), 38 (3.7%) Dual Language, 287 17 (1.7%) Special Education, and 117 (11.4%) Other.

High School Students

Participants in the current study were 556 students from two high schools located in a large urban school district in the south central region of the United States.

Participants included 337 (60.6%) students from high school “A” and 219 (39.4%) from high school “B”. The ethnic demographics of these students were 75 (13.5%)

Black/African American, 427 (76.8%) Hispanic, 32 (5.8%) White, 2 (.4%) Native

American, 5 (.9%) Asian/Pacific Islander, 10 (1.8%) Other, and 5 (.9%) did not indicate their ethnicity. Student participant demographics include students from 10 to 19 years of age, with a mean age of 16 ($M = 15.90$, $SD = .5$) enrolled in the ninth-and tenth-grades.

There were 155 (27.9%) ninth-grade students and 398 (71.6%) tenth-grade students. The sex of the participating students was 286 (51.4%) males and 254 (45.7%) females. Three (.5%) students did not indicate their grade level and 16 (2.9%) of the students did not indicate an answer for either sex. Participants were enrolled in two high schools which were part of a larger study including 16 urban high schools. Participants in the current study attend high school “A” and “B” which include a Gates Go college center available to all students on campus.

Since this study is based on ecological factors that affect Hispanic students, only students who indicated on the Student Career Assessment (SCA) survey that they were

Hispanic were included in the study. This left 427 urban high school Hispanic adolescents participating in the study.

Hispanic ninth-and tenth-grade urban high school students made up the final sample included in the current study. Participants included were 291 (68.2%) from School “A”, 136 (31.9%) from School “B”. Students range in age from 10 to 19 with a median age of 16 ($M = 15.90$, $SD = .862$). There were 220 (51.5%) males, 196 (47.1%) females and 11 (2.6%) students who did not indicate a gender. There were 111 (26.1%) ninth-grade Hispanic students and 314 (73.9%) tenth-grade Hispanic students participating in the final study. Two (.5%) students did not provide specific grade level data. Students who had participated in special programs included 87 (29.4%) Gifted and Talented, 99 (23.2%) Bilingual, 66 (15.5%) English as a Second Language (ESL), 23 (5.4%) Dual Language, 11 (2.6%) Special Education, and 34 (8%) students who had participated in programs other than listed.

Instrument

The instrument used in this study for both middle school and high school adolescents was the Student Career Assessment (SCA) survey. The SCA survey was created by researchers at the State of Texas Education Research Center at Texas A&M University as part of a larger study and adapted from several instruments that have been used to assess (a) students’ educational and career aspirations and (b) writing (Green, Smith, & Brown, 2007; McWhirter, 1997; National Center for Educational Statistics, 2006). The SCA assessment consists of a student demographics section, 16 multiple choice Likert-type questions, and three open-ended writing questions.

Section on Student Demographics

The student demographic section of the SCA survey is a self-report section that investigates students' demographic information including the school they attend, their age, sex, grade level, and ethnicity. Students are also asked if they have been enrolled in any special programs such as Bilingual, ESL (English as a Second Language), Dual Language, Gifted/Talented, Special Education, or other unnamed programs.

Section on High School and College

The questions in this section pertain to encouragement by friends and parents to finish high school and go to college. In addition, several questions ask about reading, writing, and computer use. Likert-type choices were (1) strongly agree, (2) agree, (3) disagree, and (4) strongly disagree. Students were asked to respond to one answer for each statement.

- My friends have been encouraging me to finish high school
- My friends have been encouraging me to go to college
- My parents have been encouraging me to finish high school
- My parents have been encouraging me to go to college
- I am good at writing papers or stories.
- I am good at understanding what I read.
- Is there a computer at home that you use? (Yes No)
- How often do you use computers in your Language Arts class?

(Never or rarely, about once a week, two or three times a week, nearly every day)

Unless indicated otherwise, the questions were measured on a 4-point Likert-type scale with values close to “1” indicating “strongly disagree” and values close to “4” indicating “strongly agree.” Values with negatively worded questions were reversed when entered into the SPSS data analyses program.

Section on Career and Education

The questions in this section pertain to parents level of education, student predicted level of education, level of education needed to achieve a certain career, discussion of career choice and language arts class grade for last year and current year.

- In order to achieve this career, I will need to graduate from
(Choose all that apply --high school, technical school, community college, graduate school, college/university, not sure)
- I have discussed this career choice with my
(Choose all that apply --counselor, parents, teachers, friends, no one)
- Will you be the first member in your immediate family to go to college?
(Check one --Yes, No)
- What is the highest level of education your father completed?
- What is the highest level of education your mother completed?
- What is the highest level of education you think you will complete?
(Check one – some high school, high school degree, some college, college degree, don't know)
- Mark the statement that best describes your Language Arts/English grades THIS year.

- Mark the statement that best describes your Language Arts/English grades LAST year.

(mostly A's, mostly B's, mostly C's, mostly below C)

Section on Open-Ended Questions

The section on open-ended questions asked students to answer the following questions in writing. The questions asked students (1) after completing their education what career they would like to work at, (2) why did they choose this career, and (3) to write down three steps that they could take to prepare themselves for this career while they were still in school.

Procedure

Data Collection

This section describes the distribution of the Student Career Assessment (SCA) survey and data collection process. School district personnel distributed the SCA survey to school administrators in the spring semester encouraging teachers to have all students participate in the pencil and paper instrument. For the purposes of this study, only students who indicated their ethnicity was Hispanic and enrolled in either seventh-, eighth-, ninth-, or tenth-grades were included as participants. When the pencil-and-paper survey was completed, school district personnel notified the researchers to pick up the surveys. Upon receipt of all SCA surveys, the researchers gave a unique identification number to each survey. This identification number consisted of a school number and a consecutive paper number. These identification numbers were used to identify data entered into an Excel spreadsheet and SPSS 16 software program.

Scoring and Coding of Instrument

A rubric (Student Career Assessment Rubric) was created to score the open-ended questions which were written by the students on the Student Career Assessment survey. The Student Career Assessment Rubric was used to record whether a student could or could not identify a career, identify a career they were interested in, and the number of logical steps a student could list to prepare for this career while they were still in school.

To identify a career, a student only had to write down a career aspiration and scorers coded a 1 for no career and a 2 for identifying a career. Then, a list of common career groups were created by the researchers based on the Federal Occupations Groups listing. Researchers chose 15 common career groups and assigned these career groups a number from 1 to 15. When a student listed a career, the scorers gave that career a number from 0 (miscellaneous career or no career) to 15. The researchers then made a list of key words pertaining to finishing high school and steps towards career aspirations. These key words were used as a guide by the scorers to determine how many steps a student could list toward reaching their career aspiration. Three student researchers independently scored about 10% of the surveys using the established rubric trying to reach an acceptable inter-rater reliability rating for the Section with open-ended questions. An inter-rater reliability of .91 was reached by the three student researchers. Any further scoring decisions were presented to all three researchers and a final decision was made.

Factor Analysis

Factor analysis is a data reduction technique that takes a large set of variables and reduces it into a smaller set of factors or components that make up scales (Pallant, 2007). Exploratory factor analysis was used in this study to gather information about the relationships of the variables in the SCA survey (Pallant, 2007). Prior to using principal component factor analysis, there was an inspection of the correlation matrix, Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO), and Bartlett's Test of Sphericity to determine suitability of the data for factor analysis. The KMO value was .66 exceeding the recommended value of .6 and Bartlett's Test of Sphericity reached statistical significance of $p < .05$ supporting the factorability of the correlation matrix. Eleven items were subjected to principal components analysis (PCA) using SPSS Version 16. The principal component analysis shows four components with Eigenvalues above 1, explaining 64% of the cumulative variance. A rotation method of Varimax with Kaiser Normalization was used to show the factor loadings on four components. From the results of the factor analysis, three scales were formed, encouragement, literacy, and education.

Score Reliability

To test for internal consistency of the items on each scale, a score reliability test was performed. Table 4 shows Cronbach's alpha for the encouragement scale, literacy scale, and education scale. The encouragement scale included four items (1) My friends have been encouraging me to finish high school, (2) My friends have been encouraging me to go to college, (3) My parents have been encouraging me to finish high school, and

Table 4
Reliabilities of Scale Scores

Scale	<u>M</u>	<u>SD</u>	Alpha	Inter-Item Correlations
A. Encouragement	3.38	.502	.73	.41
B. Literacy	2.96	.517	.70	.33
C. Education	1.39	.876	.62	.33

(4) My parents have been encouraging me to go to college. The Cronbach's alpha for the encouragement scale was an acceptable .73. The literacy scale included four items (1) I am good at writing papers or stories, (2) I am good at understanding what I read, (3) Mark the statement that best describes your Language Arts/English grades THIS year, and (4) Mark the statement that best describes your Language Arts/English grades LAST year. Cronbach's alpha for the literacy scale was an acceptable .70. The education scale included three items asking students (1) What is the highest level of education your father completed, (2) What is the highest level of education your mother completed, and (3) Will you be the first member in your immediate family to go to college? Cronbach's alpha for the education scale is an acceptable .62. The first two scales consisted of four items and the third scale, education contained three items. Since the scale items were less than ten and Cronbach's alpha can be sensitive to the number of items in a scale, the mean inter-item correlations are also shown in Table 4. Acceptable mean inter-item correlations range from .2 to .4. The mean inter-item correlation of .41 for the encouragement scale shows a moderate relationship among the items. The mean inter-

item correlations for the literacy and education scales show a moderate relationship among the items on each scale of .33.

Data Analysis

This section discusses the analysis of the SCA instrument used in this study. The SCA instrument consisted of three sections, (1) student demographics, (2) multiple choice questions, and (3) open-ended writing questions. The Student Demographic Section and Multiple Choice Sections were analyzed using quantitative methods. The open-ended questions were analyzed both using quantitative and qualitative methods as a means to allow the participants a way of explaining their written answers.

Quantitative

The data collected from the Student Demographic Section was used to collect information on participant characteristics of school, age, sex, grade level, ethnicity, and special program participation of urban middle school and high school students. Descriptive statistics were performed using SPSS 16 software package on the Student Demographic Section showing frequencies and percentages of middle school and high school students.

Answers to all sections were entered into SPSS 16 software package. Reverse coding was used on negatively worded questions. Factor Analysis was performed on data collected from the multiple choice sections to determine scales and alpha reliabilities. Data were analyzed by performing a Pearson product-moment correlation, multinomial logistic regression analysis, and multivariate analysis of variance (MANOVA) procedures with SPSS 16 statistical software package. The Open-Ended Questions

Section data were analyzed quantitatively and qualitatively. Quantitative statistics include descriptive statistics and percentages to show the common careers urban middle school and high school adolescents chose and whether they can list at least three steps to prepare themselves for this career. Qualitative statistics are described in the following section.

Qualitative

Examining the qualitative data in this study enhances the quantitative data by creating a more “complete picture” (Creswell & Clark, 2007, p. 33) where Hispanic adolescents’ perspectives on their college and career aspirations are explored. Open-ended questions regarding why a student chose a specific career were analyzed using both a quantitative and qualitative approach. The qualitative section includes answers students wrote to two open-ended questions concerning their career aspirations. The questions asked students to write in the blanks the answers to “After completing my education, I would like to work as a . . .” and “I like this career because . . .” By examining the written answers to these questions, the researcher can discover perspectives and beliefs perceived by urban Hispanic adolescents in relation to their college and career aspirations.

CHAPTER IV

RESULTS

This chapter reports the results for each of the four research questions included in this study. The purpose of this study was to: a) investigate urban Hispanic middle school and high school adolescents' college aspirations, b) investigate urban Hispanic middle school and high school adolescents' career aspirations, c) determine the extent ecological factors influence urban Hispanic middle school and high school adolescents to finish high school and go to college, and d) determine whether there are differences by sex and grade level (i.e., middle school and high school) with regards to career and college aspirations. Results from the middle school SCA survey will be reported first, and then results from the high school SCA survey will follow.

Results Related to Middle School Students

The first question on the Student Career Assessment (SCA) survey is a demographic question asking students to write in the name of their school, their gender, grade level, age, ethnicity, and whether they have been enrolled in a bilingual, ESL, dual language, gifted/talented, special education, or other program. The question asking students whether they had been enrolled in specific programs indicated that students need to "check all that apply." The demographics question was examined quantitatively using a SPSS 16 software package. The result of the demographics question provides descriptive information for all middle school students. In Table 5, frequencies and

percentages of middle school adolescent students who participated in filling out the SCA survey are reported.

Table 5
Demographics of Middle School Adolescents

School	# Students	Gender		Grade	
		Male	Female	7	8
A	474 (36.2%)	240 (50.6%)	225 (47.5%)	258 (54.4%)	199 (42%)
B	283 (21.6%)	138 (48.8%)	140 (49.5%)	0	262 (92.6%)
C	552 (42.2%)	265 (48%)	276 (50%)	291 (52.7%)	244 (44.2%)

Missing data: School "A" – Gender 9 (1.9%), School "B" –Gender 5 (1.8%), School "C" –Gender 11(2%)

Missing data: School "A" – Grade 16 (3.4%), School "B" –Grade 19 (6.7%), School "C" –Grade 16(2.9%)

Table 5 displays descriptive statistics relating to school, gender, and grade for all urban middle school students who took the SCA survey at Middle School "A," "B," and "C." The number of students taking the SCA survey enrolled in Middle School "A" were 474 (36.2%), with 240 (50.6%) of the students indicating they are males and 225 (47.5%) of the students indicating they are females. Nine (1.9%) students in Middle School "A" did not indicate either gender on SCA question one. There were 258 (54.4%) students in the seventh grade and 199 (42%) students in the eighth grade from Middle School "A."

Sixteen (3.4%) students did not indicate whether they were enrolled in seventh or eighth grade.

Students taking the SCA survey enrolled in Middle School “B” were 283 (21.6%), with 138 (48.8%) males and 140 (49.5%) females. Five (1.8%) students in Middle School “B” did not indicate either gender on SCA question one. There were 262 (92.6%) eighth-grade students and no seventh-grade students taking the survey. Nineteen (6.7%) students did not indicate whether they were enrolled in seventh or eighth grade.

In Middle School “C” there were 552 (42.2%) students who took the SCA survey, 265 (48%) are males and 276 (50%) are females. Middle School “C” had 11 (2%) students who did not mark either gender on the survey. There were 291 (52.7%) seventh-grade students and 244 (44.2%) eighth-grade students taking the survey. Sixteen (2.9%) students did not indicate their grade level. Table 6 displays the ethnic backgrounds of all middle school students who completed the SCA survey.

The descriptives in Table 6 display the demographic ethnicities for African American, Hispanic, White, and Other ethnic backgrounds of seventh-and eighth-grade students enrolled in Middle School “A,” Middle School “B,” and Middle School “C.” The largest ethnic group in all three middle schools is Hispanic students. Middle School “A” has the largest representation of Hispanic students that completed the SCA survey with 454 (95.8%). Because of the large representation of Hispanic students enrolled in the three middle schools who completed the SCA survey, the focus of this study is to examine college and career aspirations of Hispanic students.

Table 6
Middle School Adolescent Ethnicity Demographics

School	African American	Hispanic	White	Other
A	2 (.4%)	454 (95.8%)	7 (1.5%)	5 (1%)
B	68 (24%)	208 (73.5%)	2 (.7%)	2 (.7%)
C	106 (19.2%)	364 (65.9%)	58 (10.5%)	20 (3.6%)

Missing data: School "A" – 6 (1.3%), School "B" – 3 (1.1%), School "C" 4 (.7%)

Table 7 displays the descriptive statistics relating to school, gender, and grade for Hispanic students at Middle Schools "A," "B," and "C." Data was analyzed from 1,026 Hispanic middle school students who participated in completing the SCA survey at three urban middle schools. Students in the final sample included 454 (44.2%) from Middle School "A," 208 (20.3%) from Middle School "B," and 364 (35.5%) from Middle School "C." Males and females from Middle School "A" were 227 (50%) and 220 (48.5%) respectively. Seven (1.5%) students did not indicate either gender on the SCA survey. Also participating from Middle School "A" were 198 (43.6%) eighth-grade students and 240 (52.9%) seventh-grade students. Sixteen (3.5%) students did not indicate a specific grade level.

Table 7
Demographics of Hispanic Middle School Adolescents

School	# Students	Gender		Grade	
		Male	Female	7	8
A	454 (44.2%)	227 (50%)	220 (48.5%)	240 (52.9%)	198 (43.6%)
B	208 (20.3%)	102 (49%)	104 (50%)	0	192 (92.3%)
C	364 (35.5%)	186 (51.1%)	173 (47.5%)	186 (51.1%)	167 (45.9%)

Missing data: School "A" – Gender 7 (1.5%), School "B" –Gender 2 (1%), School "C" –Gender 5 (1.4%)

Missing data: School "A" –Grade 16 (3.5%), School "B" –Grade 16 (7.7%), School "C" –Grade 11 (3%)

Students from Middle School "B" included 102 (49%) males and 104 (50%) females. Two (1%) students did not indicate either sex in the demographics section. Eighth-grade students completing the SCA survey from Middle School "B" were 192 (92.3%) and no seventh-grade students participated. Sixteen (7.7%) did not provide an answer for grade level.

Hispanic students at Middle School "C" who completed the SCA survey were 364 (35.5%) with 186 (51.1%) indicating they are males and 173 (47.5%) indicating they are females. Five (1.4%) Hispanic students did not answer the gender question on the survey. There were 186 (51.1%) seventh-grade students and 167 (45.9%) eighth-grade students from Middle School "C" who completed the SCA survey. Eleven (3%) students did not indicate which grade they were enrolled in at Middle School "C."

Table 8 displays the program enrollment of the Hispanic middle school students who made up the final sample from Middle School “A,” Middle School “B,” and Middle School “C.” The SCA survey asked students, “Have you been enrolled in any of these programs?” and “check all that apply.”

Table 8
Hispanic Middle School Adolescent Program Enrollment

School	Bilingual	ESL	Dual Language	G/T	Other
A	133 (29.3%)	124 (27.3%)	20 (4.4%)	116 (25.6%)	66 (14.5%)
B	43 (20.7%)	57 (27.4%)	0	40 (19.2%)	27 (13%)
C	104 (28.6%)	90 (24.7%)	18 (4.9%)	131 (36%)	41 (11.3%)

Students in Middle Schools “A” and “C” had the largest percentages of students who had participated in a bilingual program. Nearly 30% of the students in Middle School “A” and “B” participated in an ESL program. Students at all three middle schools appeared to have the least exposure to a dual language program. Middle School “B” had no students enrolled in the dual language program which possibly suggests there is no

such program at the school or in the elementary school feeding into Middle School “B.” Middle School “C” had a higher percentage (36%) of students enrolled in the gifted/talented program as opposed to Middle School “A” (25.6%) and Middle School “B” (19.2%).

Results Related to Research Question One

Findings for research study question one concerning the college aspirations of Hispanic middle school students are reported quantitatively in Table 9. The SCA survey asked students if they were to achieve their chosen career, would they need to graduate from high school, community college, college/university, technical school, graduate school, or not sure. Students were instructed to “check all that apply.”

Table 9
Hispanic Middle School Adolescents’ College Aspirations

School	High School	Community College	College/ University	Technical School	Grad School	Not Sure
A	189 (41.6%)	58 (12.8%)	231 (50.9%)	39 (8.6%)	71 (15.6%)	122 (26.9%)
B	83 (39.9%)	27 (13%)	117 (56.2%)	13 (6.2%)	19 (9.1%)	50 (24%)
C	183 (50.3%)	42 (11.5%)	234 (64.3%)	48 (13.2%)	47 (12.9%)	90 (24.7%)

Approximately 51% of the students in Middle School “A” indicated that to achieve their chosen career they would have to graduate from a college or university. In Middle School “B” 56.2% of the students indicated they would need to graduate from a college or university to reach their chosen career and 64.3% of the students in Middle School “C” indicated the same. Less than 20% of the students in all three middle schools were interested in attending a community college or technical school after graduating from high school. Also, less than 20% of the middle school students completing the survey were interested in attending graduate school. An average of 25% of the students in all three middle schools were “not sure” which schools they would need to graduate from in order to reach their career aspirations.

Results Related to Research Question Two

Findings for question two concerning urban Hispanic middle school students’ career aspirations are reported quantitatively and qualitatively. The SCA survey asked students three open-ended questions. The first question asked students to name a career they were interested in after completing their education. Table 10 displays the percentages of students who chose specific careers along with the names of the common career choices by gender.

There were 515 males and 497 females who answered the question concerning their career aspirations. A total of 6.8% males and .4% females did not indicate an answer for the career choice question. Females had the largest representation in the health science field (40.6%) as opposed to males whose largest represented field was “miscellaneous” or “unknown” (23.7%). Both males and females appear to be

Table 10
Hispanic Middle School Adolescents' Common Career Choices (Percentages)

Career Choices	Males <i>n</i> = 515	Females <i>n</i> = 497
0 Miscellaneous	23.7	9.5
1 Health Science	9.3	40.6
2 Education/Training	2.1	10.9
3 Hospitality/Tourism	.8	.4
4 Architecture/Construction	5.6	2.2
5 Arts, A/V Technology	6.6	13.5
6 Law/Public Safety	15.7	11.3
7 Government/Public Adm	2.1	.2
8 Information Technology	1.9	.4
9 Human Services	.8	2.4
10 Manufacturing	1.0	0
11 Scientific Research/Engineer	14.4	5.2
12 Business & Administration	3.5	1.8
13 Transportation, Logistics	4.5	.4
14 Retail and Wholesale Sales	.8	.4
15 Finance	.4	.4

Missing data: Males: 6.8% Females: .4%

interested in pursuing careers in the law and public safety field with males reporting 15.7% and females reporting an interest of 11.3%. Other fields of interest to males were scientific research/engineer (14.4%) and health science (9.3%). For females, there was also an interest shown in the arts, A/V technology (13.5%) and education/training (10.9%) fields. The career fields with the lowest percentages were manufacturing (0) for females and retail and finance (.4%) for males.

More responses from seventh-and eighth-grade male students displayed on Table 10 include those seeking careers in architecture/construction. Seventh-grade male students were interested in this career because “I would like to draw buildings or houses,” and “I like geometry.” Eighth-grade male students interested in working in the architecture/construction field commented that “I love math and would be great in that job,” and “I want to design my own buildings.

Tables 11 and 12 report in qualitative detail a sample of the responses male and female middle school seventh-and eighth-grade students wrote about why they liked the career they chose. Both tables include responses from several career choices such as health science, law/public safety, scientific research/engineer, arts, A/V technology, and architecture/construction.

Table 11 displays responses seventh-and eighth-grade male students wrote on the SCA survey. Some of the interesting responses include a seventh-grade male who aspires to work in the health science field saying, “I would be able to help people with their teeth,” another seventh-grade male interested in the same field who wants to “work with people and help kids,” and another seventh-grade male interested in the health science

Table 11
Hispanic Male Middle School Adolescents' Responses to
"I like this career because . . ."

7 th Grade Males	Career	Reason
	Health Science	I would be able to help people with their teeth.
	Health Science	I would get to work with people and help kids.
	Health Science	I would love to save lives.
	Law/Public Safety	I will be helping the world by putting criminals where they belong.
	Law/Public Safety	I could arrest bad people.
	Law/Public Safety	I will get paid.
	Scientific	They make a lot of money.
	Research/Engineer	
	Scientific	I can work on computers.
	Research/Engineer	
	Scientific	Pays good money and is interesting.
	Research/Engineer	
	Architecture/Construction	I would like to draw buildings or houses.
	Architecture/Construction	I like geometry.
8th Grade Males		
	Health Science	I like taking care of animals and studying them.
	Health Science	The pay is good.
	Health Science	It would help me help other people.
	Law/Public Safety	I always wanted to help others.
	Law/Public Safety	I want to help the community and other people.
	Law/Public Safety	It is easy money.
	Scientific	It draws my attention.
	Research/Engineer	
	Scientific	It will help me to unlock new gateways to cures for sickness
	Research/Engineer	
	Scientific	You can fix airplanes and make a lot of money.
	Research/Engineer	
	Architecture/Construction	I love math and would be great in that job.
	Architecture/Construction	I want to design my own buildings.

Table 12
Hispanic Female Middle School Adolescents' Responses to
"I like this career because . . ."

7 th Grade Females	Career	Reason
	Health Science	I like taking care of people.
	Health Science	I would like to help sick people.
	Health Science	I like to work with children.
	Arts/AV Technology	I love music.
	Arts/AV Technology	I like the excitement and experiences.
	Arts/AV Technology	I am good at technology.
	Law/Public Safety	Pays good money.
	Law/Public Safety	I can help people.
	Law/Public Safety	I want to defend people that are abused or hurt.
	Scientific	I can help research crimes.
	Research/Engineer	
	Scientific	It involves math and thinking with logic.
	Research/Engineer	
	Architecture/Construction	You can design and build things.
	Architecture/Construction	The pay is good.
8 th Grade Females	Health Science	I like to help children feel better.
	Health Science	I love working with animals.
	Health Science	I love the hospital environment.
	Arts/AV Technology	I enjoy taking pictures.
	Arts/AV Technology	I am creative and have good ideas for books.
	Arts/AV Technology	I love to act.
	Law/Public Safety	I would get to defend the rights of others.
	Law/Public Safety	Most of my family works in law enforcement.
	Law/Public Safety	This career helps others fight for justice.
	Scientific	My brothers are studying in this area.
	Research/Engineer	
	Scientific	I like math and science.
	Research/Engineer	
	Architecture/Construction	I can use my creativeness to design buildings.
	Architecture/Construction	I like to draw and model buildings.

field because he “would love to save lives.” Eighth-grade male students interested in pursuing careers in the health science field wrote that they “would like taking care of animals,” “the pay is good,” and they wanted to “help other people.”

Table 11 also displays responses seventh-grade males gave for aspiring to work in the law/public safety field including one student who claims he “would be helping the world by putting criminals where they belong,” another student admits he would like to “arrest bad people,” and a third student commenting, “I will get paid.” Eighth-grade male students interested in the field of law/public safety were interested in “helping others,” “helping the community, and “making easy money.” Seventh-grade male students who dreamed of working in the scientific research/engineer field responded with comments such as, “they can make a lot of money,” “I can work on computers,” and “it pays good money and is interesting.” Eighth-grade male students also dreaming of working in the scientific research/engineer field responded that this field “draws my attention,” “It will help me to unlock new gateways to cures for sickness,” and “You can fix airplanes and make a lot of money.”

Table 12 expresses the comments seventh-and eighth-grade females wrote concerning their aspirations to have careers in the health science, arts/AV technology, law/public safety, scientific research/engineer, and architecture/construction fields. Several seventh-grade females responded that they would be interested in working in the health science field because “I like taking care of people,” “I would like to help sick people,” and “I love to work with children.” Eighth-grade females interested in the same field responded with “I like to help children feel better,” “I love working with animals,”

and “I love the hospital environment.” Seventh-grade females seeking careers in the arts/AV technology fields commented that they “loved music,” “enjoyed the excitement and experiences,” and consider themselves “good at technology.” While eighth-grade females aspiring to work in the arts/AV technology field “enjoyed taking pictures,” “being creative and having good ideas for books,” and had a passion for “acting.”

Seventh-grade females who dream of obtaining careers in the law/public safety field are interested in this because they “get paid good money,” “can help people,” and “can defend people that are abused or hurt.” Eighth-grade females dreaming of working in careers of law/public safety mentioned they would “get to defend the rights of others,” “help others fight for justice,” and work in law enforcement “where most of my family works.” Seventh-grade females interested in the scientific research/engineer field chose this field because “it involves math and thinking with logic” and they can “help research crimes.” On the other hand, eighth-grade females aspiring to work in the scientific research/engineer field chose this career because “my brothers are studying this area” and “I like math and science.”

Another career field of interest to seventh-and eighth-grade females is architecture/construction. Seventh-grade females seeking careers in the architecture/construction field commented that they felt “the pay is good” and “You can design and build things.” Eighth-grade females seeking the architecture/construction field as a career responded that “I can use my creativeness to design buildings” and “I like to draw and model buildings.”

When asked on the SCA survey about how many steps they could list to prepare for their chosen career while still in school, the largest percentages of student in all three middle schools could not list any steps. Table 13 findings show the numbers and

Table 13
Hispanic Middle School Adolescents' Steps to Prepare for Career

School	0 Steps	1 Step	2 Steps	3 Steps	4 Steps/more
A	226 (49.8%)	117 (25.8%)	79 (17.4%)	26 (5.7%)	5 (1.1%)
B	146 (70.2%)	36 (17.3%)	19 (9.1%)	7 (3.4%)	0
C	171 (47%)	121 (33.2%)	43 (11.8%)	29 (8%)	0

Missing Data: School "A" 1 (.2%)

percentages of Hispanic middle school students who could write steps to prepare for their chosen career while they were still in high school. Middle School "B" had the largest percentage of students who could not write down any steps to prepare for their career (70.2%). Approximately 50% of the students at Middle School "A" and "C" could not write down any steps to prepare for their chosen career. Five (1.1%) Middle School "A" students could write down four or more steps, whereas, the most steps students from Middle Schools "A" and "B" could write down was three steps.

Results Related to Research Question Three

Results for research question three concerning the extent ecological factors influence Hispanic students' college and career aspirations are examined quantitatively in the following tables. Table 14 displays the Pearson Product-Moment Correlation Coefficient analysis used to examine the relationship among Encouragement, Literacy, and Education scales to Hispanic middle school students' gender and grade.

The scale of encouragement is made up of SCA questions "My friends have been encouraging me to finish high school," "My friends have been encouraging me to go to college," "My parents have been encouraging me to finish high school," and "My parents have been encouraging me to go to college." Students were given Likert-type choices of "strongly agree," "agree," "disagree," and "strongly disagree" on all four statements. The scale of literacy combines SCA questions of "I am good at writing papers or stories," "I am good at understanding what I read," "Mark the statement that best describes your Language Arts/English grades THIS year," and "Mark the statement that best describes your Language Arts/English grades LAST year." Students were given Likert-type choices of "strongly agree," "agree," "disagree," and "strongly disagree" on statements concerning writing papers and reading. On the statements related to Language Arts grades, students were given choices of "Mostly A's (90-100)," "Mostly B's (80-89)," "Mostly C's (78-79)," and "Mostly Below C." The scale of education consisted of three questions, "What is the highest level of education your father completed?" and "What is the highest level of education your mother completed?" Students were asked to "check one" of the choices related to education. The choices were "Some high school," "High

school degree,” “Some college,” “College degree,” and “Don’t know.” Also included in the scale of education is the question “Will you be the first member in your immediate family to go to college?” Answer choices were “yes” or “no.”

The results presented in Table 14 display the correlations for variables of gender, grade ($M = 7.55$, $SD = .579$), and scales of encouragement ($M = 3.34$, $SD = .496$), literacy ($M = 2.90$, $SD = .487$), and education ($M = 1.18$, $SD = .776$). There is a statistically significant positive weak to moderate relationship between the scales of encouragement and literacy ($r = .272$, $p < .01$). There is a statistically significant weak correlation between gender and encouragement ($r = .168$, $p < .01$), literacy and education, ($r = .160$, $p < .01$), encouragement and education ($r = .148$, $p < .01$) and a significant low almost negligible relationship between gender and literacy ($r = .096$, $p < .01$) and grade and encouragement ($r = .080$, $p < .05$). There are no other significant correlations.

Table 15 displays results from the multinomial logistic regression analysis used to determine to what extent ecological factor variables affect urban middle school adolescents’ aspirations. Independent variables are grade, gender, and scales of encouragement, literacy, and education. The dependent variable is student aspirations.

Table 14
Means, Standard Deviations, and Intercorrelation Matrix (Middle School)

Variables	M	SD	Gender	Grade	Encouragement	Literacy
Grade	7.55	.579	-.063			
Encouragement	3.34	.498	.168**	.080*		
Literacy	2.90	.487	.096**	-.013	.272**	
Education	1.11	.717	.008	.059	.137**	.166**

*Correlation is significant at the $p < .05$ (2 tailed)

** Correlation is significant at the $p < .01$ (2 tailed)

Note: Unless otherwise noted, all items are measured on a 4 point scale, 4 = strongly agree, 3 = agree, 2 = disagree, 1 = strongly disagree

Note: Education scale item question “Will you be the first member in your immediate family to go to college?” 1 = no, 2 = yes

Note: Grade level coded as 7 = seventh, 8 = eighth

Table 15
Multinomial Logistic Regression
Hispanic Middle School Adolescents

Student Aspirations	Independent Variables	B	SE	Wald	Exp(B)
Don't Know	Gender	.203	.330	.380	1.225
	Grade	.838	.380	5.723	2.313*
	Encouragement	-1.173	.314	13.946	.309***
	Literacy	-.828	.354	5.479	.437*
	Education	-.529	.275	3.706	.589
Some High School	Gender	.328	.531	.383	1.389
	Grade	.593	.531	1.246	1.810
	Encouragement	-1.580	.471	11.262	.206***
	Literacy	-2.987	.598	24.921	.050***
	Education	-.039	.395	.010	.962
High School Diploma	Gender	.071	.256	.077	1.074
	Grade	.035	.223	.025	1.036
	Encouragement	-1.410	.240	34.472	.244***
	Literacy	-.922	.273	11.412	.398***
	Education	-.332	.199	2.770	.718
Some College	Gender	-.318	.235	1.8271	.728
	Grade	-.080	.187	.182	.924
	Encouragement	-.480	.246	3.820	.619*
	Literacy	-.680	.252	7.247	.507**
	Education	-.118	.167	.505	.888

* $p < .05$, ** $p < .01$, *** $p < .001$

Reference category is "college degree"

Findings from the multinomial logistic regression statistical test performed using SPSS 16 software are displayed on Table 15. The SCA survey question asked was “What is the highest level of education you think you will complete?” Answer choices were “don’t know,” some high school, “high school diploma,” “some college,” and “college degree.” The dependent variable of student aspirations and independent variables of gender, grade, encouragement, literacy, and education were entered into the computer program. SPSS chose “college degree” as the reference category relative to categories of “don’t know,” “some high school,” “high school diploma,” and “some college.” For middle school Hispanic adolescents, student education is statistically significant with predictor variables of encouragement and literacy relative to “college degree” at the $p < .05$ level. Statistically significant findings are reported at the $p < .05$ level for literacy in the category of “don’t know” and encouragement in the category of “some college.” At the $p < .01$ level, statistically significant findings are reported for literacy in the category of “some college.” At the $p < .001$ level, statistically significant findings are reported for literacy relative to “college degree” in the categories of “some high school” and “high school diploma.” Also at the $p < .001$ level statistically significant findings are reported for encouragement relative to “college degree” in the categories of “don’t know,” “some high school,” and “high school diploma.” Overall, the odds for urban middle school Hispanic adolescents of acquiring “some high school,” a “high school diploma,” and “some college” relative to a “college degree” are decreased with less encouragement and low confidence in literacy skills. The more encouragement and confidence in their

literacy skills, the more likely middle school Hispanic adolescents will graduate from high school and college.

Results Related to Research Question Four

Research question four examined whether there were differences by gender and grade level with regards to ecological factors affecting Hispanic students' career and college aspirations. A multivariate analysis of variance (MANOVA) was used to examine differences by grade and gender on the three scales of encouragement, literacy, and education. The following two tables show the MANOVA and ANOVA results of Hispanic middle school students' college and career aspirations by grade and gender.

Table 16 indicates that there are statistically significant differences for gender on literacy and encouragement (*Wilks' Lambda* (3,904) = 8.731, $p < .001$). Female middle school students ($M = 3.426$, $SD = .023$, $p < .001$) are influenced more than males ($M = 3.273$, $SD = .023$, $p < .001$). Middle school females are also more confident in their literacy skills ($M = 2.947$, $SD = .023$, $p < .05$) than male students ($M = 2.868$, $SD = .023$, $p < .05$).

Table 17 findings display statistically significant differences for grade on encouragement (*Wilks' Lambda* (3,878) = 3.927, $p < .05$). Eighth-grade Hispanic students report more encouragement to graduate from high school and go to college ($M = 3.384$, $SD = .023$, $p < .01$) than seventh grade Hispanic students ($M = 3.284$, $SD = .025$, $p < .01$). There are no other statistically significant results.

Table 16
**MANOVA and ANOVA Results of Hispanic Middle School
 Adolescents' College and Career Aspirations by Gender**

Scales	Males <i>n</i> = 453		Females <i>n</i> = 455		<i>F</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Encouragement	3.273	.023	3.426	.023	22.432***
Literacy	2.868	.023	2.947	.023	6.143*
Education	1.130	.034	1.102	.034	.339

* $p < .05$, ** $p < .01$, *** $p < .001$

Wilks' Lambda (3,904) = 8.731, $p < .001$

Note: Unless otherwise noted, all items are measured on a 4 point scale, 4 = strongly agree, 3 = agree, 2 = disagree, 1 = strongly disagree

Note: Education scale item question "Will you be the first member in your immediate family to go to college?" 1 = no, 2 = yes

Table 17
**MANOVA and ANOVA Results of Hispanic Middle School
 Adolescents' College and Career Aspirations by Grade**

Scales	7 th Grade <i>n</i> = 400		8 th Grade <i>n</i> = 482		<i>F</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Encouragement	3.284	.025	3.384	.023	8.983**
Literacy	2.901	.024	2.902	.022	.001
Education	1.071	.036	1.154	.033	2.913

* $p < .05$, ** $p < .01$, *** $p < .001$

Wilks' Lambda (3,878) = 3.927, $p < .05$

Note: Unless otherwise noted, all items are measured on a 4 point scale, 4 = strongly agree, 3 = agree, 2 = disagree, 1 = strongly disagree

Note: Education scale item question "Will you be the first member in your immediate family to go to college?" 1 = no, 2 = yes

Results Related to Hispanic High School Students

This section reports results for each of the four research questions related to high school students. Results for the four research questions regarding middle school students were reported previously in this chapter.

Question one on the Student Career Assessment (SCA) survey asks students to write in the name of their school, their gender, grade level, age, ethnicity, and whether they have been enrolled in a bilingual, ESL, dual language, gifted/talented, special education, or other program. If students had been enrolled in more than one specific program they needed to “check all that apply.”

SPSS 16 software package was used to examine quantitatively the demographics question. Frequencies and percentages of high school adolescent students who participated in filling out the SCA survey are reported in Table 18.

Table 18
Demographics of High School Adolescents

School	# Students	Gender		Grade	
		Male	Female	9	10
A	337 (60.6%)	190 (56.4%)	137 (40.7%)	34 (10.1%)	301 (89.3%)
B	219 (39.4%)	96 (43.8%)	117 (53.4%)	121 (55.3%)	97 (44.3%)

Missing data: School “A” – Gender 10 (3%), School “B”-Gender 6 (2.7%)

Missing data: School “A” – Grade 2 (.6%), School “B”-Grade 1 (.5%)

Table 18 displays the descriptive statistics relating to school, age, and gender for all urban high school students who took the SCA survey at High School “A” and “B.” This table reports the school, total number of students, gender, grade, and missing data. High School “A” had a total of 337 (60.6%) adolescents who completed the demographics section of the survey with 190 (56.4%) of the students reporting they are male and 137 (40.7%) reporting they are female. Ten (3%) of the students at High School “A” did not indicate they were either male or female on the survey. There were 34 (10.1%) ninth-grade students and 301 (89.3%) were tenth-grade students. Two (.6%) students in High School “A” did not indicate a grade level.

Table 18 also displays the descriptive statistics for all students enrolled in High School “B” who took the SCA survey. There were a total of 219 (39.4%) student participants with 96 (43.8%) indicating they are male and 117 (53.4%) indicating they are female. Six (2.7%) of the students did not choose either gender on the survey. Ninth-grade students taking the survey from High School “B” totaled 121 (55.3%). There were 97 (44.3%) tenth-grade students taking the survey. One (.5%) student did not indicate either grade level.

Table 19 displays the ethnicities of all high school students at High School “A” and “B” who completed the SCA survey. Demographics for each of the high schools show Hispanic students to be the ethnic majority enrolled at the school. Participating adolescents at High School “A” are 21 (6.2%) African American, 291 (86.4%) Hispanic, 13 (3.9%) White, and 7 (2.1%) Other. Data from the SCA survey shows 4 (1.2%) students at High School “A” did not indicate an ethnic background. Students at High

School “B” consist of 54 (24.7%) African American, 136 (62.1%) Hispanic, 19 (8.7%) White, and 10 (4.6%) Other. It is the focus of this study to examine college and career aspirations of Hispanic students, therefore Table 20 displays the descriptive statistics relating to school, age, and gender for Hispanic students at High School “A” and “B” who completed the SCA survey.

Table 19
High School Adolescent Ethnicity Demographics

School	African American	Hispanic	White	Other
A	21 (6.2%)	291 (86.4%)	13 (3.9%)	7 (2.1%)
B	54 (24.7%)	136 (62.1%)	19 (8.7%)	10 (4.6%)

Missing data: School “A” 5 (1.5 %)

Table 20 displays the gender and grade level demographics of Hispanic high school students enrolled in High Schools “A” and “B.” The descriptive statistics in Table 20 show Hispanic students enrolled in High School “A” and “B” who completed the SCA survey. The number of students, school, gender, and grade level are displayed. Hispanic students from both of these high schools make up the final sample of 427 adolescents. High School “A” participants included more males than females with 161 (55.3%) males and 120 (41.2%) females. There were substantially more tenth-grade students than ninth-

grade students that took the SCA survey with 258 (88.7%) tenth-grade students and 31 (10.7%) ninth-grade students.

Table 20
Demographics of Hispanic High School Adolescents

School	# Students	Gender		Grade	
		Male	Female	9	10
A	291 (68.1%)	161 (55.3%)	120 (41.2%)	31 (10.7%)	258 (88.7%)
B	136 (31.8%)	59 (43.4%)	76 (55.9%)	80 (58.8%)	56 (41.2%)

Missing data: School "A" – Gender 10 (3.4%), School "B"-Gender 1 (.7%)

Missing data: School "A" – Grade 2 (.7%)

Participants in High School "B" consisted of slightly more females (76, 55.9%) than males (59, 43.4%). Unlike High School "A," ninth-grade students in High School "B" participated at slightly higher rates than tenth-grade students with 80 (58.8%) ninth-grade students and 56 (41.2%) tenth-grade students.

Table 21 shows the program enrollment of the Hispanic high school students who made up the final sample from High School "A" and "B." The SCA survey asked students, "Have you been enrolled in any of these programs?" and "check all that apply."

Table 21
Hispanic High School Adolescent Program Enrollment

School	Bilingual	ESL	Dual Language	G/T	Other
A	72 (24.7%)	24 (8.2%)	16 (5.5%)	70 (24.1%)	29 (10%)
B	27 (19.9%)	42 (30.9%)	7 (5.1%)	17 (12.5%)	16 (11.7%)

Students in High School “A” had the most students participating in the bilingual (72, 24.7%) and gifted and talented (70, 24.1%) programs. High School “B” had the most students participating in the ESL (42, 30.9%) program. Fewer than 20% of the students participated in the dual language program at both high schools.

Results Related to Research Question One

Findings for research study question one concerning the college aspirations of Hispanic high school students are reported quantitatively in Table 22. The SCA survey asked students if they were to achieve their chosen career, would they need to graduate from high school, community college, college/university, technical school, graduate school, or not sure and to “check all that apply.”

Table 22
Hispanic High School Adolescents' College Aspirations

School	High School	Community College	College/ University	Technical School	Grad School	Not Sure
A	149 (51.2%)	37 (12.7%)	154 (52.9%)	19 (6.5%)	16 (5.5%)	57 (19.6%)
B	73 (53.7%)	15 (11%)	74 (54.4%)	6 (4.4%)	6 (4.4%)	27 (19.9%)

Fifty-three percent of Hispanic high school students at High School “A” indicated that in order to achieve their chosen career they would need to graduate from a college or university. Fifty-one percent of the students also indicated they would need to graduate from high school. Of the Hispanic students enrolled in High School “B” graduating from high school (54%) and graduating from college or university (54%) were their top choices to complete their career aspirations. Fewer than 7% of the students at both high schools were interested in going to technical school and graduate school.

Results Related to Research Question Two

Findings for Question two concerning urban Hispanic high school students' career aspirations are reported quantitatively and qualitatively. The SCA survey asked students three open-ended questions. The first question asked students to name a career they were

interested in after completing their education. Table 23 findings indicate the percentages of students who chose specific careers.

Table 23 displays the common career choices of urban Hispanic high school students separated by gender. There were 220 males and 296 females who completed the question on the SCA survey involving their career aspirations. Females had the largest representation in the health science field (40.3%) as opposed to males whose largest represented field was “miscellaneous” (12.3%). Both males and females appear to be interested in seeking careers in the arts, A/V technology field with 11.8% males reporting interest and 10.2% females interested. Other career areas of interest to males were health science (11.8%) and scientific research/engineer (10.9%). Another career area of interest to females is law/public safety (9.2%). Females were least interested in working in the fields of manufacturing (0%) and transportation, logistics (0%). Males were least interested in working in the area of manufacturing (0%). There were 19.5% males and 8.2% females who did not indicate an interest in any career choice. The second open-ended question asked students to write down why they like the career they chose.

Table 24 displays a sample of the reasons students wrote about why they chose a specific career. Student responses to the open-ended question of “I like this career because . . .” are shown. These qualitative expressions were written on the SCA survey by ninth-and tenth-grade Hispanic high school students. Table 24 displays ninth-and tenth-grade males’ responses to the question.

Table 23
Hispanic High School Adolescents' Common Career Choices (Percentages)

Career Choices	Males <i>n</i> = 220	Females <i>n</i> = 196
0 Miscellaneous	12.3	5.6
1 Health Science	11.8	40.3
2 Education/Training	2.7	7.1
3 Hospitality/Tourism	.5	1.5
4 Architecture/Construction	8.6	3.6
5 Arts, A/V Technology	11.8	10.2
6 Law/Public Safety	6.8	9.2
7 Government/Public Adm	1.4	.5
8 Information Technology	2.3	0
9 Human Services	.9	4.1
10 Manufacturing	0	0
11 Scientific Research/Engineer	10.9	2.6
12 Business & Administration	4.1	4.1
13 Transportation, Logistics	3.6	0
14 Retail and Wholesale Sales	.9	1.5
15 Finance	1.8	1.5

Missing data: Males – (19.5%), females – (8.2%)

Table 24
Hispanic Male High School Adolescents' Responses to
"I like this career because . . ."

9 th Grade Males	Career	Reason
	Health Science	I like helping people when they need it.
	Health Science	I like to help people and it is interesting.
	Health Science	I want to help children.
	Arts/AV Technology	I love to cook and be creative with cooking.
	Arts/AV Technology	I love working with music.
	Law/Public Safety	It motivates me to be better in life and succeed.
	Law/Public Safety	I can help people that are in trouble.
	Law/Public Safety	I want to protect people from criminals.
	Scientific	I like fixing things.
	Research/Engineering	
	Scientific	I am smart, I like to create new things that help the world be a better place.
	Research/Engineering	
	Architecture/Construction	I enjoy building and designing buildings.
	Architecture/Construction	I like to design and create things.
10 th Grade Males		
	Health Science	I am fascinated with medicine.
	Health Science	Good pay for helping people.
	Health Science	They are always hiring and they make good money.
	Arts/AV Technology	I am able to use my creativity.
	Arts/AV Technology	I want to create clothing.
	Arts/AV Technology	It allows me to be creative.
	Law/Public Safety	You get to argue and make money.
	Law/Public Safety	I like to argue and I like law.
	Law/Public Safety	I like helping people.
	Scientific	Working with electronics interests me.
	Research/Engineering	
	Scientific	I like working with technology.
	Research/Engineering	
	Architecture/Construction	It involves putting together ideas.

Some of the interesting responses from ninth-grade males aspiring to work in the health science field include “I like helping people when they need it,” “I like to help people and it is interesting,” and “I want to help children. Tenth-grade males who aspire to work in the health science field commented that they are “fascinated with medicine,” “like getting good pay for helping people,” and “they are always hiring.” Ninth-grade males interested in the arts/AV technology field “love to cook and be creative with cooking” and “love working with music.” Tenth-grade males interested in the arts/AV technology field feel they are “able to use their creativity” and “create clothing.”

For those ninth-grade male students dreaming of entering the law/public safety field, they are interested in “motivating themselves to be better in life and succeed,” “helping people that are in trouble,” and “protecting people from criminals. Tenth-grade males seeking a place in the law/public safety field are interested in using their “arguing” skills and “making money” while enforcing the law and “helping people.”

Ninth-grade male students aspiring to pursue careers in the scientific research/engineering field most like to “create and fix things that would help the world be a better place.” On the other hand, tenth-grade male students aspiring to be in the scientific research/engineering field see themselves “working with electronics and technology.” Ninth-and tenth-grade male students who enjoy “building, designing buildings, and putting together ideas” are interested in careers in the architecture/construction field.

Table 25
Hispanic Female High School Adolescents' Responses to
"I like this career because . . ."

9 th Grade Females	Career	Reason
	Health Science	I like to help people.
	Health Science	I love to work with animals.
	Health Science	I like to help people that are injured.
	Arts/AV Technology	Sounds like interesting work to me.
	Arts/AV Technology	I love being creative.
	Arts/AV Technology	I like drawing clothes.
	Law/Public Safety	I like to protect and serve.
	Law/Pubic Safety	I can help people that are in trouble.
	Scientific	I like solving a mystery.
	Research/Engineering	
	Scientific	The pay is good.
	Research/Engineering	
	Architecture/Construction	I like to design and create things.
	Architecture/Construction	I took drafting and I can do this.
10 th Grade Females		
	Health Science	I like nursing and being in hospitals.
	Health Science	I have an interest in helping others get well.
	Health Science	My relatives have worked in this field for a long time.
	Arts/AV Technology	I like making people pretty.
	Arts/AV Technology	I am interested in fashion.
	Arts/AV Technology	I dance and show my steps to everyone.
	Law/Public Safety	I want to help others with their problems.
	Law/Public Safety	I like to discuss things.
	Scientific	I mostly know about cars.
	Research/Engineering	
	Scientific	The pay is good.
	Research/Engineering	
	Architecture/Construction	I can draw a blueprint for houses.
	Architecture/Construction	I get to design things and express myself.

Table 25 displays ninth-and tenth-grade females' comments for aspiring to choose careers in health science, arts/AV technology, law/public safety, scientific research/engineering and architecture/construction fields. Ninth-grade females interested in health science careers stated, "like to help people who are injured" and "work with animals." Tenth-grade females indicated that they enjoy "nursing and being in hospitals," "helping others get well," and "working in the same career their relatives work in." Ninth-grade females dream of working in the field of arts/AV technology because "it sounds interesting," they can be "creative" and "draw clothes." Tenth-grade females find the arts/AV technology field satisfying for their interest in "fashion," "making people pretty," and "dancing."

Ninth-grade females who want to seek to work in the field of law/public safety are interested in "protecting and serving" and "helping people that are in trouble." Tenth-grade females interested in law/public safety "want to help others with their problems" and "discuss things." For those ninth-grade females wanting to pursue careers in scientific research/engineering, they commented that "the pay is good" and they "like solving a mystery." Tenth-grade females also feel "the pay is good" in the scientific research/engineering field. In the area of architecture/construction, ninth-grade females commented that they "like to design and create things" and "took drafting" and tenth-grade females suggest they can "draw a blueprint for houses, design things, and express themselves.

The third open-ended question asked students to write down three steps they could take to prepare for this career. Table 26 displays the number of high school students who could write down one, two, three, or more steps to prepare for this career.

Table 26 findings show the numbers and percentages of Hispanic high school students who could write steps to prepare for their chosen career while they were still in high school. High School “B” had the largest percentage of students who could not write any steps as to how to prepare for their chosen career (66.2%). High School “A” also had over fifty percent (56.7%) of the students who could not indicate one step as to how to prepare for their chosen career. Students who could write down one step were 254.7% at High School “A” and 19.1% at High School “B.” Students who could write two or more steps about their preparation for their career steadily decreased by almost half until there were no students who could write at least four steps.

Table 26
Hispanic High School Adolescents’ Steps to Prepare for Career

School	0 Steps	1 Step	2 Steps	3 Steps	4 Steps/more
A	165 (56.7%)	72 (24.7%)	32 (11%)	12 (4.1%)	0
B	90 (66.2%)	26 (19.1%)	17 (12.5%)	3 (2.2%)	0

Missing data: High School “A” 10 (3.4%)

Results Related to Research Question Three

Results for research question three concerning the extent that ecological factors influence Hispanic students' college and career aspirations are examined quantitatively in the following tables. Table 27 is a Pearson Product-Moment Correlation analysis used to explore the relationship of encouragement, literacy, and education scales to Hispanic high school students' gender and grade.

Table 27 correlation coefficient findings display correlations for variables of gender, grade ($M = 9.74$, $SD = .440$), and scales of Encouragement ($M = 3.41$, $SD = .503$), Literacy ($M = 2.49$, $SD = .345$), and Education ($M = 1.33$, $SD = .837$). A statistically significant positive moderate correlation between the scale of literacy and encouragement ($r = .367$) and a positive low correlation between literacy and grade ($r = .218$) at the $p < .01$ level. A positive low correlation exists between education and grade ($r = .183$), encouragement and grade ($r = .163$), and encouragement and gender ($r = .152$) at the $p < .01$ level. A statistically significant positive low relationship exists between education and literacy ($r = .129$) at the $p < .05$ level. There are no other statistically significant findings. All items are measured on a 4 point scale with 4 being "strongly agree" and 1 being "strongly disagree."

Table 28 displays findings from the multinomial logistic regression statistical test performed using SPSS 16 statistical software to determine to what extent ecological factor variables affect urban high school adolescents' aspirations. Independent or predictor variables of gender, grade, encouragement, literacy, and education are shown in

Table 27
Means, Standard Deviations, and Intercorrelation Matrix (High School)

Variables	M	<i>SD</i>	Gender	Grade	Encouragement	Literacy
Grade	9.74	.440	-.027			
Encouragement	3.41	.503	.152**	.163**		
Literacy	2.89	.522	.076	.218**	.367**	
Education	1.32	.778	-.076	.143**	.063	.104

*Correlation is significant at the $p < .05$ (2 tailed)

** Correlation is significant at the $p < .01$ (2 tailed)

Note: Unless otherwise noted, all items are measured on a 4 point scale, 4 = strongly agree, 3 = agree, 2 = disagree, 1 = strongly disagree

Note: Education scale item question “Will you be the first member in your immediate family to go to college?” 1 = no, 2 = yes

Note: Grade level coded as 9 = ninth, 10 = tenth

Table 28
Multinomial Logistic Regression
Hispanic High School Adolescents

Student Aspirations	Independent Variables	B	SE	Wald	Exp(B)
Don't Know	Gender	-.868	.601	2.081	.420
	Grade	-.117	.548	.046	.890
	Encouragement	-.839	.450	3.473	.432
	Literacy	-.868	.538	2.608	.420
	Education	-.493	.360	1.872	.611
Some High School	Gender	.474	.657	.520	1.606
	Grade	-.063	.688	.008	.939
	Encouragement	.191	.756	.063	1.210
	Literacy	-1.423	.683	4.345	.241*
	Education	-1.045	.576	3.291	.352
High School Diploma	Gender	.579	.422	1.879	1.784
	Grade	-.119	.445	.071	.888
	Encouragement	-.494	.399	1.533	.610
	Literacy	-1.256	.440	8.170	.285**
	Education	-.211	.275	.591	.810
Some College	Gender	.081	.391	.043	1.085
	Grade	.452	.499	.822	1.571
	Encouragement	.132	.448	.087	1.141
	Literacy	-.378	.416	.825	.685
	Education	-.170	.252	.453	.844

* $p < .05$, ** $p < .01$, *** $p < .001$

Reference category is "college degree"

relation to “college degree” with the outcome variable of student aspirations. Table 28 findings from the multinomial logistic regression statistical test performed show ecological factors that affect urban Hispanic high school adolescents’ college aspirations. The SCA survey question asked was “What is the highest level of education you think you will complete?” Answer choices were “don’t know,” “some high school,” “high school diploma,” “some college,” and “college degree. The dependent variable of student aspirations and independent variables of gender, grade, encouragement, literacy, and education were entered into the computer program. SPSS chose “college degree” as the reference category relative to categories of “don’t know,” “some high school,” “high school diploma,” and “some college.” Statistically significant findings are reported for literacy ($p < .05$) in the category of “some high school” and literacy ($p < .01$) in the category of “high school diploma.” The more high school Hispanic students are confident in their literacy skills, the more likely they will graduate from high school.

Results Related to Research Question Four

Research question four examined whether there were differences by gender and grade level with regards to career and college aspirations. A multivariate analysis of variance (MANOVA) was used to examine differences by student grade and gender on the three scales of encouragement, literacy, and education. The following tables display the MANOVA and ANOVA results of Hispanic high school students’ college and career aspirations by grade and gender.

Table 29 indicates that there are statistically significant differences for gender on encouragement (*Wilks’ Lambda* (3,316) = 3.432, $p < .01$) with females ($M = 3.529$, $SD =$

.041, $p < .01$) influenced more than males ($M = 3.371$, $SD = .038$, $p < .01$). There are no other statistically significant findings.

Table 29

MANOVA and ANOVA Results of Hispanic High School Adolescents' College and Career Aspirations by Gender

Scales	Males $n = 172$		Females $n = 148$		F
	M	SD	M	SD	
Encouragement	3.371	.038	3.529	.041	8.156**
Literacy	2.852	.039	2.941	.042	2.477
Education	1.366	.059	1.273	.064	1.164

* $p < .05$, ** $p < .01$, *** $p < .001$

Wilks' Lambda (3,316) = 3.432, $p < .01$

Note: Unless otherwise noted, all items are measured on a 4 point scale, 4 = strongly agree, 3 = agree, 2 = disagree, 1 = strongly disagree

Note: Education scale item question "Will you be the first member in your immediate family to go to college?" 1 = no, 2 = yes

Table 30 findings show there are statistically significant differences for grade on all three scales of encouragement, literacy, and education (*Wilks' Lambda* (3,325) = 10.566, $p < .001$). Tenth-grade students ($M = 3.495$, $SD = .032$, $p < .001$) are influenced more than ninth-grade students ($M = 3.267$, $SD = .054$, $p < .001$) on encouragement, tenth-grade students ($M = 2.96$, $SD = .033$, $p < .001$) are influenced more than ninth-grade students ($M = 2.698$, $SD = .055$, $p < .001$) on literacy, and tenth-grade students ($M = 1.412$, $SD = .049$, $p < .001$) are influenced more than ninth-grade students ($M = 1.097$, $SD = .083$, $p < .001$) on education. No significant interaction was found for grade by sex.

Table 30

MANOVA and ANOVA Results of Hispanic High School Adolescents' College and Career Aspirations by Grade

Scales	9 th Grade <i>n</i> = 86		10 th Grade <i>n</i> = 243		<i>F</i>
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	
Encouragement	3.267	.054	3.495	.032	12.918***
Literacy	2.698	.055	2.960	.033	17.013***
Education	1.097	.083	1.412	.049	10.602***

* $p < .05$, ** $p < .01$, *** $p < .001$

Wilks' Lambda (3,325) = 10.566, $p < .001$

Note: Unless otherwise noted, all items are measured on a 4 point scale, 4 = strongly agree, 3 = agree, 2 = disagree, 1 = strongly disagree

Note: Education scale item question "Will you be the first member in your immediate family to go to college?" 1 = no, 2 = yes

CHAPTER V

SUMMARY, IMPLICATIONS, AND CONCLUSIONS

This chapter is divided into five sections. The first section discusses the research findings of urban middle school Hispanic adolescents. The second section discusses the research findings of urban high school Hispanic adolescents. The third section presents conclusions based on both urban middle school and urban high school Hispanic adolescent research findings. The fourth section discusses implications for the theory and literature and how this study's findings relate to other research in the field, implications for practice, and implications for future research. The fifth section of this chapter consists of the conclusion based on the college and career aspirations of Hispanic urban middle school and high school adolescents.

Discussion of Findings for Urban Middle School Hispanic Adolescents

The final sample of urban middle school Hispanic adolescents participating in the study included 1,026 male and female seventh-and-eighth grade students. The majority of students participated in a bilingual program (27.3%) and/or an ESL program (26.4%) during their elementary or middle school years and/or participated in the gifted and talented program (28.1%). Very few students participated in a dual language program (3.7%) possibly because it was not offered in the schools the participants attended.

In looking at college and career aspirations of urban middle school Hispanic students on Table 31, the majority of students were definitely interested in finishing high school (43.9%) and going to a college or university (57.1%) as opposed to a community

Table 31
Summary of SCA Data of Urban Hispanic Middle School and High School Adolescents

Students	Career Decisions	Career Aspirations	Education (check all that apply)	Career Preparedness	Significant Findings Regression	Significant Findings MANOVA
Middle School (1026)	<u>Undecided</u> Males (23.7%) Females (9.5%)	Health Science Law/Public Safety Engineering Arts, A/V Technology	<u>High School</u> (43.9%) <u>College/university</u> (57.1%) <u>Not sure</u> (25%)	0 Steps (55.6%) 1 Step (26.3%) 2 Steps (12.7%) 3 Steps (5.7%) 4 Steps (1.1%)	Encouragement & confidence in literacy skills increases likelihood of college degree	<u>Gender</u> Encouragement Literacy <u>Grade</u> Encouragement
High School (427)	<u>Undecided</u> Males (12.3%) Females (5.6%)	Health Science Law/Public Safety Engineering Arts/AV Technology	<u>High School</u> (52.4%) <u>College/university</u> (53.6%) <u>Not sure</u> (19.5%)	0 Steps (61.4%) 1 Step (21.9%) 2 Steps (11.7%) 3 Steps (3.1%) 4 Steps (0%)	Confidence in literacy skills increases likelihood of high school diploma	<u>Gender</u> Encouragement <u>Grade</u> Encouragement Literacy Education

college (12.4%) or technical school (9.8%). Pursuing a graduate degree was attractive to about 13.4% of the middle school students. At the middle school level, 25% students were “not sure” about their future education plans. Approximately one-fourth of the middle school males participating in the SCA survey were undecided about what career they wanted to pursue as opposed to 41% or almost half of the female participants who were definite that they wanted to work in the health science field. Both genders were almost equally interested in the field of law and public safety, and disinterested in the fields of manufacturing and retail/wholesale sales. Many students were able to write a sentence about why they were interested in pursuing their chosen career, but were disappointingly unable to write any steps (55.6%) they need to take to prepare for that career. It appears that urban middle school Hispanic adolescents do have aspirations for a career and want to go to college, but they need more information about how to prepare for these aspirations.

When examining the Pearson Product-Moment correlation results of the scales of encouragement, literacy, and education, statistical significance at the low to moderate range was found for encouragement and gender, encouragement and grade, literacy and gender, literacy and encouragement, education and encouragement, and education and literacy. Further exploration using a multinomial logistic regression analysis indicates the scales of encouragement and literacy are statistically significant in all categories on predictions of how much schooling a student thinks they will attain to the category of “some college” based on the reference category of “college degree.” To determine if there were differences by gender and grade, a multivariate analysis of variance statistical

method was used. Findings indicate females have more encouragement from parents and peers than males and females have more confidence in their literacy skills than males. Statistical significance on the scale of encouragement shows eighth-grade students having more encouragement from parents and peers than seventh-grade students.

Discussion of Findings for Urban High School Hispanic Adolescents

Urban high school adolescents participating in the study were 427 Hispanic ninth- and tenth-grade males and females. The majority of students in the final sample had participated in the bilingual (23.2%), ESL (15.5%), and/or gifted and talented programs (20.4%). Of the high school Hispanic students participating in the study, only 5.4% had been in a dual language program.

Findings of urban Hispanic high school students' college aspirations show a majority of students to be interested in finishing high school (52.4%) and going to a college or university (53.6%) as opposed to a community college (12.4%) or technical school (6%). A small number of students (5.2%) were interested in pursuing graduate school. Almost one-fourth of the students at both high schools who were in the final sample are "not sure" of their future education plans. This indicates that more information needs to reach the students before they graduate from high school. Although 40% of the high school Hispanic females were definite about pursuing a career in the health science field, twice as many male students than female students were still undecided about their chosen career. It is interesting to note that male high school students, who did make a career choice, chose health science, arts, A/V technology, and scientific research/engineer fields. Neither males nor females showed any interest in a

career in manufacturing. Although many students wrote down why they chose a specific career, the majority of students could not list any steps (61.4%) to help them prepare for their future career and no students could list four or more steps of preparation. High school students would greatly benefit from college and career information provided by college and career centers staffed by school personnel. Students who knew their career path wrote that they wanted to “help others,” “be creative,” and “follow others in their family who had been in that field.”

The Pearson Product-Moment correlation findings show statistically significant low to moderate relationships between gender and encouragement, grade and encouragement, literacy, and grade, literacy and encouragement, and education and grade. Examination of the multinomial logistic regression analysis found literacy to be statistically significant in the categories of “some high school” and “high school diploma” relative to “college degree.” Findings suggest that when Hispanic high school students have confidence in their literacy skills, they are more likely to graduate from high school. The multivariate analysis of variance findings indicate there is a difference between males and females on the scale of encouragement with females encouraged more than males. There are also statistically significant differences between ninth- and tenth-grade students on scales of encouragement, literacy, and education. Tenth-grade student means were higher on all three scales than ninth-grade students.

Discussion of Findings from Middle School and High School Data

The purpose of this study was to investigate ecological factors affecting urban Hispanic middle school and high school adolescents' college and career aspirations

within the framework of Bronfenbrenner's (1979; 1994) ecological theory of "nested subsystems." Data were collected from the SCA survey distributed by school district educators to urban middle school and high school adolescents. The same survey was given to students in seventh-, eighth-, ninth-, and tenth-grades. Previous research has not focused on college and career aspiration findings in both middle school and high school. The majority of students participating in the study were Hispanic which led to focusing the study on Hispanic student survey responses in a large urban middle school and high school district. For Hispanic students who participated in the survey, the microsystem, mesosystem, exosystem, macrosystem, and chronosystem subsystems of Bronfenbrenner's ecological theory help put into words how ecological factors affect the decisions adolescents make concerning their college and career aspirations.

Though the sample size could have been larger, the survey distribution was totally voluntary subject to the decisions of the school administrators and classroom teachers. Therefore, the trends in the data are an example of what is happening with Hispanic adolescents in relation to college and career aspirations in these urban middle schools and high schools.

This section combines findings of both Hispanic middle school and high school adolescents. Looking at Table 31 which is based on the summary of SCA survey data and relating findings to the four research questions, I will connect findings from study participants in all schools. Although there are differences in sample size, connections between middle school and high school Hispanic adolescents can be seen in the career decisions the students made. In both middle school and high school, Hispanic females

were more inclined to know their career aspirations. On the other hand, Hispanic males remained undecided compared to females from the seventh-to the tenth-grade.

Qualitative remarks written by students reflect reasons they aspired to specific careers and possibly the influence of Bronfenbrenner's (1979; 1994) ecological factors in their environment including cultural beliefs. Some of the remarks written by both males and females in all grade levels include "helping people," "getting paid good money," and "following in the same career as others in the family." When students did indicate a career path they wished to follow, they chose the health science field first, then law/public safety, engineering, arts/AV technology. It is interesting to note that these same career choices were found in the same percentage order in both middle school and high school data. One can conclude that these particular fields are being encouraged by teachers and presenters at career fairs in schools, by parents at home, and by public awareness. When students were asked to check all the education they feel they will need to reach their career aspiration, high school graduation was chosen by both middle school and high school students and, interestingly, graduating from a college/university was more important than a community college or technical school. Approximately, 20% of the students were "not sure" what education was needed for their chosen career aspiration. This indicates that more information about different careers and preparation in school for these careers needs to reach the students to help them make wise higher education and career choices.

When it comes to being prepared for their career choice, I did not expect to find that Hispanic high school adolescents had less knowledge of preparation than Hispanic

middle school students. In fact, in every category of career preparedness which includes the listing of steps to prepare oneself for their career aspiration, fewer Hispanic high school students than middle school students did not know how they can prepare for their goal. This can be worrisome as high school students are closer to beginning a career than middle school students.

Continuing to be encouraged by parents and peers to finish high school and go to college along with developing more confidence in their literacy skills appears to be increasing the chances that middle school students will obtain a college degree. At the high school level, Hispanic students perceive that the more they gain confidence in their literacy skills the better chance they will have of graduating from high school. With these results in mind, it appears that while encouragement is important to building confidence to go from one degree to the next, literacy skills are perceived as the most important factor in obtaining the first diploma which is the high school diploma. Kochar's (2005) study of Hispanic occupational status suggests that Hispanic workers in low-paying jobs believe more education and better English proficiency lead to job success.

The significant findings for gender and grade level with regards to career and college aspirations show a slight variation between middle school and high school data. A student's gender at both the middle school and high school level is significant when it comes to encouragement by parents and peers to finish high school and go to college. At the middle school level, a student's perception of whether they are good at reading and writing and their language arts score appears to be significant to their gender. This

finding appeared in several gender studies and needs to be researched further. Encouragement to go to high school and finish college is significant at the seventh-, eighth-, ninth-, and tenth-grade levels. For middle school Hispanic students, their perception of their literacy abilities tends to be dependent on whether they are a male or female. At the high school level, the perception of literacy abilities and parents' education is more significantly related to a student's grade level. As Hispanic students progress from middle school to high school, the influence and encouragement of their parents and peers seems to be important, their literacy skills appear to be significantly more important at the ninth- and tenth-grades, and the education level of their parents seems to significantly influence them at the high school level. It is possible at the high school level that students begin to realize how unprepared they are to reach their career aspirations and no matter how much encouragement their parents offer, their lack of information about the college going experience and their belief about their literacy skills overshadows their future college and career aspirations. For some Hispanic students, they may feel there is no way they will ever reach their career goals because they do not know how to get there, so they give up and drop out of school.

Implications for Research Literature

The following section discusses the implications for literature, implications for practice, and implications for future research. It is encouraging to note that the overall findings of this study contribute significantly to previous studies already published concerning Hispanic middle school and high school adolescents' college and career aspirations. There are also several differences in this study that distinguish it from

previously published studies but add knowledge to the body of research that already exists regarding Hispanic adolescents' college and career aspirations.

Previous findings noted in Tables 1 and 2 in Chapter II of this dissertation suggest that (a) Hispanic middle school and high school adolescents' decisions concerning their college and career aspirations are influenced by parents, peers, and teachers or school staff (Alfaro et al., 2006; Azmitia et al., 2009; Bullington & Arbonna, 2001; Ceja, 2004; Hill et al., 2003; Keller & Whiston, 2008; Murray, 2009; Ojeda & Flores, 2008; Plunkett et al., 2008; Reyes et al., 1999; Woolley et al., 2009; Zarate & Gallimore, 2005), (b) language proficiency predicts college and/or career success (Hill et al, 2003; Kochar, 2005; Zarate & Gallimore, 2005), and (c) females enroll in college and appear more prepared for careers requiring higher education (Reyes et al., 1999; Yowell, 2000; Zarate & Gallimore, 2005).

Following Bronfenbrenner's (1979; 1994) ecological systems theory that ecological factors affect a developing adolescent, significant findings of this study indicate Hispanic adolescents are influenced and encouraged by parents and peers to finish high school and go to college, confidence in literacy skills increases the likelihood Hispanic students will obtain a high school diploma and pursue higher education, and females are encouraged more to finish high school and go to college along with being more confident in their literacy skills. Students in both middle school and high school make college and career decisions based on encouragement, but high school students base their decisions on encouragement, belief about literacy skills, and the education level of their parents. It appears that the higher grade level a student has achieved, the

more likely that ecological factors become important to their college and career decisions. The influence of these factors could have positive or negative results depending on the cultural beliefs of the parents, peers, or school staff.

Disappointingly, but consistent with findings in the Hill et al. (2003) study, the current study found Hispanic students in middle school and high school unable to write down steps as to how to pursue preparing for their career goal. Also discouraging is the large percentages of students at all schools who indicated they were “not sure” what education they would need to obtain their dream career.

Several differences in the methods employed in this study and previously published studies contribute to the body of research knowledge relating to Hispanic students’ college and career aspirations. Using a sample size larger than previous studies, including Hispanic students from several middle schools and high schools in an urban school district, collecting and analyzing data from both middle school and high school seventh-, eighth-, ninth-, and tenth-grade students, and considering gender and grade differences are some of the contributions that add to previously published research in the area of college and career aspirations.

In examining the literature on previous study findings related to college and career aspirations of middle school and high school Hispanic adolescents, it is noted that most researchers employed either quantitative or qualitative methods through the use of interviews or surveys. This study used a mixed-methods approach using the SCA survey which asked students questions pertaining to both college and career aspirations. Using a mixed-methods approach allows the researcher to gain different perspectives on related

questions. Not only are there multiple choice answers to the questions, but there are open-ended questions where students can write down their own answers and express themselves.

Yowell (2000) employed a mixed-methods approach but only used a small limited sample of thirty-eight Hispanic middle school students. The current study sample size included 1,027 Hispanic middle school students and 427 Hispanic high school students. Although Zarate and Gallimore (2005) and Azmitia et al. (2009) collected longitudinal data, both studies had small limited sample sizes. The larger sample size used in this study and the relationship between both middle school and high school Hispanic students allows the researcher to have confidence in the fact that findings have less variability among the three middle schools and two high schools in the study. The students who attended the different middle schools and high schools and participated in the SCA survey did not know the answers given by students at other schools, thereby the data shows trends in college and career aspirations that are happening in the lives of these Hispanic middle school and high school students. Previous findings from studies that have employed a variety of quantitative and qualitative techniques indicate that encouragement by family, school staff, and friends does influence college and career choices made by middle school and high school Hispanic adolescents (Azmitia et al., 2009; Alfaro et al., 2006; Bullington & Arbonna, 2001; Ceja, 2004; Hill et al., 2003; Keller & Whiston, 2008; Perez & McDonough, 2008; Plunkett, et al., 2008; Yowell, 2000; Zarate & Gallimore, 2005).

Previous studies presented in Table 3 of Chapter II in this study, which focus specifically on gender differences of Hispanic middle school and high school adolescents also found parental influence and language proficiency to predict a student's educational aspirations (Alfaro et al., 2006; Ojeda & Flores, 2008; Reyes et al., 1999; Yowell, 2000; Zarate & Gallimore, 2005). These studies found that females placed a higher priority on education, males placed a higher priority on occupation, and even though teacher and same sex parent support was important to both genders, females were more likely to visit with college counselors and enroll in college.

Implications for Practice

While previous studies have found parents and peers to be influential in the college and career decisions Hispanic middle school and high school students make, one has to ask themselves what about the influence of other stakeholders in the adolescent's environment such as counselors, administrators, and teachers. What if anything could these educators do that would encourage or influence a Hispanic student to graduate from high school and go to college or to pursue the career choice they dream about? Having a larger sample size from several different schools provides trends in data that gives an idea of what is happening in the school. Being prepared for that dream career does not appear to be happening in either middle school or high school.

The skills of solving problems, collaborating, adapting, initiating, communicating effectively, analyzing situations, and building on one's imagination (Partnership for 21st Century Skills, 2008; Wagner, 2008) which are considered so valuable in the workplace are not being addressed in school. All stakeholders in the education system need to take

pride in helping middle school and high school students prepare for their desired future career. Teachers and administrators can be provided with staff development that brings awareness of how important it is to express their college and career experiences to adolescents in a positive manner through classroom research assignments and discussions. For the large number of Hispanic males who are undecided about their future career decisions, school counselors can play a more active role in balancing counseling of both Hispanic males and females which includes visiting classrooms and talking about college and career choices. Policy makers interested in changing Hispanic student drop out rates could try to provide monetary assistance to encourage pre-college visits, college and career fairs, and college centers staffed by career counselors which can provide information and assistance to parents and students. Administrators and teachers could design and present community question and answer type meetings that involve parents so they can continue to be influential in their children's lives.

Implications for Future Research

Future research involving urban Hispanic middle school and high school adolescents' college and career aspirations could focus on random sampling, increasing the sample size, and more gender related studies. Conducting more qualitative, open-ended interviews with Hispanic middle school and high school students could possibly contribute to the current body of research that examines gender differences concerning college and career aspirations. Future studies could focus on Hispanic students in a rural school district and their college and career aspirations.

Distribution of the SCA survey was at the discretion of the urban district school personnel. Therefore, students chosen to answer the survey were not chosen at random, but instead they were in classes where teachers passed out the surveys. If every student in all the urban district schools had been given a chance to participate in taking the SCA survey, then the sample size would have been larger and there would be less bias in the sampling.

Conclusions

The purpose of this study was to examine how ecological factors affect urban Hispanic middle school and high school adolescents' academic aspirations, career aspirations, the influence of peers and parents, and gender roles in college and career aspirations. Adolescents in both urban middle schools and high schools participated in taking the SCA survey which asked multiple-choice and open-ended questions about their academic and career aspirations. The majority of participants in the study were Hispanic, therefore the study focused on Hispanic students. Data was collected and analyzed quantitatively and qualitatively resulting in a mixed-methods study.

I became interested in this study because I wondered why there are large numbers of adolescents dropping out of high school. After all, dropping out of high school was a problem of my mother's and grandmother's generations. Or so I thought. I soon learned that previous research contends 42% of all Hispanic students drop out of high school every year compared to 22% of White students (Diplomas Count, 2008; Fry & Gonzales, 2008; National Center for Education Statistics, 2006). What could be happening that Hispanic students are choosing to drop out of school at such alarming rates?

As expected, Bronfenbrenner's (1979; 1994) ecological theory explains the findings in this study through the influence of different ecological factors in an adolescent's environment. Parent and peer encouragement shows significance at both the middle school and high school level. Encouragement is significant for both males and females and all grade levels. These findings are consistent with most of the previous research also. Unexpected findings are related to education level needed to achieve their dream career, preparation while still in school for their dream career, and confidence in literacy skills at the high school level. Findings to these questions show approximately 50% of the Hispanic students in the middle schools and high schools think they need to graduate from high school, more than 50% of the students could not write down any steps that they could think of to prepare themselves for their dream career, and lack of confidence in their reading and writing skills is hindering students from finishing high school and going to college.

One only has to ask him/herself if parental influence and encouragement is all that is needed to keep adolescents in school and send them to college, then what part does a teacher or administrator play in the education of a Hispanic adolescent? If adolescents graduated from high school and went to college based on the influence of their parents and peers, then there would be no problem with drop-outs. That is what is happening, but encouragement alone is not solving the drop-out problem nor preparing students for their chosen career aspiration.

The findings show Hispanic adolescents are discouraged about their literacy skills. They are discouraged because they want to finish high school, they want to

graduate from college, they want to pursue professional degrees, but something is holding them back. They lack literacy skills that are needed for 21st century jobs. They lack the knowledge of how to prepare themselves in school for the dream career they want to pursue. Hispanic adolescents need the help of all stakeholders. Teachers and administrators need to provide more than just encouragement to Hispanic adolescents so they will graduate from high school. Additionally, teachers need to include more reading and writing assignments in all subject content areas. A students' language proficiency level should be considered at every grade level, not just at the lower grade levels. Chapter reading books along with textbooks should be used in the classroom to make reading more interesting. Reading should include culturally relevant material that would interest Hispanic adolescents. Literacy skills can also be developed through writing assignments which include journals and reports. Developing strong reading, writing, and communication skills in both languages would be beneficial to all Hispanic students.

Finally, all middle schools and high schools could devote an area to be used as a college-going center to help Hispanic students understand the education they need to reach their desired career, the steps they need to take while they are still in school, and to navigate college enrollment. School administrators and teachers need to positively encourage middle school and high school students to visit campus college-going centers and participate in college-going activities such as career fairs, college campus visits, and discussions about their future aspirations. If school becomes a place that prepares students for their dream career, then more Hispanic adolescents will become educated workers of the 21st century and beyond.

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APPENDIX A

STUDENT CAREER ASSESSMENT

This survey is designed to help us understand your attitudes toward your future career. Your answers will be used for research purposes only and no one from your school will read your answers. Thank you for participating in this survey.

1. Please enter the following information:

School: _____ Your Age: _____
 Gender: Male Female Grade level: 7 8 9 10
 Ethnicity: Black/African American Hispanic or Latino White Native American
 Asian/Pacific Islander Other

Have you been enrolled in any of these programs? (check all that apply)

Bilingual ESL Dual Language Gifted/Talented Special Education Other

Please mark only one answer for the following questions and indicate whether you strongly agree, agree, disagree, or strongly disagree with each statement.

2. My friends have been encouraging me to finish high school.

Strongly Agree Agree Disagree Strongly Disagree

3. My friends have been encouraging me to go to college.

Strongly Agree Agree Disagree Strongly Disagree

4. My parents have been encouraging me to finish high school.

Strongly Agree Agree Disagree Strongly Disagree

5. My parents have been encouraging me to go to college.

Strongly Agree Agree Disagree Strongly Disagree

6. I am good at writing papers or stories.

Strongly Agree Agree Disagree Strongly Disagree

7. I am good at understanding what I read.

Strongly Agree Agree Disagree Strongly Disagree

8. Is there a computer at home that you use?

Yes No

9. How often do you use computers in your Language Arts/English class?

Never or rarely About once a week Two or three times a week Nearly every day

Please answer the following questions:

10. After completing my education, I would like to work as a

11. I like this career because

Continued on other side

12. Please write down three steps that you can take to prepare yourself for this career while you are still in school

1. _____

2. _____

3. _____

13. In order to achieve this career, I will need to graduate from (check all that apply)

High School

Technical School

Community College

Graduate School

College/University

I'm not sure

14. I have discussed this career choice with my (check all that apply)

Counselor

Parents

Teachers

Friends

I haven't discussed it with anyone

15. Will you be the first member in your immediate family to go to college? (check one)

Yes

No

16. What is the highest level of education your father completed? (check one)

Some high school

High school degree

Some college

College degree

Don't know

17. What is the highest level of education your mother completed? (check one)

Some high school

High school degree

Some college

College degree

Don't know

18. What is the highest level of education you think you will complete? (check one)

Some high school

High school degree

Some college

College degree

Don't know

19. Mark the statement that best describes your Language Arts/English grades THIS year.

Mostly A's (90 -100)

Mostly B's (80-89)

Mostly C's (75-79)

Mostly Below C

20. Mark the statement that best describes your Language Arts/English grades LAST year.

Mostly A's (90 -100)

Mostly B's (80-89)

Mostly C's (75-79)

Mostly Below C

APPENDIX B

TEXAS A&M UNIVERSITY
DIVISION OF RESEARCH AND GRADUATE STUDIES - OFFICE OF RESEARCH COMPLIANCE

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Human Subjects Protection Program

Institutional Review Board

DATE: 03-May-2010**MEMORANDUM****TO:** HOSTRUP, JUDY

77843-3578

FROM: Office of Research Compliance

Institutional Review Board

SUBJECT: Initial Review**Protocol
Number:** 2010-0336**Title:** Ecological Factors Affecting Hispanic Urban Middle School and High School
Adolescents' College and Career Aspirations**Review
Category:** Exempt from IRB Review

It has been determined that the referenced protocol application meets the criteria for exemption and no further review is required. However, any amendment or modification to the protocol must be reported to the IRB and reviewed before being implemented to ensure the protocol still meets the criteria for exemption.

This determination was based on the following Code of Federal Regulations:

(<http://www.hhs.gov/ohrp/humansubjects/guidance/45cfr46.htm>)

45 CFR 46.101(b)(4) Research involving the collection or study of existing data, documents, records, pathological specimens, or diagnostic specimens, if these sources are publicly available or if the information is recorded by the investigator in such a manner that subjects cannot be identified, directly or through identifiers linked to the subjects.

Provisions:

This electronic document provides notification of the review results by the Institutional Review Board.

file://F:\IRB Approval.htm

5/10/2010

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