SI SE PUEDE: AN INVESTIGATION OF FACTORS FOSTERING ALLIED HEALTH
GRADUATE DEGREE COMPLETION FOR LATINOS/AS

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This study uncovers the experiences of Latinos/as in allied health graduate programs and provides vital information which may help increase the number of Latino/a healthcare providers. It focuses on the *testimonios* (life narratives) of 9 Latinos/as who graduated from allied health graduate programs. Academic resilience and community cultural wealth theories framed the study while *testimonio* methodology guided data collection. Alumni were interviewed about the personal experiences and educational journeys that led them to successfully complete graduate allied health degrees. Participants’ family background, educational history, personal and environmental factors were considered.

Participants described learning about the value of education early in their lives in home and school settings. The interviews also revealed the importance of participants’ personal drive and desire to excel academically and professionally. Participants noted that the academic rigor and adjustment required to succeed in graduate allied health programs, combined with feelings of social isolation, made their transition to the graduate program challenging. Family and social networks were noted as the most supportive in regards to participants’ retention and success.

Research implications include the use of methodologies and theoretical frameworks which focus on the voices and experiences of underrepresented students in the allied health professions. Implications for allied health schools include intentional recruitment of underrepresented student populations, the establishment of social
support systems, student affairs offices, and the inclusion of social class, ethnicity, and cultural diversity as standards by which allied health schools are rated for accreditation and re-accreditation purposes.
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CHAPTER 1
INTRODUCTION

In the book, *The Art of Healing Latinos*, America Bracho wrote in her essay *Tamales for Health* (p. 77):

…I received a call informing me that one of our [Latina diabetes patients] had suddenly gone blind…I asked the woman, who had been a diabetic for the last ten years, if she had known of the problem with her eyes. She told me she had never been examined. In talking with her health care provider, I discovered that diabetics weren’t receiving eye examinations annually because the clinic simply didn’t believe the patients could manage the treatment of these sorts of complications. I felt frustrated. This condescending attitude correlated with so many others I had witnessed in which patients have not been informed of their problems because it was assumed they were incapable of being part of the solution. And when the patients are low-income Latinos[as], the attitudes are even worse.

The 2010 U.S. Census summary data and demographic projections for the country revealed an astronomical growth of the Latino/a population. Despite this demographic trend, there is a critical shortage of Latino/a professionals in the healthcare industry; this shortage negatively impacts the ability to provide quality and culturally congruent healthcare to the largest racial/ethnic group in the country. According to Komaromy et al. (1996) it is imperative to have a diverse healthcare workforce because patients tend to gravitate to healthcare providers from their own cultural background. Diversity in healthcare is necessary not only to reflect the
demographics of the country but also because diverse perspectives are necessary for Latinos/as’ advancement in, increased access to, and equity in healthcare (Mitchell & Lassiter, 2006).

This study focuses on the educational trajectories of nine Latinos/as who completed allied health graduate degrees. Their experiences provide testimonials about the realities of becoming healthcare professionals, the actions and experiences which led them to successful completion, and insight about what can be done to ensure a significant increase in the volume of Latinos/as who successfully complete degrees in the health professions.

The Need for a Diverse Healthcare Workforce

Research indicates that Latinos/as are medically underserved (Komaromy et al., 1996; Zayas & McGuigan, 2006). Medically underserved persons are those who do not receive sufficient primary care (Schrop et al., 2006). Latinos/as make up only 5.9% of the entire healthcare workforce (National Council of La Raza, 2009) even though they make up 16% of the U.S. population (Ennis, Rios-Vargas, and Albert, 2011). Latinos/as are highly concentrated in a small number of states, and California, Texas, and Florida are home to over 50% of Latinos/as in the U.S. (Ennis, Rios-Vargas, and Albert, 2011). Fourteen million (28%) Latinos/as live in California, 9.5 million Latinos/as (19%) live in Texas, and 4.2 million (8%) Latinos/as live in Florida. In 2005-2006, the allied health workforce in California’s central region was studied and the summary of findings was published by the Center for the Health Professions (Bates, Chapman, Kaiser, Chan, 2009). The report for this study stated that Latinos/as account for 40% of the general allied health workforce. A closer look reveals Latino/a allied health professionals are
highly concentrated in the allied health support occupations rather than those in which the professionals diagnose and treat patients. Only 11.6% of mid and high level allied health workers in the region were Latino/a (Bates, Chapman, Kaiser, Chan, 2009). I looked for comprehensive state (rather than the regional) information about the percentage of Latino/a allied health professionals in California, Texas, and Florida to compare them with the Latino/a populations in these states but was unable to find the information. Regardless, Saha and Shipman (2006), Shaw (2010), Vogt (2009), and Vogt and Taningco (2008) are among those who argued that increased diversity in healthcare providers can increase access to healthcare for underserved populations.

Mitchell and Lassiter (2006) also recognized that underrepresented students, such as Latinos/as, who complete health profession degrees are more likely to practice in communities with underserved populations because they want to give back to their communities by increasing health services for members of their own ethnic group. Gilliss, Powell, and Carter (2010) and Komaromy et al. (1996) highlighted that there is evidence that a great number of minority physicians serve a disproportionately high number of minority patients. According to their survey of physicians in California, Komaromy et al. found that Latino/a physicians were caring for three times as many Latino/a patients as their non-Latino/a counterparts. Moreover, research shows patients who were treated by physicians from their own ethnic group expressed higher satisfaction rates in primary care and mental health settings (Komaromy et al., 1996).

According to Adam (2012), although minorities make up one third of the U.S. population they comprise more than half of the “50 million people who are uninsured” (p. 8). Regardless of insurance status, minorities receive lower quality healthcare and also
have a harder time obtaining the healthcare they need (Adam, 2012). One way to increase the positive outcomes of any patient is to have him or her be an active participant in their healthcare (Bracho, 2008). For minorities, that includes having healthcare workers who speak their language “literally and figuratively” (Adam, 2012, p. 8). Adam cites improved patient-provider communication as the biggest factor to improving healthcare outcomes for minorities.

Shim (2010) emphasized the need for clinicians to build their patients’ cultural health capital. Cultural health capital encompasses a variety of skills from knowing what preventative health measures can be followed in order to avoid illnesses; to how to read and interpret medical information and apply it to their lives; and knowing what questions to ask of their healthcare providers. Increased diversity in the healthcare workforce will foster a greater flow of healthcare information that will build cultural health capital for many more people. For Latinos/as, having Spanish-speaking culturally similar clinicians significantly increases their cultural health capital and reduces healthcare inequities (Vogt and Taningco, 2008). Studies have found that culturally congruent providers increase health benefits as well as advocacy for Latinos/as (Santiago-Irizarry, 1996; Shaw, 2010). Similarly, the 2006 review by the U.S. Department of Health and Human Services Administration Bureau of Health Professions (Saha & Shipman, 2006) suggested linguistic and ethnic concordance might increase clinician-patient interactions and improve healthcare outcomes.

Improved health outcomes and patient interactions warrant the need for diversity in healthcare providers and the vast shortage of healthcare workers demands it. Given that Latinos/as are the fastest growing population in the U.S., it is appropriate that we
should capitalize on that growth to build up our emaciated healthcare workforce with Latino/a providers.

The Latino/a Education Dilemma

Most allied health professionals must complete a post-secondary degree to be licensed to practice (Education Portal, 2012). Unfortunately, Latino/a representation in higher education is low. In 2004, 54% of Latinos and 62% of Latinas who graduated from high school immediately enrolled in some type of post-secondary institution. During the 2003-04 school year, 19% of Latinos and 17% Latinas who started post-secondary education left without a degree (Ross, Kena, Rathbun, KewalRamani, Zhang, Kristapovich & Manning, 2012). Additionally only 46% of Latinos and 53% of Latinas who first enrolled in college in 2004 as full-time degree-seeking students completed a bachelor’s degree within 6 years (Ross et al., 2012). In 2010 only 30% of Latinos and 27% of Latinas ages 25 to 34 had completed high school degree (Ross et al., 2012). Also in 2010 only 11% of Latinos and 16% of Latinas ages 25 to 34 had a bachelor’s degree or higher (Ross et al., 2012). Low post-secondary education completion rates can be a limiting factor for Latinos/as who want to enter the field of allied health.

Researchers have attributed low completion rates to factors including low parental involvement and poor academic preparation. Furthermore, almost half (46%) of Latino/as begin post-secondary education at the community college level (Fry, 2011) but only about 25% of Latinos/as transfer to 4-year institutions (Fry, 2004). These low transfer rates have a negative impact on Latino/a bachelor degree completion rates (Arbona & Nora, 2007). Orfield and Lee (2005) noted that socioeconomic and racial segregation also impact students’ academic performance and asserted that
disadvantaged schools perpetuate disadvantaged lives. Moreover, high levels of poverty of certain racial groups, school poverty, teacher education, teacher turnover, school district funding, and community homogeneity are factors which contribute to the decreased participation by Latinos/as in post-secondary education (Atwater, 2000; Gándara, 2010; O'Connor, 2009; Orfield & Lee, 2005). Findings in the field of health professions education (Donini-Lenhoff and Brotheron, 2010; Grumbach and Mendoza, 2008; and Mitchell and Lassiter, 2006) state that poor academic preparation as well as the inadequate educational system keep underrepresented students away from health professions degrees.

It is important to consider the barriers faced by Latinos/as seeking to complete higher education degrees because the majority of allied health professions require higher education degree completion in order to be licensed to practice. Contrary to popular thought, allied health degrees are not limited to technical degrees; there are bachelors, masters, and professional doctorates which must be completed in fields such as radiation therapy, physician assistant studies, and physical therapy, respectively, in order to practice in those fields.

Purpose of the Study

The purpose of this study is to explore the educational pathways and experiences which lead Latinos/as to allied health graduate education, students’ experiences in allied health school, and the factors which led them to successfully complete their allied health graduate degrees.

Researchers (Curtis, Lind, Plesh, & Finzen, 2007; Jewell & Riddle, 2005; Wheeler & Arena, 2009; Zipp, Ruscingo, & Olson, 2010) agree that successful
admission to and graduation from an allied health graduate program requires a high grade point average (GPA), high Graduate Record Examination scores (GRE), and strong preparation in math and science. Others (Alexander, Chen, & Grumbach, 2009; Cooney, Kosoko-Lasaki, Slattery, & Wilson, 2006) agree that academic preparation is not enough to help students successfully progress through the health professions pipeline. Furthermore, these researchers posit that there are unidentified forces, within and outside of allied health academic institutions, which help students persist and graduate. This is especially true for the small number underrepresented students in health professions education.

Yosso (2005) stated that academic preparation alone does not render successful educational outcomes for students of color. Students need the tools to succeed in an educational system which is oppressive to students of color, tools typically obtained through their communities.

Although there have been studies which have investigated academic factors which help students achieve entrance to health professions programs (Alexander et al., 2009; Cooney et al., 2006; Mitchell & Lassiter, 2006) few have focused specifically on Latinos/as (Barr, Gonzalez, & Wanat, 2008) and none have focused on Latinos/as in allied health. This study seeks to fill that gap by focusing on Latinos/as who graduated from an allied health graduate program and by exploring the academic trajectories and experiences which led participants to be admitted and successfully complete their allied health graduate degree and their experiences as allied health graduate students.

Research Questions

The questions presented below guided this research study:
1. What difficulties, if any, did Latino/a allied health graduate school alumna/us have to overcome as they progressed through allied health school?
2. What personal protective factors did Latino/a allied health graduate school alumna/us access and use in allied health school to overcome difficulties?
3. What environmental protective factors did Latino/a allied health graduate school alumna/us access and use in allied health school to overcome difficulties?

Significance of the Study

This study is a direct response to the call for more studies which focus on successful Latino/a university students (Arellano & Padilla, 1996). Furthermore, this study directly responds to the call for research to explore environmental and personal factors that aid students of color in their progression through the health professions education pipeline (Alexander et al., 2009). Moreover, this study is significant because it gives a glimpse into the Latino/a allied health student experience.

A systematic literature review revealed only a few studies focused solely on the experiences of Latinos/as in health professions and no studies focused on Latino/a students in allied health. Therefore, this study will begin to fill a critical void by providing an understanding of the academic trajectories of Latinos/as who have completed allied health graduate degrees.

The information derived from this study will be used to motivate prospective Latino/a students to develop clear career pathways to allied health degrees. Moreover, these results will be used to inform higher education policy and practice to increase Latino/a participation and success in allied health and higher education.
For a detailed definition of the important terms found in this study, please refer to Appendix A.
CHAPTER 2
LITERATURE REVIEW

In order to succeed in health professions academic programs, it is widely known that students have to be academically competitive. Health professions schools place a special emphasis on high grades in science related undergraduate courses, which are often pre-requisite courses for admission into advanced programs, in conjunction with cumulative grade point average and standardized test scores such as the Graduate Record Examination or the Medical College Admission Test (Carlisle, Gardner, & Liu, 1998; Cooney et al., 2006; Curtis et al., 2007; Day, 1986; M. Gonzalez, Barr, & Wanat, 2010; Hocking & Piepenbrock, 2010; Scott et al., 1995; Staat & Yancey, 1982; Templeton, Burcham, & Franck, 1994; Zipp et al., 2010). Since undergraduate academic preparation determines a student’s acceptance into health professions degree programs, it is imperative to review student outcomes in science, technology, engineering, and technology (STEM).

This chapter begins with a historical summary of Latinos/as in higher education. Next, STEM literature is covered and serves as the foundation for the study of the success of Latino/a allied health graduates. This review includes literature focused mainly on minorities in STEM since Latino/a trajectories in STEM are often studied along with African-American and Native-American populations. When Latino/a experiences in STEM differ from the other underrepresented minority groups, those points will be highlighted. Asian-American students are not considered in this literature review since they are not considered underrepresented in STEM, health professions, and allied health fields.
Next, this study delves into a review of literature examining health professions education, as well as issues of access and success for underrepresented minority students. As with the STEM section, the health professions literature review includes literature focused mainly on minorities since Latino/a trajectories in health professions are often studied along with African-American and Native-American populations. When Latino/a experiences in the health professions differ from the other underrepresented minority groups, those points will be highlighted.

The third and last part of the literature review includes a synopsis of allied health literature. The allied health literature also is focused on multiple underrepresented students; there were no studies found that highlight only Latino/a trajectories. Of the four articles found in this literature review, two were commentaries and two were research papers. These findings, or lack thereof, highlight the need to study Latino/a students’ experiences in allied health schools.

The Literature Review Process

A systematic literature review was conducted by searching the Educational Resources Information Center and the Public Medline (PubMed) databases for literature published between 1992 and 2012. The terms used to locate literature were: medical education, health professions education, healthcare workforce, allied health education, allied health occupations education, and STEM. All of these terms were paired with Latino, Hispanic, Hispanic American, minority, students of color, and underrepresented. Additionally, I reviewed the table of contents in The Review of Higher Education, The Journal of Higher Education, The Journal of Public Health, The Journal of Allied Health, The Journal of Hispanic Higher Education, and The Journal of Latinos in Education
published from 1992 to 2012 in search of articles relevant to Latino/Hispanic students, STEM, health professions, medical education, and allied health.

A Historical Perspective on Latino/a Access to Higher Education

A history lesson on Latino/a educational access is beneficial and necessary to give insight into the issues that have shaped Latinos/as current position in American society and as underrepresented in higher education and allied health education specifically. Historical background facilitates better understanding of contemporary issues and helps education researchers and practitioners determine and tackle future issues based on past and current developments. Key historical and contemporary events including, but not limited to, politics and war help situate and provide a context for Latinos/as in today’s American educational context. Furthermore, this historical summary provides clues and examples about how Latinos/as have been excluded, marginalized and oppressed in the American educational system as a result of the racism that forms part of the thread of American society (Yosso, 2005). This knowledge is vital if we are to positively affect Latino/a access into higher and allied health graduate education.

The Treaty of Guadalupe Hidalgo

The Mexican American War occurred from 1846-1848 and ended with the signing of the Treaty of Guadalupe Hidalgo which officially designated the northwestern part of Mexico as property of the United States (San Miguel & Valencia, 1998). When the United States acquired the land in the southwest that includes the present-day states of California, Colorado, New Mexico, Arizona, and Texas, schools already existed and were an integral part of the communities (MacDonald & Garcia, 2003).
Before the United States government formally took over the newly acquired area, it promised the Mexicans who had become new Americans that this area’s bilingualism would be protected, property would be respected, and citizenship would be granted to Mexicans who chose to stay in the newly acquired American land (MacDonald & Garcia, 2003). According to the University of Texas’ Latino Education Policy website (Latino Education Policy, n.d.):

Through the Treaty of Guadalupe Hidalgo, Mexican Americans who chose to assimilate to the culture of Anglo settlers were promised land and freedom of religion. However, their right to maintain their native tongue was excluded from the treaty's final documents. Article X of the Treaty of Guadalupe was intended to guarantee linguistic, among other, rights but was stricken by the United States Senate prior to the treaty's adoption.

MacDonald and Garcia (2003) explained that the promise to respect the land rights of Mexican Americans was also short lived as the Gold Rush brought many Anglo settlers to the southwest and this created a decline in rights for Mexicans. The loss of rights and status translated to the economic and educational decline of Mexicans as English only rules excluded them from the education system (MacDonald & Garcia, 2003; SanMiguel & Valencia, 1998). The saving grace for the Mexican students were the Catholic schools and colleges managed by the Jesuits that provided classes in Spanish and even printed recruitment material in Spanish (McKevitt, 1990-1991).

Educational participation of white men and women between the ages of 5-19 from 1850 to 1890 averaged at 52% for every 100 persons. For Black people and people of other races, the average percentage of men and women enrolled in school
between the ages of 5-19 was 16%, for every 100 persons (Snyder, 1993). Very few people in the U.S. had completed college degrees during the nineteenth century (MacDonald & Garcia, 2003). Only one percent of working men had college degrees prior to the Civil War (Geiger, 2000). According to McKevitt (1990-1991), the few Latinos/as attending college during the nineteenth century were those from the wealthiest classes in the newly acquired American territory as well as Mexicans who had been sent by their families to the U.S. for bilingual education. Thus, Latino/a university enrollment was extremely low during this era. The University of California, Los Angeles (UCLA) opened its doors in 1869 to forty students. Soon after these students arrived on campus, the faculty noted that they were not adequately prepared to do college work (MacDonald & Garcia, 2003). The remedial program called the Fifth Class was created in an effort to provide students remedial courses (Leon & McNeil, 1992). If after being in the Fifth Class students passed the freshmen examination they were granted admission. Of the almost two dozen Latino/a students who entered, only two Latino/a students passed the freshmen examination108

The University of Texas at Austin (UT) opened as the flagship state institution in 1883. The first Mexican-American to have graduated from UT was Manuel Garcia who graduated in 1894 (Kanellos, 1997). There is little information about Latino/a students in higher education during this era (Castellanos & Jones, 2003). The American acquisition of and immigration to the southwest, and the lack of protection for Latinos/as during the 19th century began a steady and dire decline in Latino/a access to education from which we have not recovered.

Mexicans during the Dust Bowl
From 1931-1939 there was a large migration of Oklahoma state residents and Mexicans into the West (Theobald & Donato, 1992). Many migrated in search of work and sustenance after a horrible drought decimated agricultural life in the central plains during the Dust Bowl era. Theobald and Donato’s (1992) exploration of rural education during the Dust Bowl depicted the hardships Mexican-Americans endured. Until the 1930s, the education of Mexican-American children consisted of assimilation into American culture rather than literacy and overall competency (Stoskopf, 1999). Many of the children were segregated into schools where they would be taught at a level fit for them; IQ testing and eugenics were used in an effort to lawfully separate children by keeping students of the same intellectual capacity together (Murray-Garcia & Garcia, 2002; Stoskopf, 1999). Stoskopf (1999) reports that most Mexican-American children in the San Jose school system in California were placed in less rigorous academic tracks since aptitude test results showed that the students were intellectually inferior. Rural schools in the West were a perfect example of this type of segregation. Theobald and Donato (1992) recounted that neither Mexicans nor Oklahomans were wanted in the areas where they migrated. This strong disapproval of the migrants was expressed by impeding participation of Mexicans and Oklahomans in the grade schools. Mexican children were often segregated due to their lack of English fluency and their education continued to be focused on assimilation into American culture. Historian Gilbert Gonzalez highlights educational access of Mexicans during this time:

The educational experience of migratory [Mexican] children represented the social aspect of the economic system, which established the migrant family as the foundation for its productivity…These conditions condemned generations of
Mexican children to poor nutrition, poor health, poor housing, and virtually no education. The educational pattern of migrant children was characterized by exclusion, segregation, irregular (or seasonal) attendance, and very early dropout rates. (as cited in Theobald & Donato, 1992, p. 32)

During this same time in Texas, Latino/a access to University of Texas (UT) remained limited. The University of Texas at Austin conducted a study in 1970 in an effort to count the number of students with Spanish last names. Since students were not asked to provide ethnic/racial data as they are now, last names were the best way to guess a student’s race. In the class enrolled at UT in 1928-29, a total of 5,855 students were enrolled. Only 58 of those students or one percent of the class had Spanish last names (Castellanos & Jones, 2003).

Through this bleak time for Latino/a access to education there were rays of hope. MacDonald and Garcia (2003) noted that from the 1920s through 1950s important steps were taken to increase access of Latinos/as to higher education. The inception of the GI Bill, and organizations like the YMCA and the Mexican American Movement (the first Latino/a student organization founded at UCLA), helped to ignite the fight for Latino/a access to higher education (Castellanos & Jones, 2003). Other Latino/a based organizations began to sprout with the sole purpose of fighting for educational equity and access marking the beginning of a long fight for Latinos/as throughout the country. During this era, an important cohort of Mexican Americans entered the University of California, Los Angeles (UCLA) and was the first cohort of bicultural college students to receive scholarships to attend a higher education institution (MacDonald & Garcia,
The cohort is important because these Latinos/as later became some of the first Latino/a faculty during the 1960s and 1970s.

*El movimiento* in Higher Education

Activism was prominent during the 1960s as baby-boomers sought to reverse what they saw as injustices in American society (Cohen, 1998a). Desegregation and voting rights were some of the most prominent social concerns of the time. Latinos/as took note of the Civil Rights Movement and learned from African Americans how to effect positive social change for themselves (Cohen, 1998a; MacDonald & Garcia, 2003). Some of the most prominent Latino/a Chicano/a activism was happening in California, New York, and Texas on college campuses (MacDonald & Garcia, 2003).

During the span of twenty years from 1960 to 1980, the first Latino/a faculty entered higher education. Many of these faculty members obtained their degrees through benefits from the GI bill (MacDonald & Garcia, 2003). MacDonald and Garcia (2003) coined the term, *El movimiento* (the movement) for this period (1960-1980) when Latinos/as started great movements to focus attention on the inequities that existed in society and in higher education. Latino/a students conducted student protests in the universities demanding an increase of Latino/a faculty and more access into higher education (MacDonald & Garcia, 2003).

Fortunately, these protests and civil activity brought about the creation of Latino/Chicano and Puerto Rican studies programs in a few universities. The commotion and attention brought about by the protests and walkouts by Latinos/as also brought them into the spotlight on a national level. This attention led to the Office of Management and Budget Statistical Directive 15 of 1970 which created *Hispanics* as a
federally identified group (MacDonald & Garcia, 2003). This meant that Latinos/as would no longer be counted along with other groups and it also granted them greater attention by the federal government regarding many civic issues such as educational attainment, as well as benefits including financial aid funding (MacDonald & Garcia, 2003).

The newly acquired attention garnered the inception of government reports about the educational inequities which Latinos/as experienced (MacDonald & Garcia, 2003). The U.S. Commission on Civil Rights conducted the Mexican American Education Study in the early 1970s. This study identified the inequities which Mexican Americans, specifically, were experiencing in education:

In all…aspects of their education, Mexican American students are still largely ignored …In the force of so massive a failure on the part of the educational establishment, drastic reforms would, without questions, be instituted, and instituted swiftly…Not only has the educational establishment in the Southwest failed to make needed changes, it has failed to understand fully its inadequacies. The six reports…cite scores of instances in which actions of individual school officials have reflected an attitude which blames educational failure on Chicano children rather than on the inadequacies of the school program…change must occur at all levels—from the policies set in the state legislatures to the educational environment created in individual classrooms. (Quoted in San Miguel and Valencia, 1998, p. 379)

The findings highlighted the lack of equitable access to educational opportunities for Latinos/as. Unfortunately the swift change the study called for did not happen. Actually,
highly populated Latino/a communities started to suffer the closing of many of their K-12 institutions. According to San Miguel and Valencia (1998), in the 1970s many schools in "politically and economically powerless working-class and racial/ethnic minority schools were targeted for closure" (p. 386). The schools in more affluent neighborhoods, which were typically predominantly Anglo, were suffering from declining enrollment numbers and should have been the ones to suffer the closures (SanMiguel & Valencia, 1998). Instead, the affluent community members began a movement to prevent the closure of their schools and advocated for the closure of poorly funded schools located in the predominantly minority neighborhoods. It is worth noting that the predominantly minority schools were seeing an increase in enrollment and were necessary not only for the education of the children but also served as a unifying force for the community in general (SanMiguel & Valencia, 1998).

**Contemporary Issues of Access: The K-16 Pipeline**

In 2004, 54% of Latinos and 62% of Latinas who graduated from high school immediately enrolled in some type of post-secondary institution. During the 2003-04 school year, 19% of Latinos and 17% Latinas who started post-secondary education left without a degree (Ross et al., 2012). Additionally only 46% of Latinos and 53% of Latinas who first enrolled in college in 2004 as full-time degree-seeking students completed a bachelor’s degree within 6 years (Ross et al., 2012). In 2010 only 30% of Latinos and 27% of Latinas ages 25 to 34 had completed high school degree (Ross et al., 2012). In 2010 only 11% of Latinos and 16% of Latinas ages 25 to 34 had a bachelor’s degree or higher (Ross et al., 2012).
Latino/a children are at a disadvantage as soon as they step into the school grounds for pre-K (Gándara, 2010; Murray-Garcia & Garcia, 2002). According to Gándara, "only one-half as many Latino/a children as white children fall into the highest quartile of math and reading skills at the beginning (emphasis added by Gándara) of kindergarten, and more than twice as many fall into the lowest quartile" (p. 24). These gaps tend to widen as Latino/a children progress through the educational pipeline (Gándara, 2010). About one million students drop out of high school every year (Tyler & Lofstrom, 2009). Latinos/as students are most at risk of dropping out of school (Gándara, 2010). Poverty, segregation, health, nutrition, neighborhood safety, lack of educational support, and lack of role models strongly impact Latino/a student success (Gándara, 2006, 2010).

In 2010-2011, “56% of Hispanic students attended predominantly Hispanic schools” (Ross et al., 2012, p. vi). Furthermore, 38% of Latino/a students were enrolled in high poverty schools during 2010-2011 (Ross et al., 2012). Almost half (48%) of Latinos/as attended high schools which did not meet “standards based on criteria contained in the Elementary and Secondary Education Act (ESEA) Reauthorization” (Ross et al., 2012, p. vii). In 2009, just 41% of Latino/a students reported having counselors whose goal was to help them enroll in post-secondary education (Ross et al., 2012, p. vii). 12% of Latino/a students reported they had been threatened or injured at school in comparison to the overall 8% of high schools students nationally in 2009 (Ross et al., 2012). In 2010, 26% of Latinos and 36% of Latinas ages 18-24 were enrolled in undergraduate and graduate education (Ross et al., 2012). Lastly, in 2004, only 46% of Latinos and 53% of Latinas had completed bachelor’s degrees six years
after they first enrolled in post-secondary education (Ross et al., 2012). These numbers provide a glimpse of Latinos/as in the educational system, and show that much work remains to be done in order to increase their access and success.

Thompson’s (2008) study identified factors that contribute to what teachers might perceive as student apathy and lead to student attrition. The teacher-student relationship is crucial in affecting a student’s persistence. If the student feels valued, respected, and connected to their teachers they will be more likely to enjoy going to school. Thompson’s study revealed that of the Latino/a student population surveyed, only 57% felt that their teachers cared about them compared to 70% of the White students. Thompson’s finding is parallel to Valenzuela’s (1999) concept of authentic caring. Valenzuela stated that students are bound to be more engaged in classroom and curricular tasks if they feel that their teacher’s honestly and authentically care about the students’ “welfare and emotional displacement” (Valenzuela, 1999, p. 61). According to Valenzuela:

Authentically caring teachers are seized by their students and energy glows toward their projects and their needs. The benefit of such profound relatedness for the student is the development of a sense of competence and mastery over worldly tasks. [When that connectedness is absent] students are not only reduced to the level of objects, they may also be diverted from learning the skills necessary for mastering their academic and social environment. (Valenzuela, 1999, pp. 61-62)
It takes more than just delivering curriculum to engage students; caring is one of the most important keys to a student’s success and when that is absent the student’s academic success and engagement can be compromised for life.

A student’s perception of their teacher's expectations for academic success greatly affects college access. According to Thompson (2008) “a culture of high expectations for students, teachers, staff, administrators, and parents is a hallmark of high-achieving schools” (p. 51). Thompson goes on to state that low expectations tend to be prominent especially in low-socioeconomic and high-minority populated schools. Furthermore, Thompson found that even in schools with high expectations, Latinos/as and African-Americans were subjected to low expectations. The low expectations transfer into counselors’ erroneous or incomplete advising for both academics and college preparation. In the teaching sphere, low expectations are expressed through the improper and incomplete preparation for high school examinations such as the ACT and SAT. The unfortunate fact is that students perceive these low expectations and this awareness is yet another nudge pushing students out of the educational system.

Another way in which students are negatively affected by the educational system is through curriculum. Thompson (2008) highlights a comment from a focus group: “I’ve already learned a lot of American history, because I’ve lived here my whole life. So it would be nice to learn something about my culture, too” (p 52). Students have the need to see their culture and history reflected in the curriculum. Students are more likely to be engaged if the curriculum includes their cultural group because they see that as a sign of being valued. School can be an “invalidating and intimidating” (Nora 2003, p. 55) environment for Latinos/as, especially in the Euro-centered curriculum presented in our
schools. Furthermore, students “…simply do not buy into an education system that often insults them with inequitable track assignments, culturally underrepresented or irrelevant curricula, et cetera” (Murray-Garcia & Garcia, 2002, p. 725). The lack of inclusion, reflectivity, and tracking in education have a powerfully negative impact on Latino/a student success in the educational system and further alienate and exclude students from all forms of education (Murray-Garcia & Garcia, 2002; Nora, 2003; Thompson, 2008).

Parental educational attainment highly influences their children’s educational attainment. “In 2010, about 11% of children between the ages of 6 and 18 lived in a household where neither parent had earned at least a high school degree” (Ross et al., 2012, p. v). In 2010, only 16% of Latinos/as and Alaska Native children had parents who had completed a bachelor’s degree or higher (Ross et al., 2012). This lack of parental experience in higher education translates into limited parental involvement in, and educational guidance toward, higher education for Latinos/as students.

Most Latino/a parents, though, highly value education. A study by the Tomás Rivera Policy Institute through which 1,054 Latino/a parents were interviewed revealed that 96% expected their children to go on to some form of post-secondary education (Tornatzky, Cutler, & Lee, 2002). There is a clear disconnect between parents valuing education and actually getting their children to college. The disparity happens when students look to their parents for information about college and parents are misinformed or uninformed about what it takes to be admitted into college and to obtain a higher education degree.
In her study of the Latino/a overpopulation in community colleges, O’Connor (2009) found that the biggest barrier to completion of a bachelor’s degree for Latino/a students was their parents’ lack of adequate college information. Adequate access to information would help alleviate and clarify worries about college costs and also illustrate the differences in income between people with two-year and four-year degrees. According to O’Connor, Hispanic families do not see the difference and importance between the degrees nor do they think that the time and investment in a bachelor’s degree is worth the time and effort. Another important point from O’Connor’s study reveals that adequate information is lacking for Latino/a families in all socioeconomic strata, not just low-income. Fann, McClafferty, and McDonough (2009) provide insight into the information deficit experienced by parents:

Despite high expectations for educational attainment, relatively few parents have access to meaningful information to help them understand the process…immigrant parents are less likely to have access to needed information on college preparation and planning compared with second- and third-generation Latino/a parents…[they] may not feel entitled or comfortable approaching school staff to ask questions, may not know what to ask, and may be prevented from contacting school staff during regular school hours because of nontraditional work schedules. (p. 376)

Education is a family affair; therefore, it is imperative for the P-20 educational system to be intentional in their inclusion of parents in their children’s educational trajectories. Well informed parents are likely to be able to provide their children better support and
guidance through the entire education pipeline (Fann et al., 2009; Sanchez, Reyes, & Singh, 2006).

**Latinos/as in Higher Education**

In 2010, 26% Latinos and 36% of Latinas ages 18-24 were enrolled in either college or graduate school (Ross et al., 2012). During the 2007-2008 school year, 45% of Latino/a undergraduates were enrolled full-time (Ross et al., 2012). In 2004, only 46% of Latinos and 53% of Latinas had completed bachelor’s degrees six years after they first enrolled in post-secondary education (Ross et al., 2012). In 2003-2004, 19% of males left post-secondary education for financial reasons (Page, 2012).

Latinos/a higher education completion rates are very low especially when compared to the total number of Latinos/as in the U.S. (Crisp & Nora, 2010; Gándara, 2010; Nora, 2003; Page, 2012). Inadequate K-12 preparation, the need to work while going to school, lack of adequate funding, and delayed enrollment into higher education after high school graduation are all factors which hinder Latino/a bachelor’s degree completion (Arbona & Nora, 2007; Gándara, 2010; Lopez, 2009; Nora, 2003; Page, 2012; Sanchez et al., 2006).

Research cites that cultural incongruence and feelings of inadequacy in relation to academic performance also lead to the attrition of college-going Latinos/as (Arbona & Nora, 2007; Page, 2012). Additionally lack of social support to guide students through college and toward professional careers further hinders Latino/a college experiences (Rios-Aguilar & Deil-Amen, 2012). While there are programmatic efforts to mediate the inequalities that impede Latino/a college student success, Gonzalez and Ballysingh
(2012) have found that these programs are not created in a way that successfully supports Latino/a students.

Latino/a students’ success in college requires that students are supported throughout their entire time in college. The literature cites that Latino/a students encounter a variety of barriers ranging from inadequate pre-college educational preparation to insufficient social and academic support. These issues combine to create a perfect storm which, if not adequately and quickly remediated, leads to the attrition of Latinos/as in college.

The Community College

Only 46% of Latinos/as who enroll in higher education institutions are completing their baccalaureate education, furthermore, only 10% of Latinos/as between the ages of 24 to 64 obtain four-year degrees (Oseguaera, Locks, & Vega, 2009). One reason Latinos/as are not completing bachelor’s degrees is because they are concentrated in the community colleges. According to Crisp and Nora (2010), the community college is considered the gateway to the baccalaureate for 85% of Latinos/as. Although Latinos/as express an interest transferring to a university to obtain a bachelor’s degree, in reality, less than a quarter of Latinos/as will actually transfer (Fry, 2004).

The concentration of Latinos in the community college and the low transfer rates are partly due to being uninformed about the transfer process and the benefits of a four-year degree (Alexander, Garcia, Gonzalez, Grimes, & O’Brien, 2007; Bensimon & Dowd, 2009). Some students lack transfer knowledge or transfer capital (Laanan, 2007; Laanan et al., 2010) that will help materialize their intentions to transfer (Bensimon &
Dowd, 2009). Some studies have found that Latino/a students haphazardly transfer when they are encouraged to consider transferring (Bensimon & Dowd, 2009).

Research on the perceptions of students, faculty, counselors, and administrators has helped to identify institutional barriers which hinder transfer for Latinos/as. Specifically, a case study by Ornelas and Solorzano (2004) revealed that there are great discrepancies between what Latino/a students need to transfer and the support institutional agents provide to enable transfer. Interviews with student participants revealed that barriers to transfer include: lack of institutional commitment to transfer; lack of access to information; being the first in the family to attend college; a lack of information about how to navigate the higher education pipeline; and inadequate K-12 educational preparation along with outside responsibilities.

Counselors noted that the most important barriers for Latino/a students' transfer success were the time they allotted to outside responsibilities and inadequate K-12 preparation. Faculty reported that they did not have enough transfer information to share with the students and this hindered their ability to help students transfer. For the most part, administrators at the college believed that they were transferring a proportionate number of Latinos/as compared to the other groups. Unfortunately, the administrators beliefs were different from transfer numbers providing evidence to interviewers that there was a large disconnect between perceived and actual student transfer needs and success (Ornelas & Solorzano, 2004).

Alexander et al. (2007) suggest that Latinos/as enroll in non-academic vocational programs and forego plans to transfer because they need preparation for immediate employment. Others note that the prominence of vocational programs and the ever-
changing mission of the community college contributes to the higher availability of community colleges that focus on vocational education (Wassmer, Moore, & Shulock, 2004) and leave fewer opportunities for the academic preparation that leads to transfer. Colleges with vocational education missions have lower transfer rates and Latinos/as are disproportionally enrolled on these campuses (Wassmer et al., 2004).

The high concentration of Latinos/as at the community college and their lack of transfer to four-year institutions are problematic. Even more problematic is the fact that although research has shed light on the issues which hinder Latino/a student transfer, transfer rates for this population continue to be stagnant due to a lack of action to ameliorate these problems (Arbona & Nora, 2007; Crisp & Nora, 2010). Increased access to transfer information and consistent intentional guidance and support from peers as well as institutional agents can help mediate the barriers Latinos/as encounter in the transfer process (Arbona & Nora, 2007; Laanan, 2007; Laanan et al., 2010).

_Beyond the K-16 Pipeline_

Legal status is another important barrier to Latino/a student academic success. Placing legal status on top of all the barriers already discussed creates a dreary future. Latinos/as represent almost 80% of the undocumented population in the U.S. (Passel, 2006). About 80,000 undocumented students “reach high school graduation age every year” (Perez et al., 2009). Of these high school graduates, approximately 13,000 enroll in public colleges and universities across the country” (Passel, 2006; Perez et al., 2009, p. 2) Perez et al. (2009) catalog the extra stressors faced by undocumented students:

- Exclusion and rejection due to their undocumented status
- Self-consciousness about having a funny accent when they speak English
• Familial and internal conflicts faced while trying to fit in to mainstream society and their Latino/a household
• Feelings of loneliness and marginalization

Undocumented students also struggle because their educational opportunities decrease significantly after high school. Currently, the federal government grants all children, undocumented or not, the right to an education from Pre-K through high school. Then the state governments decide if undocumented students will be allowed to participate in post-secondary education. Currently the states of Texas, California, New York, Illinois, Kansas, New Mexico, Washington, Utah, and Massachusetts have granted undocumented students access to higher education and in-state tuition (Perez et al., 2009). Some of the states, such as Texas, even offer some state-sponsored scholarship money for undocumented students.

Since many undocumented students are of low-socioeconomic status, it is virtually impossible for them to attend institutions where tuition is almost double of what it would be if they were legal citizens. However, Alexander et al. (2007) noted that despite the tuition savings provided in some states, college access remains an economic impossibility for many undocumented students who opt out of a college education because they must depend on themselves to raise the money for school. In June of 2012, though, President Barrack Obama “signed a memo calling for deferred action for certain undocumented young people who came to the U.S. as children and have pursued education or military service [in the U.S.].” (Immigration Equality, n.d., http://immigrationequality.org/issues/immigration-basics/daca/). What this means is that undocumented youth who meet certain criteria can apply for employment authorization
and work under the protection of U.S. law. Deferred Action is providing qualifying
undocumented youth the opportunity to work in the U.S. legally and this is allowing them
to fund their education in ways which had not been legally possible before.

*Latino/a Health Professions Degree Attainment*

It is important to keep in mind that Latinos/as in the health professions, at all
levels of educational attainment, comprise 5.9% of the entire healthcare workforce
(National Council of La Raza, 2009). Santiago (2012) states that in 2009-10, 70% of the
health professions and health professions related degrees conferred to Latinos/as were
certificate and associate’s degrees in health support occupations. Health support
occupation degree programs are more accessible for students due to their relatively fast
time to degree completion, moderate price, and the quickness with which it leads
students into well-paying jobs.

On the other hand, Latinos/as had a representation of 4-6% in graduate level
health professions degree programs (Santiago, 2012). In 2009-10 Latino/a health
professions degree attainment was as follows:

| **Total degrees and certificates awarded to Latino/a and to all students in health fields by academic level: 2009-10** | **ALL STUDENTS** |
|---|---|---|---|
| **Academic level** | **# Hispanic** | **Total** | **% Hispanic** |
| Certificate | 20,839 | 111,393 | 19 |
| Associate | 19,351 | 181,484 | 11 |
| Bachelor | 9,844 | 132,074 | 7 |
| Master’s | 4,069 | 69,753 | 6 |
| 1st Professional | 2,635 | 53,301 | 5 |
| Doctoral | 142 | 3,956 | 4 |
| Total: | 56,880 | 551,961 | 10 |

Source: U.S. Department of Education, National Center for Education Statistics, IPEDS, 2009-12,
Completions survey
The numbers speak for themselves. Latinos/as complete very few health professions related degrees at the bachelor’s, master’s, and doctoral levels—all levels of education required for participation in the allied health professions. Research states that increased diversity increases patients’ health capital and access to healthcare. Moreover, diversity provides cultural congruence that increases health benefits to the patient and ensures greater advocacy on behalf of Latino/a patients (Garro, 2005; Gilliss, Powell, & Carter, 2010; Komaromy et al., 1996; Mitchell & Lassiter, 2006; Saha & Shipman, 2006; Santiago-Irizarry, 1996; Shaw, 2010; Vogt, 2009; Vogt & Taningco, 2008). These are just some of the reasons that merit a study of Latinos/as who have completed graduate level allied health degrees.

STEM Literature

In order to successfully progress through the health professions pipeline, students must satisfactorily complete pre-requisite courses in science and math. Additionally substantial number of courses must be completed in STEM (science, technology, engineering, and math) subjects to prepare students for the rigorous science-based courses they will take in their health professions degree programs. Thus, this section will focus on the success of minorities in STEM coursework since success in these courses determines students’ eligibility (and predicts success) in their health professions degree.

The information in this section is aggregated from African-American, Native-American, and Latino/a students since many of the issues faced by these groups are similar. When differences emerge between these three groups, they will be highlighted.
Completion Rates

Literature focusing on minorities in STEM emphasizes the dire need to recruit and retain underrepresented students. As of 2011, 2.7% of African-Americans, 3.3% of Native-Americans and Alaska Natives, and 2.2% of Latinos/as had obtained a bachelor’s degree in a STEM field by the age of 24 (Committee on Underrepresented Groups and the Expansion of Science and Engineering Workforce Pipeline; Committee on Science, 2011). Ironically, a similar number of African-American and Latino/a students enter universities with the intention of majoring in STEM as White and Asian-American students (Anderson & Kim, 2006). However, after six years in college Latinos/as and African-Americans are less likely to have completed their STEM degree compared to Whites and Asian-Americans (Anderson & Kim, 2006). African-American and Latino/a students persist in their STEM majors during their first years at a university but begin to struggle during their last years at the institution (Anderson & Kim, 2006; Chen & Weko, 2009).

The majority of Latinos/as who completed STEM degrees during 2009-10 completed bachelor’s degrees which make them candidates for service occupations rather than professional occupations (Santiago & Soliz, 2012). Furthermore, the Latino/a workforces in STEM are highly concentrated in blue collar and service occupations (Santiago & Soliz, 2012).

Hispanic Serving Institutions (HSIs) were an integral part of Latino/a student STEM degree completion in 2009-10 (Santiago & Soliz, 2012). An HSI is “a federal category…created in 1992 when, as a result of a provision in the reauthorization of the Higher Education Act, over two hundred institutions that were regular community
colleges, four-year colleges, and regional universities received the designation of “Hispanic-serving” institution (Bensimon et al., 2012, p. 2). To be categorized as an HSI, a higher education institution must have at least 25% Hispanic student enrollment (Bensimon et al., 2012; Santiago & Soliz, 2012).

HSIs in Florida, California, Texas, Arizona, Puerto Rico, New York, North Carolina, and Maryland had the highest concentrations of Latino/a graduates in STEM (Santiago & Soliz, 2012). According to the Hispanic Association of Colleges and Universities, 40% of all bachelor’s degrees awarded to Latinos/as “are granted by HSIs, and only 20% of the bachelor’s degrees awarded to Latinos in STEM fields are from HSIs” (as cited in Dowd, Malcom, and Macias, 2010, p. 3). HSIs can play a very important role helping Latinos/as succeed in STEM degrees if funding to HSIs is increased and if institutions make better efforts to help Latinos/as successfully complete STEM degrees (Dowd, Malcom, & Macias, 2010).

The table below details—by STEM field and degree level—the number of HSIs that awarded the most STEM degrees to Latinos/as in 2009-2010. These HSIs form part of the top 25 institutions which graduate the most Latinos/as in these fields and educational levels.

<table>
<thead>
<tr>
<th>STEM Field</th>
<th>Certificate</th>
<th>Associate’s</th>
<th>Bachelor’s</th>
<th>Master’s</th>
<th>Doctorate</th>
</tr>
</thead>
<tbody>
<tr>
<td>Biology/Biomed</td>
<td>0</td>
<td>16</td>
<td>11</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>Physical Sciences</td>
<td>0</td>
<td>13</td>
<td>14</td>
<td>13</td>
<td>3</td>
</tr>
<tr>
<td>Science Technologies/Technicians</td>
<td>8</td>
<td>9</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Computer Information Sciences</td>
<td>8</td>
<td>6</td>
<td>14</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Engineering Technology</td>
<td>12</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Engineering</td>
<td>0</td>
<td>17</td>
<td>10</td>
<td>8</td>
<td>4</td>
</tr>
</tbody>
</table>
Overall completion rates for minorities in STEM are very low. This is troublesome considering the high rate at which retirees are leaving the field. American colleges and universities are not graduating enough students to fill the gaps in the STEM workforce created by retirees. It is disturbing that the fastest growing groups in our country, minorities, are not being properly trained, recruited and attracted to this field to continue the work of those who are leaving.

Barriers to Minority STEM Completion

K-12 Education

Studies have found that minority students’ aspirations to major in STEM fields start to decline as early as 4th grade (Riegle-Crumb, Moore, & Ramos-Wada, 2011). In their study, Riegle-Crumb et al. (2011) found that young African-American males have aspirations equal to White males when it comes to future science and math careers. Additionally, Latino/a youth did not differ greatly from their White male counterparts but Latino/a aspirations for a career in science declined earlier in their schooling careers. In the end, the researchers found that students who are not engaged in science and math courses early in their educational trajectories are least likely to aspire to careers in those fields. This was especially true for Latina and African-American females whose aspirations are diminished due to external factors. Additionally, success in mathematics has been noted as a major gatekeeper to college for students of color (Elliott & Ewoh, 2005; Gándara, 2006; Mathews-Aydinli, 2008; Riegle-Crumb et al., 2011). Gándara (2006) notes that when students don’t succeed in math and science courses in the K-12 pipeline, their chances of attending college at all are greatly compromised.
One of the biggest reasons for this early disengagement in science and math stems from the lack of incorporation and acknowledgement of students’ diverse ways of knowing. Atwater (2000) underscores “White, middle class, Protestant culture is considered the norm and every other culture is considered “deficient” and has no relevancy in the science classrooms” (Atwater, 2000, p. 172). This problem is exacerbated by the fact that teachers do not have a wide knowledge about the communities from which their students come (Atwater, 2000; Gándara, 2006). Lack of community knowledge and culture competency hinders teachers’ ability to incorporate and utilize community culture to advance and maximize student learning. Lack of culturally congruent teachers in K-12 classrooms aggravates the problem.

Teachers in minority classrooms lack proper qualifications to effectively teach math and science classes (Atwater, 2000; Ross et al., 2012). In California, for example, “44% of math courses at high-poverty-level high schools and over 90% of such courses at high-poverty middle schools in California were led by teachers without mathematics certification” (Taningco, Mathew, & Pachon, 2008, p. 5). This lack of quality teachers further hinders minority student success in STEM.

Language barriers also hinder minority student success in STEM. The number of English language learners (ELL) between the ages of 5-17 more than doubled between 1980 and 2009 from 4.7 to 11.2 million (U.S. Department of Education, 2012). Furthermore, in 2009, there were 2.7 million school-aged children who spoke a language other than English and who spoke English with difficulty; about 73% of these children were Spanish speakers (U.S. Department of Education, 2012). ELL and students who enter the classrooms with varying language ability may be seen as
deficient in science and math coursework (Atwater, 2000; Gándara, 2006). What is most
distressing is that these subjects tend to be less language dependent and “and
therefore among the only accessible non-ESL classes in which ELLs can enroll”
(Callahan & Gandara, 2004, p. 116).

On one hand we have an aging and declining STEM population. On the other
hand, we have a young and growing minority population. It seems fitting that we would
try to capitalize on the growth of our minority populations to help us replenish the retiring
STEM workforce. “Minorities who are currently underrepresented in Science &
Engineering…currently embody a vastly underused resource and lost opportunity for
meeting our nation’s technology needs” (Committee on Underrepresented Groups and
the Expansion of Science and Engineering Workforce Pipeline; Committee on Science,
2011, p. 2).

Postsecondary Education

Students who are most likely to succeed in STEM fields enter postsecondary
education straight out of high school, are 19 years old or younger, have parents who
have completed a bachelor’s degree and come from families who belong to higher
socio-economic levels. Furthermore, students who enroll full-time and do not work while
in school tend to have better chances of completing their STEM degree (Chen & Weko,
2009; Griffith, 2010). Institutions that focus on the experiences of undergraduate
students and their academic success, as well as those with relatively bigger numbers of
women and minority PhD students, are more likely to retain undergraduate female and
minority students (Griffith, 2010).
Introductory STEM coursework is often considered to have a “weeding out” effect but university faculty don’t see a need to change the way their courses are taught. This “weeding out” effect is most detrimental to the success of minority students (Bayer, 2011). The report by the Bayer Foundation (2011) found that although faculty acknowledge the negative effects of “weeding out” courses, few deem it necessary to change these courses.

Students majoring in STEM have suggested that a few ways to rid STEM courses from their chilly climate is by incorporating pedagogies which acknowledge different ways of knowing. This would help to make classes seem more inclusive and welcoming and less as part of the “weeding out’ process (Palmer, Maramba, & Dancy, 2011).

Faculty strongly affect minority student STEM experiences and persistence. A students’ ability to successfully connect and have meaningful relationships with faculty on their campuses increases the chances of retention and success (Hernandez & Lopez, 2004-2005). Faculty have also been found to be the people most likely to discourage women and minorities from persisting in STEM careers. Moreover, STEM department chairs acknowledge that minority students tend to feel isolated in STEM courses (Bayer, 2011). Finally, faculty and student cultural incongruence continues to be a factor in STEM education at the postsecondary level. The lack of minority faculty in STEM affects students’ ability to connect and integrate into campus life (Chen & Weko, 2009).

African-American, Latino/a, and Native-American students tend to favor careers and degrees that will improve social conditions and discover that is not the goal of
STEM degrees (Bonous-Hammarth, 2000). Additionally, the chilly academic environment of STEM departments is culturally incongruent and conflicts with their personal and cultural values (Bonous-Hammarth, 2000). Thus, academic advisors steer minority students away from STEM degrees by informing them of career opportunities in which they could help meet their community’s needs (Grandy, 1998).

For minority students who remain in STEM, their peer networks become a very strong source of support that leads to completion and persistence (Palmer et al., 2011). Furthermore, participation in STEM related clubs and organizations helps minority students find a home on campus through which they can obtain information to help them persist (Cole & Espinoza, 2008; Palmer et al., 2011). On the other hand, some studies have found that participation in extracurricular activities and non-academic endeavors can negatively impact GPA (Astin, 1993; Cole & Espinoza, 2008).

Lack of financial aid and the expense of STEM degrees further deter the success of minorities in STEM. Minorities who are recruited to institutions to major in STEM sometimes enjoy the benefit of financial assistance. However, this assistance is often not enough to keep them financially stable through their second year and beyond (Taningco, 2008). Moreover, and for Latinos/as specifically, there may be reluctance to take out students loans to pay for educational expenses (Taningco et al., 2008).

Minority students majoring in STEM fields face many challenges including: inadequate K-12 education, post-secondary institutional barriers, cultural incongruence, and lack of financial assistance. Minority student success in STEM education is imperative in order to successfully progress through the health professions pipeline.
Students’ inability to do well in STEM creates yet another barrier to their admission and graduation from health professions and allied health graduate programs.

Health Professions Literature

Studies on underrepresented students in health professions education have mainly centered on academic characteristics, graduation rates, absence from, and lack of participation in the field as seen in studies by Alexander et al. (2009), Barr et al. (2008); Cooney et al. (2006). There is also a high volume of research focusing on the necessity to increase the admission and success of underrepresented students in health professions education because it is believed that workforce diversity will render improved care, increased access for medically underserved populations, and an overall improvement in healthcare (Komaromy et al., 1996; Saha & Shipman, 2006; Santiago-Irizarry, 1996). The majority of these studies tend to focus exclusively on physician education, therefore, little is known about the educational experiences of the other health professionals who make up 60% of the healthcare workforce. Additionally, much of the research that exists on underrepresented students in health professions academic programs tends to group students into one minority category, often foregoing the disaggregation of data to study the individual experiences of students in one ethnic or racial group. Consequently, few studies focus specifically on the experiences of Latinos/as in any of the health professions and even fewer focus on the experiences of Latinos/as in allied health.

This section of the literature review covers findings related to underrepresented students in the health professions. The sections within the review represent the topics most talked about in the literature.
Pre-Health Professions Coursework

Health professions preparatory coursework is considered an important barrier to underrepresented student success in the health professions pipeline. Alexander et al. (2009) acknowledge that when minority students struggle in health professions gateway courses they may shift away from health professions degrees. They also found that African-American and Latino/a students were significantly less likely to earn a grade of A or B in health professions gateway courses than their White counterparts. Moreover, health professions preparatory course averages for African-American and Latino/a students were lower than those of White students. On a 4.0 scale, African-American students had a 1.70 average and Latino/a students had a 1.94 average while White students had a 2.57 average. Even with these course averages, Alexander et al. (2009) found that African-American, Latino/a, and Filipino students were more likely to persist in the completion of at least four gateway courses while this was not the case for White students.

Although persistence in gateway course completion is important, low grades in health professions preparatory courses are problematic since entrance to health professions programs is based in part on a students’ grade point average specifically in these courses. Moreover, when admissions committees see that students have struggled in these courses they are less likely to admit those students predicting that they might also experience academic hardship in the science courses at the health professions school level. Given the low number of seats available in health professions degree programs and the financial and programmatic consequences of having students
drop out, admissions committees tend to favor admitting students who have done well in all their previous academic coursework since they are less likely to drop out.

Barr et al. (2008) conducted a study to determine what factors increased or decreased underrepresented students’ intention to major in a health professions degree. Coursework was, once again, identified as one of the main factors affecting persistence. Chemistry proved to be specifically difficult and acted as the “weed out” course at the campus where the study took place. Per the study, students who had positive experiences in their health professions preparatory courses tended to persist in their health professions career plans. Students who had bad experiences in the same courses typically lost interest in health professions careers. 75% of the uninterested students noted that their interest had been lost due to their experiences in health professions preparatory courses. This was true mainly for women and underrepresented minority students in the sample (Barr et al., 2008).

Zayas and McGuigan (2006) interviewed high school students to determine what factors encouraged and discouraged them from choosing to become health professionals. They found that the students also mentioned that chemistry would be a “weed out” course in college. The perception of the difficulty of the health professions preparatory courses proved to be the most important reason why students would not consider becoming a health professional.

**Social Support System**

Almost every study reviewed for this report highlighted the desperate need for better social, academic, and professional support that underrepresented students require to succeed in the health professions pipeline. Underrepresented students who
achieve enrollment into health professions programs tend to persist due to a variety of support networks (Pyskoty, Richman, & Flaherty, 1990). Therefore it is imperative to determine whose support is required and what it does for the underrepresented student interested in pursuing a health profession.

Family Members

Zayas and McGuigan (2006) found that family members can strongly influence a student’s desire to become a health professional. Family members who are health professionals are a fountain of information which is invaluable for the student. Through that family member, the student gets a clear picture of the day-to-day professional and personal demands and how to best cope with them. They get to see how much time the health professional has to spend at work, the quality of that time, and the effects of the time spent at work on the health professional. Additionally, students get to see the type of lifestyle afforded to the health professional as it relates to quality of life. Moreover, since the family member has been through health professions education they can help dispel misconceptions about the health professions academic and professional career and become sources of support for the student.

Since only 5.9% of Latinos/as are health professionals (National Council of La Raza, 2009), it is highly likely that few Latino/a children will have a health professional parent at home. It is therefore imperative that outreach programs include familial components so that the entire family can learn what is necessary for a student to achieve the successful completion of a health professions degree. It is for this reason that Zayas and McGuigan (2006), and Cooney et al. (2006) recommend that health
professions outreach efforts include family programming because family influence in the students’ choosing of and persistence in, the health professions is highly important.

Campus Climate

Research by Alexander et al. (2007), Barr et al. (2008, Cooney et al. (2006), and Zayaz and McGuigan (2006) states that support provided at the school level is imperative for the success and persistence of underrepresented students in the health professions. Alexander et al. (2007) specifically address the need for students to have academic support throughout the entire time they are taking health professions preparatory courses. They stress that the support should be ongoing and not focused on specific courses but holistic. While grades are important for persistence, Alexander et al. (2007) note that even students with good grades leave health professions education because they lack academic and social support on campus.

Barr et al. (2008) also highlighted the need to improve support efforts at the academic level. In their study students explicitly stated that better academic advising and improved support from their faculty would greatly improve their health professions academic experiences. Moreover, peer-to-peer support is another area in which students wish to see more effort because they highly value and benefit from their peers’ advice and experiences in health professions preparatory courses.

Murray-Garcia and Garcia (2002) recognized that the American school system is permeated by individualistic values which do not necessarily align with Latino/a students’ cultural values of cooperation and comunidad. They acknowledge that it can be difficult for students who value comunidad to excel in an educational system that discourages “cooperative approaches to achieve the same goal” (p. 726). This alone
should provide great impetus for the educational system to devise and provide a variety of student support sources that build community as they positively impact successful completion of academic degrees.

Clinicians as Role Models

Gonzalez et al. (2010) found that students who had role models in their health profession of choice had an easier time overcoming difficulties to achieve their health professions career goals. One of the Latina students’ in Gonzalez et al.’s study seemed to be taking her health profession’s preparatory coursework in stride and was not letting the pressures overcome her. The researchers assert that the student was coping well with the highly stressful health professions preparation because of her access to a physician who was providing insight about the profession and also helping her prepare, via discussions and readings, for the stresses that would continue to come her way.

Conversely, Gonzalez et al. found that another student in their study reported that being a pre-med major at her institution was hard and lonely work. She was not connected to people on campus who were reinforcing her decision to be a pre-med major nor did she feel like people were there to help her. She had to keep reminding herself that she chose her major due to the great feeling she felt when she volunteered during her high school years. She held on to the memory of that feeling to persist in her pre-medical education whereas the other student was constantly supported by her physician mentor as well as her peers in the pre-medical student organizations she joined.

Although students may not always have access to clinician mentors, it is important for them to consider ways in which they can be supported through their health
professions career goals. It is imperative that students make connections with people who will help advance and compliment their health professions education. Even less formal contact with a students’ own dentist, pharmacist, physician assistant, or family physician helps expose students to the health professions and can serve to dispel misconceptions about health professions educational preparation (Zayas & McGuigan, 2006). Having these connections may make the daunting task of becoming a clinician more attainable and manageable.

Cost of Health Professions Education

The costs of health professions education often impede underrepresented student enrollment into health professions education. Grumbach and Mendoza (2008) found that between 1990 and 2005 few health professions programs experienced increased numbers in their underrepresent student graduates. The health professions programs that did experience growth were, as noted by Grumbach and Mendoza, less expensive degrees which “do not require doctoral education for licensing” (p. 415).

Parents interviewed by Zayas and McGuigan (2006) expressed that the only reason their children would not pursue health careers was the prohibitive cost to obtain those degrees. The unfortunate truth is that health professions education, like all of higher education, continues to be out of reach for many people. Roman (2004) noted that most students graduate from medical school with an average of $109,000 of debt. This number can be monumental especially to Latino/a families whose median household income is estimated to be $38,667 (DeNavas-Walt, Proctor, & Smith, 2011). Thus, it is common that people will opt out of these careers due to their extreme financial costs.
“Prior to 1968, only about 2.5% of American physicians were African-American [most of them trained at Historically Black Colleges and Universities] and less than 0.2% of medical students were Mexican American, Puerto Rican, or American Indian/Alaska Native” (Carlisle et al., 1998, p. 1314). Although the landmark Supreme Court case *Brown v. Board of Education* (1954) officially deemed “separate but equal” educational facilities unlawful, it was through Title VI of the Civil Rights Act of 1964 that public institutions of higher education were officially desegregated, offering educational opportunities to all students (Cohen, 1998a; Harper et al., 2009; Moreno, 2003).

Simpson and Aronoff (1988) note that in the 1970s there was a dramatic increase in the number of Latino/a and African-American physicians due to the growing minority applicant pool, increased availability of financial assistance, the growth of medical school seats, and the implementation of programs focused on minority physician recruitment. The continued growth of the minority physician population seemed so unstoppable in the post-affirmative action era that in 1985 the Bureau of Health Professions estimated that by 2000 there would be a 156% increase in the number of African-American physicians and a 71% increase in the number of Latino/a physicians (Simpson & Aronoff, 1988). Even though at the time of Simpson and Aronoff’s article the 1985 projections had not materialized, there had been an impressive increase in the number of minority physicians and future projections still seemed promising.

During the years when the projections of minority physicians were so favorable, courts in jurisdictions ranging from the district, state, circuit, to the U.S. Supreme court
heard and decided cases that affected affirmative action admissions policies in public colleges and universities around the country. As the use of race for admissions purposes has been in flux, so too have the numbers of minority students who have attended and graduated from schools of health professions. Grumbach and Mendoza (2008) note that from 1995-2000, enrollment numbers for minority students drastically decreased due mainly to the reduction in applications to medical schools in Texas and California. Grumbach and Mendoza (2008) attribute these massive reductions to the legal cases which challenged affirmative action admissions policies, specifically citing that many of the court cases centered on law and medical schools’ race-based admissions processes and policies.

As cases have been heard in the courts, multiple constituencies including higher education institutions, professional and educational organizations, as well as consumer advocacy groups, have submitted documentation in support of the use of race in admissions processes due to the great need to have a diverse and growing healthcare workforce. Some institutions have tried to devise lawful admissions processes that still render diverse applicant and enrollee pools but not enough institutions have been able to do this (Grumbach & Mendoza, 2008).

_Underrepresented Student Experiences in Health Professions Education_  

Literature on the need to increase healthcare workforce diversity typically includes issues of access and success for underrepresented students in allied health and health professions degree granting institutions. Mitchell and Lassiter (2006) emphasize the need to consider the many troubles underrepresented applicants confront in K-16 education that makes their entrance into graduate allied health degree
programs difficult. They acknowledge that a large portion of underrepresented students come from communities where schools may have been deficient in their college training course offerings, facilities, and equipment thereby affecting students’ educational outcomes. That in turn affects their success in college and may hinder the possibility for them to enter health related baccalaureate and post-baccalaureate education. For those reasons Gilliss, Powell, and Carter (2010); and Mitchell and Lassiter (2006) advocate that health professions degree granting institutions create partnerships with undergraduate institutions to expose underrepresented students to the health professions as well as model and facilitate opportunities that foster academic success.

Allied health literature, which addresses admissions criteria repeatedly, noted that students who came from community colleges are typically less prepared and more prone to leave health professions degree programs before completing their degrees (Newton, 2008; Pinter, 1983; Wheeler & Arena, 2009). It is extremely problematic that health professions degree granting institutions consider community colleges and less selective universities (per the U.S. News and World Report rankings) inadequate in preparing the students. A large number of Latino/a students attend community colleges and less selective institutions and therefore may be seen as unfit for graduate health professional programs. Maize et al. (2010) advocate for remediation and special assistance for underrepresented students, much like what is done at undergraduate institutions, because the benefits of successful remediation will be felt within the healthcare workforce and among underserved patient populations.

Literature in the fields of allied and public health, anthropology, health professions education, and underrepresented students and patient advocacy agree that
more needs to be done to increase the diversity of the healthcare workforce. Improving educational outcomes for Latino/a students will render multiple benefits for underserved and underrepresented populations. Moreover, the nation will benefit from improved economic and public health outcomes thereby making investments of time, education, and money worthwhile.

Health professions literature expands on the issues underrepresented and Latino/a students continue to face during their undergraduate preparation en route to health professions schools. Many of the issues seen in the K-12 pipeline follow students into STEM and health professions education. From the literature, it is evident that some underrepresented students have foundational problems which they cannot shake, even during their health professions educational career. The problems are compounded in health professions programs because these programs tend to be academically rigorous and lack academic and social assistance. Additionally, the high cost of health professions education is prohibitive for underrepresented students.

Affirmative action processes in health professions education have also had a negative effect on underrepresented student access to health professions education (Grumbach and Mendoza, 2008) and consideration about how to reverse those effects is necessary.

Allied Health Literature

A systematic literature search for this study focused on minorities and Latinos/as in the allied health professions. The search rendered four articles. The articles focused on the need to increase the diversity of the allied health workforce, holistic admissions criteria, barriers to access for underrepresented students, and for-profit allied health
school attendance. Of the four articles, only two were research based, the other two were commentaries. All articles were published in the *Journal of Allied Health*.

Allied health researchers acknowledge and recognize the dire need to diversify the workforce. Like the other literature already covered in this review, allied health literature emphasizes the need for a demographically and culturally congruent allied health workforce as well as holistic admissions processes that consider community service, intercultural experiences, and ethnicity (Helm, Grabarek, & Reveal, 2003); this may increase more diverse ethnic participation.

Although a lot of the literature focused on minorities in allied health echoes much of the STEM and health professions literature, two additional important points emerged. The first point is that allied health programs at for-profit schools are enrolling large numbers of underrepresented students (especially African-American and Latinos/as) although attrition of underrepresented students from these institutions is also high (Donini-Lenhoff & Brotheron, 2010). Donini-Lenhoff and Brotheron (2010) emphasize that in order for students to succeed in higher education, regardless of non-or-for-profit designation, they need to enroll in college immediately after high school, they should not work more than 25 hours per week, and they need financial assistance, as well as social/academic support inside and outside the classroom. Most studies cited in this literature review highlight these components as necessary for the success of underrepresented students but Donini-Lenhoff & Brotheron’s 2010 study was the only one that highlights for-profit schools.

Another important addition to the literature highlights systemic issues that inhibit diversity. Baldwin, Woods, and Simmons (2006) cite financial hardship, and admissions
processes as barriers to underrepresented student success. They go a step further by noting that recruitment of underrepresented students is underfunded and understaffed. Moreover, “…the “proof” that diversity is a concern is in the declaration, not the admission process or [academic] program selection” (Baldwin et al., 2006, p. 117).

One of the reasons for this lack of action to diversify allied health is the lack of allied health academic program accrediting bodies to make diversity one of the pillars by which programs are evaluated and accredited. According to Baldwin et al. (2006), implementing a proper process by which allied health programs are evaluated on the diversity of their programs might actually improve diversity. Making diversity part of the accreditation process would ensure that classes are diverse. The current focus for allied health accreditation continues to be student pass rates for board exams. Thus, if diversity, recruitment, retention, and graduation of underrepresented students became measures of quality instituted by accrediting bodies, there might be more and real efforts to increase diversity in allied health.

The allied health literature review conducted for this study rendered limited insight into the experiences of underrepresented and Latino/a students in the field. The four articles which were relevant mostly echoed the issues already covered in health professions, STEM, and general higher education literature. The two significant additions allied health literature provides are a quantitative review of underrepresented students in for-profit allied health programs and commentary proposing the idea to have accrediting bodies implement recruitment, retention, and graduation of underrepresented students as an accrediting standard. The limited findings of allied health literature further support the notion that more research must be conducted in this
field especially focused on the experiences of underrepresented students and
Latinos/as specifically.

Theoretical Framework

Latinos/as are considered an at-risk population due to their high poverty levels, segregation (Arellano & Padilla, 1996; Gándara, 2010; Smokowski, Reynolds, & Bezruczko, 1999), low educational attainment (Arellano & Padilla, 1996; Gándara, 2010; Nora, 2003), and prevalence in low-wage jobs (Gándara, 2010; Santiago, 2012), among other things. As such, Latino/a educational and professional success is, unfortunately, erratic. Furthermore, most of the research on Latino/a education has centered on educational failure rather than achievement (Alva & Padilla, 1995; Arellano & Padilla, 1996; Gándara, 1982). Smokowski et al. (1999) recognized that important resilience factors aid underrepresented and historically underachieving student populations to succeed in spite of perceived and prescribed risk-factors.

Perez et al. (2009) developed an academic resilience framework to describe the academic successes of undocumented Latino/a youth. Perez et al.'s (2009) academic resilience framework is founded on the notion that Latino/a undocumented youth encounter a variety of risk factors that require the application of resilience, personal protective factors, and environmental protective factors to achieve academic success.

The risk factors identified by Perez et al. (2009) include working more than 20 hours per week while in school, feeling a sense of rejection due to undocumented status; low parental educational attainment, and belonging to a large family. These risk factors were identified after studies repeatedly found them to be hindrances to Latino/a youth’s academic success (Perez et al., 2009).
Resilience, personal protective factors, and environmental protective factors help to mediate risk factors that might negatively affect academic outcomes (Perez et al., 2009). Resilience theory “though it is concerned with risk exposure among adolescents, is focused more on the strengths rather than deficits and understanding healthy development in spite of high risk exposure” (Perez et al., 2009, p. 154). Personal protective factors for academic resilience include a students’ “positive self-evaluation of their academic status at school…and a sense of control over their academic success and failure, [therefore], high academic achievers excelled because they believed in their own capabilities to achieve” (Perez et al., 2009, p. 155). Environmental protective factors for academic resilience included having parents and peers who value education, participating in extracurricular and volunteer activities and growing up with both parents (Perez et al, 2009).

All of these protective factors for academic resilience were measured against students' academic outcomes (Perez et al. 2009). Perez et al. (2009) studied students’ GPA, academic awards, and involvement in honors or advanced placement (AP) courses to “understand the academic performance patterns of undocumented Latino[a] students” (p. 163).

In line with Perez et al.'s (2009) theory, participants' in this study exhibited a high sense of control over their academics and belief in their capabilities thereby supporting the personal protective factors theorized by Perez et al. (2009). All study participants came from homes where both parents were still married, all participants had personal and social networks in which education was valued, and all of them participated in volunteer and extracurricular activities. These environmental factors were imperative
parts of the solid foundation required for all study participants to do well according to Perez et al. (2009).

In this study, I use Perez et al.’s (2009) academic resilience framework as a counter-story to the research that frames Latino/a students in an academically deficient perspective. The theory will be modified to inquire about Latino/a allied health graduate degree alumni’s post-secondary educational experiences rather than the high school experience. Hence, the academic resilience framework is employed to identify the personal and environmental protective factors that led Latino/a allied health graduate degree alumni to remain academically resilient and successfully progress through the allied health professions pipeline.

To further frame this study, the cultural asset-based work of Tara Yosso will be applied to study the various forms of cultural wealth Latino/a allied health degree alumni employed to complete their allied health graduate degrees. Yosso’s (2005) community cultural wealth theory, which is based on Critical Race Theory, centers the research lens on the experiences of People of Color in critical historical context[s] [revealing] accumulated assets and resources in the histories and lives of Communities of Color…Community cultural wealth is an array of knowledge, skills, abilities and contacts possessed and utilized by Communities of Color to survive and resist macro and micro-forms of oppression. (p. 77)

Community cultural wealth challenges how some researchers have interpreted Bourdieu’s cultural wealth theory (Yosso, 2005). Cultural wealth (Bourdieu & Passeron, 1977)
refers to an accumulation of cultural knowledge, skills, and abilities possessed and inherited by privileged groups in society…cultural capital (i.e., education, language), social capital (i.e., social networks, connections) and economic capital (i.e., money and other material possessions) can be acquired one of two ways, from one’s family or through schooling. The dominant groups within society are able to maintain power because access is limited to acquiring and learning strategies to use these forms of capital for social mobility. (Yosso, 2005, p. 76)

The theory of community cultural wealth is a response to researchers who took Bourdieu’s idea of cultural capital as an attribute of dominant society. This attribution has given some researchers the idea that Communities of Color are deficient because they are not part of dominant society (Yosso, 2005). Furthermore, researchers have used Bourdieu’s theory to determine which communities are “culturally wealthy and culturally poor” (Yosso, 2005, p. 76). Yosso (2005) rejects these ideas and posits that Bourdieu’s theory critiqued social reproduction instead of favoring dominant society’s cultural reproduction. Through community cultural wealth, Yosso (2005) acknowledges that Communities of Color have alternate forms of cultural capital (cultural wealth) that support academic success and college going.

Community cultural wealth is based on Solórzano’s (1997 & 1998) suggestion that five critical race theory principles should be applied to educational practice, policy, and research: “(1) the intercentricity of race and racism; (2) the challenge of dominant ideology’ (3) the commitment to social justice; (4) the centrality of experiential knowledge; (5) the utilization of interdisciplinary approaches” (Yosso, 2005, p. 73).
Community cultural wealth provides an explanation of the ways in which communities of color have survived explicit and implicit forms of racism within the educational structures of our country (Yosso, 2005). Yosso identifies six types of capital that are derived from the community and aid persons of color through successful navigation of systems, specifically the educational system, in the U.S.

1. Aspirational capital refers to the ability to maintain hopes and dreams for circumstances outside of those which the family/community has experienced. Additionally, aspirational capital assumes that there is hope that goals and aspirations can be achieved in spite of perceived personal and environmental barriers.

2. Linguistic capital “includes the intellectual and social skills attained through communication experiences in more than one language and/or style” (p. 78).

3. Familial capital places a value on the knowledge attained through family including “community history, memory, and cultural intuition” (p. 79).

4. Social capital refers to personal networks and connections within the community which facilitate navigation of institutional systems and environments.

5. Navigational capital focuses on skills acquired through one’s community which aid persons as they navigate through institutional systems “not created with Communities of Color in mind” (p. 80).

6. Resistant capital “refers [to knowledge] and skills fostered through oppositional behavior that challenges inequality” (p. 80).
Figure 1 helps to visualize assets that are used by communities of color as alternative forms of cultural capital that support academic success and college going:

Figure 1. Yosso’s (2005) model of community cultural wealth.

The six types of capital Yosso theorized are combined to identify important ways in which communities of color arm their members with tools to cope with social inequities in order to achieve success in institutions that historically constricted them.
The application of academic resilience theory provides a lens through which personal and environmental protective factors that affected Latino/a allied health alumni’s educational experiences can be identified. The implementation of the community cultural wealth framework helps to categorize these factors into a framework that sees personal, familial, and community resources employed by students of color as sources of strength rather than insufficiency.
CHAPTER 3
METHODOLOGY

Rationale for Qualitative Research

The purpose of qualitative research is to understand, interpret, and describe people’s experiences, the meaning they attribute to their experiences, and “how [people] construct their worlds” (Forde, 2007, p. 5). Qualitative research is interpretivist and constructivist and places emphasis on the inductive approach (Forest, 2008). Qualitative research acknowledges that realities vary from person to person and that context also has a strong influence on a person’s experience (Creswell, 2009).

Because the purpose of this study is to capture the voices and experiences of Latinos/as who have graduated from allied health graduate programs, qualitative research, specifically testimonios (life narratives), were be utilized for data gathering. In this study though, testimonios do not focus on the entire life narratives of participants’, rather, they focus on a specific time in the participants' lives (their experiences in allied health school) much like Espino (2007) did. Testimonio methodology has been used as a qualitative method in various academic fields and “is often told by a witness, motivated by a social and/or political urgency to voice injustice and raise awareness of oppression. Testimonios are usually guided by the will of the narrator to tell events as [he/]she sees significant, and [are] often an expression of a collective experience, rather than the individual” (Perez Huber, 2009, p. 644). Furthermore, testimonios are used to “[bear] witness and [inscribe] into history those lived realities that would otherwise succumb to the alchemy of erasure” (Latina Feminist Group, 2001, p.2). According to Nuñez-Janes and Robledo (2009) “dialectically, testimonios interrupt narratives that
ex exclude and question the legitimacy of subaltern voices, and the same time speaking to or against the hegemony of other forms of expression” (p. 92). Although testimonios The Latino/a student voice has been largely omitted in health professions and allied health education literature. Providing a venue for that voice through testimonio methodology enables apt (and overdue) documentation of the Latino/a student allied health educational experience.

Testimonios have multiple players: the testimoniante (the person sharing their life narrative) and the interlocutor. As the interlocutor, I have the privilege and duty to share the testimonios of study participants and to “raise awareness to the plight endured…in order to engender progressive change in the living conditions, policies, or treatment of those peoples” (Aleman, 2012, p. 492). Thus, I have taken my role as the interlocutor very seriously and conducted my interviews through testimonio methodology with the goal of bonding and connecting with the testimoniante. Additionally, I have conducted this study owning up to my responsibility to share participants’ testimonios, which have not ever been heard, to incite change which will improve and empower the lives of the community I have selected to study. Moreover, testimonio methodology allows and demands that I challenge stakeholders to remedy the issues cited by testimoniantes in order to improve educational attainment of Latinos/as in the health professions and consequently, Latino/a healthcare outcomes.

The literature review for this study revealed that the Latino/a voice is missing from higher education and allied health literature. Moreover, it revealed that much of the literature which focuses on Latinos/as in higher education and health professions in general paints the Latino/a community in a deficient light. Lastly, the review revealed
that much of the research which does exist about Latinos/as in the health professions does not present their voice and experiences within health professions, and specifically allied health educational spaces. Therefore, I found that *testimonios* (life narratives) would be the perfect tool to draw out the voices and experiences of Latinos/as who have navigated the allied health educational pipeline as they allow me to and the participants to recover “previous experiences otherwise silenced and untold” (Delgado Bernal, Burciaga, Flores Carmona, 2012, p. 364). Through *testimonio* methodology I am empowering participants to share their stories to acknowledge that their stories as different from others, to demonstrate that they are valuable, and to allow participants to heal as they share their narratives (Aleman, 2012).

Site, Sample, and Data Collection Procedures

*Site*

One graduate allied health institution in the southern U.S. is the site from which participants were recruited. I have professional relationships with the faculty and staff at the allied health school due to the 5 years I spent working there. I contacted the associate dean of the school and was granted permission to contact departmental faculty chairs and directors of 5 graduate allied health programs so they could help me recruit study participants. The 5 allied health graduate program chairs and directors were contacted to help connect me to their Latino/a alumni in order to recruit participants for this study.

Emails were sent to the 5 faculty chairs and directors (Appendix B) telling them about the study. In the same email, the faculty chairs and directors received an attachment (Appendix C) with the suggested script of the email I asked them to send to
their Latino/a alumni on my behalf for recruitment purposes. Alumni interested in participating in the study were asked to contact me directly. As alumni participants were identified they were given the option to select our meeting location, date, and time of our face to face interviews.

**Sample**

Purposeful sampling guided participant selection. Participants for this study were: participants who met all of the following criteria:

1. identify as Latino/a, Hispanic, Chicano/a, Mexican-American, Puerto Rican, and any other roots that link the alumni to Latin-American descent;
2. were graduates of allied health masters and/or doctoral programs;
3. graduated between 2009 and 2012.

Nine Latinos/as who met the criteria volunteered and participated in the entire interview process. As stated in chapters one and two, research states that Latinos/as advance to graduate programs at very low rates. Thus, it is imperative to study the trajectories of Latinos/as who have graduate degrees in order to try to identify protective factors and pathways for Latinos/as currently in the pipeline.

The sample is small because in this study, extensive *testimonios* (life narratives) will help me to understand the “particular set of circumstances [in which participants did or endured a variety], of things…The interaction of the doing with the enduring is the process under scrutiny in small-sample research. It’s approach is therefore clinical, involving as it does careful history-taking, cross case comparisons, intuitive judgments and reference to extant theoretical knowledge” (Crouch & McKenzie, 2006, p. 493). A small sample size allowed me to delve deeper and more meaningfully into the allied
health educational trajectories of the Latino/a alumni providing an insight and richness not yet present in Latino/a allied health research literature.

A demographic questionnaire (Appendix E) was completed by study participants before the interviews began. The demographic questionnaire provided insight about participants’ familial, educational, and personal backgrounds. The information following summary contains details obtained through the demographic questionnaire and the interviews which provide profiles of study participants.

There were six female and three male participants. Luis, Victoria, Lucy, June, Miguel, Marlen and Dina identified Mexico as their ancestral home; Miguel stated that his family has Puerto Rican and Nicaraguan roots; James and his parents were both born in Latin America; Marlen’s mother is from the U.S. and Caucasian and her father is of Mexican descent. English was the first language spoken by Luis, June, Victoria, Lucy and Marlen while Spanish was the first language spoken by Lizet, James, Miguel, and Dina. Lizet, James, Miguel, Dina, and Marlen identified as being bilingual in English and Spanish. James and Lizet participated in English as a Second Language (ESL) courses. James was in ESL for two and a half years and Lizet for one year. All students graduated from high school and enrolled in college within the same year. James, Luis, and Lizet started their post-secondary education at community colleges. James was enrolled at the community college only during his first semester his college career while Luis and Lizet were enrolled for their first two years. All students completed courses at community colleges either to get ahead during summers between fall and spring semesters at the university or to take pre-requisite courses to fulfill the requirements for admission into allied health school. I asked about community college attendance since
some of the literature in allied health (Newton, 2008; Pinter, 1983; Wheeler & Arena, 2009) states that allied health students who have attended community college are bound to have more academic problems in allied health graduate programs.

Participants also shared their parents’ and siblings educational attainment and provided estimates of their family’s household income while they were in high school. The table on the next page provides details of the participants’ birthplace, allied health degree, parental educational attainment, and parent’s estimated household income while participants were in high school.
<table>
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<tr>
<th>Participant’s Pseudonym</th>
<th>Birthplace</th>
<th>Allied Health Degree</th>
<th>Mother’s Educational Attainment</th>
<th>Father’s Educational Attainment</th>
<th>Parent’s Estimated Household Income Range</th>
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<tr>
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<td>Mexico</td>
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**Data Collection**

*Testimonio* methodology was used in this study to gain insight about the educational experiences of Latino/a allied health graduate school alumni. *Testimonio* methodology is a based on the work by women of color scholars whose goal is to

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1 Since James was the only Latino student in his allied health program and due to his undocumented status I will not specify his degree in order to further protect his identity.
“document the experiences of struggle, survival, and resistance within the context of oppressive institutional structures and interpersonal events” (Perez Huber & Cueva, 2012, p. 397). Testimonios (life narratives) provide “the participants with a space to reveal and reflect on their educational experiences as mediated by race, immigration status, class, and gender” (Perez Huber & Cueva, 2012, p. 396).

Interviews took place at sites agreed upon by me and the participants. Due to the nature of testimonio methodology and because of the depth and detail it requires, study participants were asked to participate in three interviews which would last up to 60 minutes each. The first interview would consist of semi-structured questions which would allow me to get to know the participants personal, family, and educational history. The second interview was structured to allow me delve deeply into participant’s allied health educational experiences allowing me to build this knowledge upon the foundational historical knowledge acquired during the first interview. The goal of the third interview was to revisit and clarify any information acquired during the first and second interviews. Only two interviews were conducted with all nine participants and this was the case because most of the interviews exceeded the 60 minute time frame originally allotted. Interviews lasted between 40 minutes and 2 hours thereby allowing me the proper time to discuss all necessary topics. Please see Appendix D to view the interview questionnaire. Participants were asked to complete a demographic questionnaire (Appendix E) that provided demographic and familial information.

To ensure accuracy, interviews were digitally recorded and promptly transcribed.

Data Analysis Plan
Initially, data was analyzed by reading interview transcripts through open coding in order to allow me to see all the data without being bound by the theory (Merriam, 2009). Next, axial coding (Merriam, 2009) was used to create categories of data using the academic resilience theory (Perez et al., 2009) lens. Once codes were organized through the academic resilience lens, they were organized further in the context of community cultural wealth theory (2005). The final codes were divided into two main sections: pre-allied health school experiences and allied health school experiences. The pre-allied health school experiences included subsections such as: familial education, personal resilience, and family, peer, and school influences on educational trajectory. The allied health section included subsections which included: family support in allied health school, allied health academic, and support during allied health school. To view the complete interview protocol please see Appendix D.

Confidentiality

Participants' identities were highly guarded during and after the completion of the study and through subsequent publications. All participants selected when necessary were assigned pseudonyms and school names were changed in order to protect the privacy of all participants. Only the researcher had access to interview data which identifies participants.

Immediately after interviews were completed, the recorded interviews were uploaded to a computer accessible only to the researcher. Data analyzed by persons other than the researcher contained pseudonyms given to participants as another precaution to guard their identity.

Credibility and Reliability
To ensure this study’s credibility and reliability I sent study participants a draft of the findings chapters to give them the opportunity to confirm the findings (Merriam, 2009). According to Maxwell (2005, p. 111) member checks are “the single most important way of ruling out the possibility of misinterpreting the meaning of what participants say and do and the perspective they have on what is going on, as well as being an important way of identifying your own biases and misunderstandings of what you observed.” Five members provided feedback for the findings and the final findings found here are reflective of their comments and suggestions. The feedback was highly positive: “you did a wonderful job” (Lizet, personal communication, June 4, 2013), “I think you captured my experience perfectly” (James, personal communication, June 9, 2013), “I looked over the [text] and loved it! I think you did a great job…” (Dina, personal communication, June 10, 2013). Two of the participants said that participating in this exercise and having the opportunity to relive this time in their life was emotional: “Excellent job!! Your interpretation was on point. I even got a little watery eyed reading [my] account as it brought back so many great memories. Thank you for allowing me to participate” (Marlen, personal communication, June 14, 2013). June reviewed the findings with her mother: “My mom and I just read over your dissertation and we loved it! We really liked reading about June! I think you did a great job capturing my experience in grad school. It was talking with you, it was very therapeutic!” (June, personal communication, June 4, 2013).

Reflexivity, Researcher Role, and Reciprocity

Reflexivity allows the researcher to explain his/her values and expectations and how those may influence study conclusions (Merriam, 2009). With this in mind, I provide
personal information which definitely affected my research interests and ideas for this study.

I cannot remember exactly when I decided college was for me but, as early as I can remember, I have loved school. My family was an important influence in my attendance to college. When I was growing up my mom hosted a few of my cousins in our home as they went to college. My cousins Chayito, Chela, and Carlitos all came to study law, dentistry, and engineering respectively. I attended Chayito and Chela’s graduation, which in Mexico involves more than the commencement and graduation ceremony as we know it here. There is usually a Mass for all graduates and a big party, kind of like a wedding reception. The graduates all wore beautiful dresses and handsome suits. What little girl did not look forward to that?

On top of having my college-going cousins in house for some years, we had some well-educated, and even prominent, uncles. One of my uncles studied agronomy and worked for the Mexican government in a prominent position; he also had one of the biggest homes I had ever visited and every one of his children had cars. My oldest uncle Lorenzo worked in a sulfur plant in Jaltipan, Veracruz. Tio Lorenzo was so important and his work so influential that he was honored by his company by having a part of the sulfur plant named after him. When he visited our home, he would tell us about all the international travel he was able to do because his work required it and paid for it.

My mother also went to college and studied tourism at a prominent tourism school in Mexico City. She eagerly shared college stories, even the times she skipped class. Additionally, my sister and I have had the pleasure of meeting some of her best
friends from college who also eagerly shared many more stories. Aside from going away for college (and much to her brothers’ dissatisfaction) my mother even studied abroad in London for six weeks. Being the youngest of nine children and being twenty years apart from her oldest sibling, my mother was very protected by most of her siblings. Going to England to take English courses alone was an accomplishment and one of the best experiences my mother ever had. She often shared her experiences abroad with us and essentially instilled the travel bug in my sister and me.

My cultural capital growing up was pretty high because of my family’s educational and professional experiences and because they supported and promoted going to college. But, moving to the United States changed how I navigated the college system. Neither my mother nor I knew how to navigate through the American college process.

I applied to college late in the fall of my senior year, extremely late. The University of Oklahoma (OU) was the only school I applied to, I figured that if I did not make it in I would start at San Antonio College, where my mother attended classes when we first moved to the U.S. It was the last and only other option I had but I really hoped I wouldn’t have to go there. The only school visit I made was to OU the last semester of my senior year. Thankfully it all worked out!

I had a lot of familial capital which enhanced my educational experiences and my achievement but as I mentioned earlier, during the move from Mexico to the U.S. some things were lost in translation, especially information about navigating the educational system. As I have grown personally and professionally I realized that I wanted to help native and newly migrated Latinos/as have access to college going information early enough to make college a reality.
When I started my Ph.D., my heart was set on conducting research that would help increase Latino/a student access to, and success in, higher education. My research was steered to allied health post-secondary education when I started working at a school of allied health in a university medical center in the southern U.S. One specific volunteer opportunity sealed my interest in allied health. I volunteered as a clinic translator and cultural broker for Spanish speaking patients during their interactions with (usually) Anglo-American clinicians. My experiences as a translator made me question how patients without translators made their needs clear to their clinician. In addition to the language, there were other important issues that arose during these cross-cultural interactions. I wondered why some Latino/a patients were so quiet during their visits with the clinicians. Why did they forget that they were in charge instead of the person in the white coat? Patients knew I was not a clinician so why would they wait until they were alone with me to say their treatment was not working or was making them uncomfortable? They might have felt rude saying that things were not working out, or assumed the clinician knew best when really, the best treatment requires the input of the clinician and the patient. It might have been that they could relate to me on a cultural level which created a trust they had not achieved with their clinician.

In 2010 I took a medical anthropology course which delved into the national and international effects of illness and how different cultures process, experience, and cope with health issues. In class we discussed the major cultural discrepancies between majority/White clinicians and minority/diverse patient populations in our country. Until I took that course, I had not been exposed to the deeper consequences resulting from
ignoring the health issues of diverse and underserved communities. I also had not explored the national and international effects of illness and how varying cultural ideologies affect health. This made me wonder how health professions schools in the U.S. were educating the future healthcare workforce and if they were effectively teaching students to consider their potential patients’ cultural ideologies of illness. Moreover, and to put it bluntly, I also wondered if a White clinician understands how cultural barriers get in the way of patient compliance and their overall efficacy as a care giver.

I left translation appointments feeling immensely fulfilled because I knew that my cultural and language brokering helped create a safe and trusting atmosphere where the patient felt empowered to tell the clinician how things were really going. However, I was left with the realization that more Latinos/as in the healthcare workforce could have a dramatic effect on the quality of healthcare for Latino/a patients and this is what fueled my research agenda and my professional goals.

My knowledge of the allied health academics and curricular lingo was utterly helpful for building rapport with study participants. Moreover, I know that the professional relationships I developed with students (who eventually became participants for my study) helped to increase participation. A few of the alumni who volunteered to participate in the study did so in part because they wanted to help me, because they appreciated me, and because they trusted that I would honor their voices and experiences. Moreover, most of the participants believed that diversity in the healthcare workforce is imperative and that is also what led them to volunteer. I feel extremely privileged and humbled to have been trusted with the treasures that are these
participants’ experiences and it is their hope (and mine) that these testimonios (life narratives) will help to make allied health educators more cognizant of Latino/a student needs and the impact they are making in healthcare.

I did not foresee my personal experiences as barriers for the successful completion of this study. On the contrary, I know that being a Latina who worked in an allied health school for a little over five years, and who had experiences in the American educational system provided cultural congruence that enhanced rapport with study participants. Additionally, in order to ensure impartiality, member checking ensured that data was examined objectively and that the participants’ voice was clear.

Reciprocity

Since the inception of this study I have shared the results of my research from the literature review to the preliminary findings. In June of 2012, a white paper I authored which focused on the literature review for this study was published online. The white paper was commissioned by the Hispanic Association of Colleges and Universities. I take every opportunity to share my research and findings with colleagues with whom I work in a variety of higher education institutions and at a variety of conferences ranging from the American Association of Hispanics in Higher Education, Association for the Study of Higher Education, and American Educational Research Association. Most importantly, I provide better and more intentional advice to Latino/a students interested in the health professions, and allied health specifically. Families were a focus of my outreach efforts before this research study and they became even more important after this study because of their central role in the success of Latinos/as in health professions education. The insight I gained working at an allied health school
and through this study have allowed me to gather a collection of information which allows me to better support future Latino/a allied health professionals. I continue to focus my work on the experiences of all students in higher education, especially underserved and underrepresented students, and passionately bring attention to the difficulties encountered by Latinos/as in allied health education. Lastly, I will share this knowledge by publishing in a variety of journals and media.
CHAPTER 4

LIFE BEFORE ALLIED HEALTH SCHOOL: THE VALUE OF EDUCATION, PERSONAL RESILIENCE AND FAMILIAL, PEER, AND SCHOOL INFLUENCES

This study provides a glimpse into the lives of nine Latino/a allied health graduate degree alumni who completed their degrees between 2009 and 2012. The nine alumni who volunteered to participate in this study exemplify the varied academic, familial, and socioeconomic backgrounds present in our nation’s Latino/a communities. This chapter introduces study participants and provides insight about their personal and educational experiences before they enrolled in allied health school. This section specifically highlights personal, familial, peer, and school influences and how those weaved together to drive participants to want more and do more. Most importantly, this section provides vivid narratives of participants’ lives and paints a colorful picture of the wealth of familial and community members who helped students excel academically. I made sense of these findings and organized them through the community cultural wealth framework because it acknowledges and captures the many ways in which communities of color enable the academic success of their children. While participants saw their family’s roles in their educational endeavors as important, they were not privy to the theories in this study and thus not able to articulate or recognize how having a home cooked meal or being given advice about how to navigate institutional structures supported their academic success. At the end of the chapter I will highlight familial capital, one of the tenants of community cultural wealth theory, as it was the most prominent in these participant's narratives.
It is imperative to remember that, even though these students succeeded, the accounts of their experiences are important because they represent the experiences of an extremely small percentage of Latinos/as who complete graduate and specifically allied health graduate education. In 2010, 26% Latinos and 36% of Latinas ages 18-24 were enrolled in either college or graduate school (Ross et al., 2012). Furthermore, as of 2011 2.2% of Latinos/as had obtained a bachelor’s degree in a STEM field by the age of 24 (Committee on Underrepresented Groups and the Expansion of Science and Engineering Workforce Pipeline; Committee on Science, 2011). All of the participants in this study completed STEM degrees by 2011; therefore, they are part of that minute 2.2% of Latinos who completed in 2011. Please keep in mind these students form part of the very small cohort of Latinos/as who complete bachelor’s degrees and graduate education. As you read these accounts remember how difficult it would be for Latinos/as to achieve academic success if they do not have the type of academic, social, and personal support these study participants did.

Luis

Although Luis’s dad dropped out of middle school and his mom had no college education, they instilled educational values in their son which he readily shared during interviews. Luis is the youngest of six siblings. Luis’s father dropped out of the eighth grade and started working immediately thereafter; his mother graduated from high school but decided to forego college, even though her mother offered to pay for it, to stay home with her children. Luis’s father worked a variety of blue collar jobs in Texas and even traveled to work in Wisconsin. Their father-son relationship was not very close as Luis’s father spent most of his time outside the home due to his remarkably long
work weeks. Luis’s mother worked as a cashier in his school cafeteria and Luis fondly recalls having her around not only at home but in school as well. All but one of Luis’s five siblings completed bachelor’s degrees; his oldest sibling completed high school and did not continue on to post-secondary education.

Luis was born and raised in Texas as were his parents and one set of grandparents; his other set of grandparents was born in Mexico. Luis was involved in sports at a very young age. He recalled being hypnotized by basketball legend Michael Jordan and asking his parents to enroll him in a youth basketball league to brush up on his basketball skills. His parents did not hesitate and promptly enrolled Luis in a basketball team. When Luis came to the realization that he was not excelling as he wished to be to have a stellar basketball career, he decided to try his hand at track and field and his parents supported him once more. Track and field, specifically cross-country running, became the sport which motivated and drove Luis to be more than just “a regular kid”. Luis did so well as a cross-country runner that he attended regional competitions. He even got to the point where he and an athlete from a rival high school became the rivals to watch! Luis and his rival made the front page of the city’s newspaper’s sports section before and after a regional cross-country competition. Luis attributes much of his personal and academic success to his involvement in sports and credits his parents for their encouragement and support of his participation in these activities.

Upon graduation from high school where Luis had a stellar cross-country career and graduated as one of the top 10 students in his graduating class, he attended a local community college to save money. Luis successfully transferred to a public university
and completed a degree in exercise sciences. From his senior year of high school through college and even on breaks during allied health school, Luis worked in a hospital first sterilizing surgical instruments and later as a physical therapy technician. His interest in the sciences and sports led to his interest in exercise science, and later in physical therapy. This all culminated in his decision to pursue a doctorate in physical therapy which he completed in 2012.

Luis’s parents set important boundaries regarding what expenses they would and would not fund for their children. When Luis wanted to purchase a cell phone and wanted to have extra money to go out with his friends, he was encouraged by his parents to get a job. Luis promptly looked for jobs but had a hard time securing a position because he had no professional experience. This did not deter him. Luis became a volunteer at a hospital hoping that when job opportunities became available he might be considered. Luis’s plan worked. As soon as a position became available and after Luis proved himself as a volunteer, he was considered for and eventually offered an opportunity to work at the hospital. Luis’s first job required that he clean and prepare instruments for surgery.

Luis’s second job at the hospital was a physical therapy technician, he recalls receiving less pay per hour. Nonetheless, Luis pursued that opportunity after becoming interested in physical therapy. Luis was introduced to the field and the profession by a coworker, another high school student interested in medical school, who talked to Luis about different health profession opportunities. As a senior in high school and through his time working at the hospital Luis was exposed to the field of physical therapy and essentially sealed his professional fate. Luis’s parents’
encouragement to get a job (for practical purposes) became an opportunity which exposed him to the field of allied health.

When I asked Luis what led him to choose his career in allied health school he stated that it was his parents support and encouragement in academic and sporting experiences and his experiences as a volunteer and part-time employee at the hospital during high school. As our conversation evolved I could clearly see that Luis had been set up to succeed early in his life by his parents and also through the growth he achieved through academics, extracurricular involvement, and his professional endeavors. The personal growth he experienced throughout his formative years were crucial to the success he would achieve as an undergraduate and later, as a physical therapy doctoral student.

Lucy

Lucy also valued education and this value was instilled by her family as well. She expressed that college attendance was never a question; the questions were where she would attend college and what her major would be.

I think [my family] just set pretty high standards and it was always expected that I would study and be on Honor Roll and have perfect attendance. Education was important there was no excuse ever to be anything but [outstanding]. I wasn’t punished or anything like that it was just kind of expected I guess, always. My sister did it and my brother did it and so I, you know, kind of had to follow in line.

Lucy was born in Texas as were her siblings and parents. One set of grandparents was also born in Texas while the other set was born in Mexico. Lucy’s mother completed a Bachelor of Arts degree in social work while her father completed
some college courses but did not complete a post-secondary degree. Lucy’s older sister completed a master’s in speech language pathology and her brother completed an associate’s degree related to computer information systems. Lucy’s mother works as a social worker in a hospital, her father works for the state of Texas and previously managed a hardware store, and her brother works at a bank.

In high school, Lucy participated in student council, the national honor society and summer camps hosted by the National Hispanic Institute which aimed to educate Hispanic youth about college-going, civic involvement, and empowering Latino/a youth to consider the proactive way in which they would counter negative stereotypes about Latinos/as through education. Lucy modeled her high school involvement based on her older sister’s experiences and that of her friends thus example of social capital (a network of people who provide navigational support to navigate society’s institutions). Lucy received a scholarship from a public university in her hometown which fully covered her college tuition and fees; she opted to go there for financial reasons and lived with her parents during her undergraduate career. She recalls knowing that she wanted to pursue a graduate degree since she was in elementary school: “I think it was probably in elementary that I was like oh, I want to be a doctor or a lawyer. I always just wanted to do something grand.” Lucy’s K-12 extracurricular involvement, attendance to summer camp, and academic success are patterned similar to the types of traditional “vision of college readiness” (Hooker & Brand, 2010, p. 76). Lucy’s family’s insight about the traditional ways by which youth become college-ready and competitive (i.e. attendance to summer camps) were part of what led Lucy to academic success (navigational and familial capital).
Lucy’s exposure to the hospital setting began early in her life. Lucy went to the hospital with her mom on some of the Saturdays when her mother had to go into work. Lucy’s mother provided opportunities for Lucy to interact with a variety of healthcare professionals who would talk to her about healthcare career options. Later, Lucy’s sister’s work as a speech language pathologist and her professional connections would also play a role in Lucy’s exposure to the healthcare field. Lucy decided to become a healthcare professional when she was in high school.

June

June is from Texas and is the oldest of four siblings. June’s parents completed bachelor’s degrees; her mom a degree in education from a regional public institution and her father an engineering degree from a local private university. At the time of our interview, June reported that the sibling that follows her in birth order also completed a bachelor’s degree; the next sibling had completed two years in college but was contemplating joining the service. June’s youngest sibling was also thinking about joining the service.

June described her family’s history in Texas “…from what I know my parents, grandparents, great-grandparents, [have] always lived in this geographical area…back when it used to be Mexico. We’ve never moved” (linguistic capital). Upon graduation from a private religious institution close to her home community, June worked for a year and a half as a physical therapy technician before attending allied health school to pursue a doctorate in physical therapy. At the time of our interview, June had been working as a doctor of physical therapy for a little over a year in the same clinic where she worked before her enrollment in allied health school.
June was a good student in high school. By her account, she was an A and B student. When an English teacher gave an assignment which required students to select a book from a list of titles, read the book and write a paper about it. When June realized that many of her classmates had read a lot of the books on the list and she had not, that was the fuel that lit the fire in her to do well and compete:

I don’t know why but for some reason that list made me feel bad, like oh, my gosh, I don’t know any of these books, I haven’t heard of any of them. [From then on I took it upon myself] to read all the books on the list…I felt disadvantaged because I didn’t know [the books on the list], I felt like my lack of knowing was detrimental.

June’s thirst for knowledge by reading was awakened. She did not realize that other students were being exposed to more than she had been, but once she did, she was determined to read everything everyone else had, and then some, in order to catch up. Reading also led June to decide that she wanted to be in a career where she could help people. During our interview she spoke with enthusiasm about a book called *A long way gone* through which she learned about the plight of a young African man who witnessed the murder of his family and who had to go through hell and back to survive. June stated with conviction: “reading about that really opened my eyes…and I just kind of found my purpose…that’s kind of how I got into physical therapy… I have a heart for Africa…I would like to go anywhere really just to help like the disadvantaged.” That reading assignment in English class led June on a journey that eventually led her to her career in physical therapy.
In college, June’s “frien-emy” came back to her life and this reignited their hunger to outdo each other constantly. According to June, she and her friend had always competed against one another in sports and academics. When June graduated from college, she heard from this friend again and the competition continued:

She got in [to the same allied health program I was interested in] and because I felt like I was in competition with her my whole life I was like ahh! I’m getting in and I’m doing it too. She graduated a year ahead of me…anything else in life I want to do, she does first. I started doing marathons. [And when I mentioned it to her she said] I just finished one, now I’m doing a triathlon. Grrrr!

Having a friend with whom she compared herself and who led her to strive to be better helped her be more competitive, stay on her career path and achieve her goals.

During our interviews, June shared that her interest in allied health was cultivated by her desire to help others and her mother instilling in her the need to acquire professional training and skills which would allow her to better and more intentionally serve others. June has a self-described “heart for Africa” which she cultivated after reading about the Lost Boys of Sudan during high school. She hopes to be able to carry out her physical therapy services through missionary work in places like Africa and China. During her long lunch breaks, June visits the local bookstore. In high school, June was “ravenous for any type of book”; she remains strongly connected to her family through their love and appreciation for reading.

Victoria

In Victoria’s home education always came first as well. Much like Lucy, it wasn’t a matter of whether college was going to happen; it was more a question of where
Victoria was going to college. Victoria stated: “my parents…never wanted me to work during the school year because they wanted me to focus on school.”

Victoria is from a Texas and she is the younger of two siblings. Victoria’s mother was born in Mexico and her father was born on an American base in France. Her maternal grandparents were born in Mexico and her paternal grandparents were born in a Texas border city. Victoria’s mother completed a bachelor’s of science in nursing. Her father completed a bachelor’s degree in blood banking. Later, Victoria watched her father as he progressed through and graduated with his master’s degree in business administration. Victoria’s parents met at a blood banking lab. At the time of our interviews, Victoria’s mom worked as a pediatric nurse and her father was managing a blood bank. Victoria’s older brother completed a bachelor’s degree. Both of Victoria’s parents grew up speaking Spanish but chose not to teach their children Spanish.

Victoria and her brother spent a lot of time in healthcare settings with their parents. She recalls:

… my brother and I would go and we would hang out around [the hospital]…[we would] hang out with my dad at the blood bank, he would show us all the blood, platelets, centrifuge and all that stuff…I spent a lot of time in the healthcare setting.

During her high school years, Victoria actively volunteered at the summer camps held at the hospital where her parents were employed. This is another example of how Victoria’s parents shared and exercised their knowledge about college-going opportunities with their children in order to help them have the best preparation and opportunities (navigational and familial capital). Victoria’s experience at the summer
camps solidified her decision to work with children. During her senior year in high school, while discussing career options which would allow Victoria to work with children, her parents recommended that she pursue a degree in physical therapy. According to her parents, a physical therapy career would allow Victoria to work with young patients and be as specialized or generalized as she wanted to be as a healthcare provider (familial capital). Throughout high school and college, Victoria prepared herself academically and clinically with the goal of being accepted into a physical therapy degree. She attended a small religious university in Texas and eventually was accepted to the doctorate in physical therapy degree at an allied health school in Texas.

James stated that for him a higher education was also a given. He stated: “I never really had the option of studying or not, just because both my parents went to school. I think [education] became even more important when they came to the U.S. and they had to work jobs where they didn’t necessarily need to study.”

James is an only child who was born in Latin America. At the age of ten, James’s parents decided to migrate to the U.S. to escape the violence of their homeland and to secure a brighter future for their only son. James and his family ended up in the Midwestern U.S. James and his parents came to the U.S. undocumented and to this day James remains undocumented but benefits from Deferred Action. His parents moved back to Latin America when James began his master’s degree in allied health.

James’s father completed an engineering degree and his mother completed a pharmacy degree in their home country. When they moved to the U.S., James’s dad worked in construction and his mother worked cleaning homes and babysitting. Not
being from the U.S. and being in limbo because of their undocumented status, the plan for the family had been that James would graduate from high school and then move back to Latin America because college would not be a possibility financially speaking due to their status. Even with this plan and with the stress of his legal status, James excelled academically and participated in a variety of college preparatory opportunities. As high school graduation approached, James and his family decided to stay in the U.S. for James to go to college. Because he started his college plans late in his senior year, James had limited college options but with the help of his high school counselor, he gained acceptance to a local liberal arts university which welcomed and provided support for undocumented students. The scholarship James received from the university coupled with his parents financial support afforded James the opportunity to attend and graduate from the university.

As college graduation approached, James and his family contemplated moving back to Latin America, once again, given that their migratory status was still unresolved and that James’s opportunities at a successful professional career were dim. Nonetheless, James decided to apply to several allied health schools which offered a degree in his profession of choice. After hearing back from some schools which were either unwelcoming of undocumented students or charged international student rates to those students, James began to give up hope. He decided that it was time to head back to Latin America so he and his family made plans to return to their home country. Airplane tickets were purchased in December, the big move back date was set for the summer of the following year. In February James was invited to interview at an allied health school in spite of his migratory status. In June James’s mother traveled to Latin
America alone. James was given an opportunity to study exactly what he wanted at a nationally prominent institution which was willing to grant him financial support and allow him to enroll regardless of his status. James relieved the nightmare of limbo caused by his status and the instability it caused for his educational future. Once again, a school overlooked James's immigration status and gave him a chance for which he was extremely grateful.

James's undocumented status continued to be a concern as he has progressed through allied health school. During James's last semester in allied health school, he was enrolled in a course which I taught. One afternoon after class James asked if he could speak to me privately. Once his classmates left the room and with tears in his eyes, James shared that he was going to be able to stay in the U.S. to complete the residency required for licensing in his allied health profession. This opportunity was granted to him and many other undocumented youth nationwide through the Deferred Action mandate which was enacted in the fall of 2012 and which allows qualified undocumented youth to obtain work permits. That day, as James and I sat alone in the classroom, James shared that he had received official notice about his eligibility for a work permit and social security number. The day before his birthday and less than two months from his graduation from allied health school James was given another chance to stay in the country, this time, it was through Deferred Action. Much like in high school and college, James was being granted another opportunity to remain in the country.

James attributes his interest in the healthcare field to his mother being a pharmacist and other family members who are practicing healthcare providers in his home country (familial capital). James’s interest in his specific field came after a
presentation he attended during high school. The presenters were professionals in the particular healthcare field and also provided assistance to Latin American countries in which this specific field lacks professionals but where their services are highly necessary due to the high rates of violence. The connection to Latin America and the prospect of helping people in need in the U.S. and in his homeland, where this particular allied health field is especially necessary and scarce, led James to pursue the field. James’s passion, resilience, persistence, and a touch of luck are what led him to allied health.

Miguel

For Miguel “[education] wasn’t anything that I felt was ever forced upon me. It wasn’t anything that I was dreading…I was always excited about [my education and college] was just going to be the next step.” Miguel is the older of two children born to a Nicaraguan father and a Puerto Rican mother. Miguel’s maternal grandparents were born in Puerto Rico and his paternal grandparents were born in Nicaragua and moved to the U.S. with all of their children in the 1970s. Miguel was born and grew up in a college town in Texas. His father and his mother both completed master’s degrees. Miguel’s father and mother met at the college in the town where Miguel was born and raised and they have lived there for over 30 years. Miguel’s father is employed by the public university in the town and his mother overseeing an the Early Childhood Intervention program in her county as well as nine surrounding counties. Miguel has a younger sibling who completed a bachelor’s degree and who, at the time of our interviews, was pursuing a graduate level physical therapy degree.
Miguel went to the same private catholic school from elementary school through high school. After much thought, Miguel decided to stay in his hometown and to attend the public university therein, the same one his parents went to and where his father had worked for over two decades. Miguel went to college with the idea that he would be going to medical school. When Miguel was sitting in a classroom, about to take the MCAT, he decided that medical school was not for him. He promptly turned in his blank MCAT exam booklet and left the testing site sure that becoming a physician was not his dream.

Miguel switched his major from biology to biomedical science and decided to apply to be a Teach for America teacher. After being rejected by Teach for America, Miguel did some soul searching and through conversations with campus advisors he was introduced to the physician assistant profession. Interestingly, Miguel's girlfriend at the time, who is now his wife, also had a change of heart and decided that she did not want to be a professional engineer and instead also decided to pursue a master’s of physician assistant studies. She went to allied health school a year before Miguel did. After graduation from his undergraduate institution, Miguel worked in the healthcare field to fulfill the shadowing requirements of the various allied health schools to which he was applying. A year after being in the field acquiring experience, Miguel began a master’s of physician assistant studies at the same allied health school where his wife had been pursuing the same degree.

Having worked toward medical school in undergraduate education and realizing that was not his preferred path created uneasiness and confusion which Miguel had not expected. His ability to assess his situation, seek help and advice from family and
school representatives, and his willingness to follow that advice led Miguel to an allied health profession which he finds deeply fulfilling.

Lizet

Lizet’s home was filled with books when she was growing up. She explained:

My mom used to buy me tons of books when I was little and instead of having toys I would play with books. We had encyclopedias which back in the day was a big deal… I would [decide and declare], ‘I’m teaching Italian to myself today’… My mom said I would be going around saying all these Italian words just for the heck of it.

Lizet was born in Mexico and is the youngest of three children. Lizet’s older sister was born in Texas. Lizet’s parents were born in Mexico as were her grandparents. Lizet and her family moved to the U.S, specifically Texas, when she was 12 years old because her older sister had been getting treatment for heart problems in the U.S. since she was very young.

Lizet’s father completed a bachelor’s degree in Mexico and worked as a business man and professor at a university in Mexico. Lizet’s mother completed the equivalent of a GED and worked for the government in Mexico. When the family moved to the U.S., Lizet’s parents went from having professional white collar jobs to blue collar jobs. Lizet choked back the tears as she talked about the life change her parents endured by moving to the U.S. to provide the medical care their child required and to ultimately provide a better life for their children (aspirational capital). Lizet saw herself as “having it easier” than the rest of her family, in the transition from Mexico to the U.S., because she
was young enough to learn English and become immersed within the culture with less
difficulty than her older siblings and her parents.

Lizet’s desire to succeed was displayed earlier in her life. As she spoke about her
educational experiences in Mexico, before moving to the U.S., she recalled the
competition she had with her friends to be on the honor roll:

I [am competitive]. In Mexico they have the honor roll, they didn’t have honors
classes but they always have the honor roll. And at the end of the year they
select first, second, third place and I was always between first and second…My
friends [in Mexico] were the smart ones so we would always be the ones
switching back and forth [between] first, second, third, first, second and third for
everything. So I was used to trying to be better, trying to be better, trying to [be
the] best…

Upon her arrival to the U.S., Lizet was enrolled in English as a second language
courses. I asked her how long she was enrolled in that program:

Less than a year. They kicked me out… Yeah, in less than a year I was taking
regular reading classes. Yes, I was really upset because most of my friends that
were there before, they were still there when they kicked me out I remember
throwing a fit about it because they wouldn’t let me go back to ESL.

Although at the time Lizet resented being pulled away from her friends, she
enjoyed succeeding and was driven to do well. Having attended school in the same city
and state and remembering that I had to choose between the college preparatory track
and the non-college preparatory track I asked her about how she decided, and who she
spoke to, about what track would be right for her. She replied:
I wanted to be in the medical field and I started trying to figure out the ACT’s and to see if maybe I [could] get scholarships. I didn’t even have legal residency then. So [I tried] to figure out how do I do this without [being a resident] and looking, researching myself, my parents had no idea...I just researched things, asked people around. I had a great counselor...if I needed any help on how to fill out paperwork, anything, she would help me. But random people just here and there I think helped me along the way and I ended up with really good amount of money...even though I couldn’t really apply to most of them because I wasn’t a citizen or even a permanent resident. So I did that and my parents were really good. They were never involved. I’m not going to lie. They were just never involved on how to do this.

Lizet went on to college and graduated with honors from her undergraduate institution with a double major in biology and genetics with a minor in Spanish. Although her parents’ assistance and guidance was limited due to their lack of knowledge about the U.S. educational system, Lizet took it upon herself to figure out what she needed to do to achieve her medical career. Her resourcefulness and ability to seek answers and guidance are impressive displays of desire to do well. The fact that her parents supported her attendance to college preparatory coursework by taking her to the local community college or allowing her to enroll in honors and advanced placement courses was enough support for Lizet. As she stated, they allowed her to be and do as she thought would be best, and that was the best support she could have asked for.

Lizet was undocumented throughout much of her early life in the U.S. Because of her immigration status and her family's financial situation, Lizet turned down a
scholarship to a private university in Texas which had a very good pre-medical program as it would partially cover her tuition and fees at the institution. Instead, Lizet attended a local community college where she had also received a scholarship which would cover all of her expenses. Lizet successfully transferred to a public university in Texas, which was more affordable for her family, where she double-majored in biology and genetics and minored in Spanish. She was actively involved on campus as a lab assistant and through various student organizations while at the university and actively sought advice about medical careers. After deciding that medical school would take too long to complete and would not render the type of family life she wanted, Lizet learned about the physician assistant profession and decided to pursue a master’s in the field. During her senior year as an undergraduate and as she went through the allied health application process and interview rounds (which are extremely stressful), Lizet became a U.S. resident. This appeased Lizet greatly as she knew that without a legalized status her dream of becoming a healthcare provider would be very difficult to achieve.

Lizet’s path to allied health was highly influenced by her family’s medical history, involvement in community service, as well as by her interest in the human body, and her desire to help others through medicine. Those factors coupled with her academic achievement, tenacity, and familial support carried her through her undergraduate education and into an allied health degree which led to a professional life she loves.

Marlen

Marlen focused on her studies and valued education from a young age:
I didn’t know I was going to go to college per se, but I always knew…I had to be successful in whatever I did. I remember being five years old, tying my shoe on
the first day of school and I was so excited…I just knew that everything was just
going to fall in place…I knew that I was going to do something great, but I didn’t
know it would involve college.

Marlen is the youngest of four siblings and was born in Texas. Her parents met in
Mexico when Marlen’s mother was studying abroad in Mexico. Marlen’s mother was
born and raised in the U.S. and dropped out of college during her sophomore year upon
meeting the man who would become Marlen’s father. Marlen’s father was born in
Mexico and he completed his high school education. Marlen’s mother worked long
hours for the IRS while her father worked for himself as a land surveyor. One of
Marlen’s older siblings completed a bachelor’s degree at the same public university
Marlen later attended. Marlen’s other two siblings completed high school and did not
pursue post-secondary educational opportunities.

Marlen is another participant who excelled academically and her teachers
constantly praised her academic success, her involvement in the Key club, calculus
club, national honor society, and dance as well as her service to other students through
tutoring. From a young age, Marlen decided she wanted to become a child psychologist
so her interest in healthcare was present early in her life. According to Marlen, one of
the reasons she wanted to go to college and become a successful professional was to
avoid struggling economically the way her parents did. Therefore, Marlen worked very
hard to achieve the academic profile which would grant her the educational
opportunities required to achieve her professional and personal goals. She explains:

I always knew that I wanted to have a higher education when I got out [of high
school] so I took a lot of AP courses in high school. Didn’t really know where I
wanted to be [for college] yet but I knew I needed to start racking up my credits. I didn’t really have a lot of guidance because my two older sisters never went to anything past high school.

Marlen was very proactive and sought the opportunities that would lead her to achieve her educational and professional goals early in life. Marlen did not excel only in high school though; she talked about her desire for her mom to attend parent-teacher conferences in elementary and middle school so she could hear all the wonderful things she was achieving in school. Marlen recalls teachers saying: “[Marlen] did really well in this subject, she’s very pleasant to have in the classroom, she goes out of her way for students, and she tutors students…” She enjoyed doing well and hearing positive reinforcement about her academic success. This feeling coupled with her personal and professional aspirations drove Marlen to succeed well into her present professional career.

Marlen graduated from high school and attended a public university in Texas which was close to home but far enough so she could live more independently from her parents. She was very dedicated to her studies and after she established a solid GPA, she allowed herself time to relax and enjoy college life. During her time in college, Marlen’s goal to become a child psychologist changed to become a physical therapist. After Marlen graduated with her undergraduate degree she worked at a clinic with a co-worker who advised her that her talents would be much better used as a physician’s assistant. After doing some research, Marlen was hooked on the idea and applied to a master’s of physician assistant studies.
Marlen’s dedication to her studies and her ability to keep her eye on her professional and personal goals are part of what allowed her to succeed. Moreover, her desire to explore career options and surround herself with people who helped guide and support her allied health aspirations (social capital) led her to a career which she enjoys and in which she thrives.

Dina

When Dina’s cousin, who had dropped out of school, told Dina that she wouldn’t make it in high school either because it was too hard, Dina took that as a challenge. “[Her comment] scared me but I think at the same time it also made [education] more taboo, why can't I do this? Why did she say this? It was more like a challenge to me to prove them wrong.” Dina’s reaction to her cousin is a form of resistant capital (“knowledge and skills fostered through oppositional behavior that challenges inequality” (Yosso, 2005, p. 80). Dina was the first of her family to graduate from high school and to graduate from college. Her parents were not necessarily prohibitive when it came to her education but they did not provide much guidance either. Dina recalled “my parents never said you have to go to college and as a matter of fact my dad was [asking] me all the time why go to college? He didn't go to college and he was fine. So why did I have to go to college? That was his take on it. My mom was more neutral.” Dina’s mom became one of the family members she would rely on during allied health school; the one she would call to request special prayers to help her pass her exams at school.

Dina is the oldest of three children. She was born in Texas and was there through the completion of her undergraduate degree in microbiology. Dina’s parents were both born in Mexico and migrated to the U.S. soon after they were married. Dina’s
parents completed their elementary school education in Mexico and that was the extent of their educational career. While Dina did not state her father’s profession she did mention that her mother cleaned homes for a living. At the time of the interview, Dina’s middle sibling had completed a master’s degree and the youngest was starting her first year of college at a public university in Texas.

During the interviews, Dina stated that she disliked elementary school because she started school without being fluent in English. The language barrier coupled with her introverted character made school an uncomfortable place to be. In middle school, Dina began to notice that her teachers kept recommending her for summer programs at universities and to attend magnet high schools. As she reflected on this, Dina stated that being noticed by her teachers and counselor and being offered college preparatory opportunities meant that people saw potential in her which she appreciated and realized.

Over the summers, Dina remembers going with her mother to clean houses because her parents could not afford babysitters and they did not want to leave her and her siblings at home. This experience is one of a few crucial experiences which drove Dina to contemplate a livelihood with less hardship through education.

Dina graduated from high school and began her microbiology degree at a public university in her hometown. She attended her university thanks in large part to a scholarship she received which covered her tuition and fees expenses throughout her undergraduate education. The scholarship was given to students who were first generation and low-income and who were interested in pursuing degrees in the sciences among other majors. While she was in college, Dina lived with her parents as
she didn’t think they would have approved of her living outside of their home. “I had talked about moving out but it was going to be a fight, it was going to be a challenge and I didn’t want to put up a fight so I just decided to stay home.” Dina was actively involved on campus and participated in a variety of career preparatory programs. When Dina graduated from her university she was selected as the commencement speaker at graduation. She remembers that event “as the cherry on top” to her already stellar undergraduate experience.

For Dina, her desire to succeed was fueled during middle school, when teachers and counselors recommended that she apply for the local magnet school and summer college-preparatory programs. As she spoke about her time in elementary school I remembered Dina as shy and quiet as she was when I would run into her in the hallways and elevators of the allied health school. I could imagine her tiny elementary school self, keeping to quiet in a corner of the room, just like I had done as a student whose first language was also Spanish. After grade school Dina was still shy but no longer holding back her intellectual talents: “I would say that I didn’t like school in elementary…But once middle school came around… I was the perfect attendance kid who got all the A’s, honor roll, that was the turning point.”

As she reflected upon her college career, Dina stated:

I mean it’s amazing. I think back and I don’t even know how I got from one point to the other… I wanted to be someone, I wanted to do something. Not just your average Joe kind of thing… Once you get a taste of [success], it just blows up and you want more… And then at the end, I wanted look back and say "I did all of this"… You just have to, kind of, lose the fear.
Dina shared that her incremental educational success led her to excel in college; she became a peer academic leader, a science teaching assistant, a decorated scholar, and at graduation, the commencement speaker. Dina realized that she had to be more extroverted to become as successful as she is. Dina’s choice to step out of her comfort zone led her to gain tremendous accolades, self-esteem, and successes. That feeling of accomplishment and success drove Dina greatly and allowed her to reach goals not ever reached by anyone in her immediate family.

Upon graduating from college and after working in a variety of health related jobs, Dina learned about the physician assistant profession and decided to pursue a master’s in the field. Her outstanding academic career and extensive educational training in the sciences set her up for success in her allied health graduate program. Dina’s time away from school and in the health field (although not as a healthcare provider) allowed her the time to contemplate career options which would be adequate for the family life she wanted for herself and the personal fulfillment and stability she desired.

**Familial Capital**

Study participants often referred to their families and to the assistance they provided during the educationally formative years. As some of the participants spoke, they stated that their parents were not able to help them academically and thus did not place special importance on other types of familial support they received. For example, Lizet and Luis talked about how their parents’ educational support was limited but both of their parents provided economic resources via college savings funds, or even rides to the community college to support their educational endeavors. Support which extends
beyond helping with homework or going to parent teacher conferences deeply affected and enabled participants’ academic success. Familial capital was the most prominent form of community cultural wealth in the data but as noted by the parentheses, it was not the only form of capital found. The paragraphs following are the most salient examples of familial capital in this study.

Luis’s parents encouraged Luis to get a college education since he was very young. His parents realized their educational support of their children by saving about $200,000 for them to borrow to pay college and living expenses instead of borrowing from the government or any private lenders for their education. According to Luis, as his siblings have completed their college degrees they have begun to pay back their parents for the money lent to support their post-secondary endeavors. While parental encouragement is important, parental support is what can really make the difference in the college aspirations of students. Hossler and Vesper (1993) theorized that parental support, in the form of savings for their children’s college expenses, can make a big difference on their children’s attendance to college. Luis’s parents verbally encouraged their children to do well in school by promoting sports and academic activities, displaying aspirational capital (the ability to maintain hopes and dreams). They supported their children by actually providing the financial backing necessary for extracurricular involvement (pay for sports team enrollment fees and equipment) and academic achievement (paying for advanced placement exams). Support was realized by providing the financial means necessary to participate in the extracurricular and academic activities and by providing a college savings fund from which their children could borrow. Luis recalled: “my parents made this deal with all my brothers and sisters
that they [would] pay for our college...if we needed money we could borrow money but once we’re done [with college] we had to start paying them back.” I was Intrigued about the amount of money Luis’s working-class parents saved to pay for all six of their children to obtain their college degrees so I asked if he knew about how much they had saved. Luis stated:

Honestly, I don’t understand where the money came [from] but they must’ve been saving a crap load of money when they started working because I remember one time when I was filling out my FAFSA I needed their information and I saw how much money they had saved...I think they had like $200,000 saved up already and like, this is like when I was already 18.

Luis’s parents encouraged their son’s educational and extracurricular activities in a variety of ways. One of the most notable ways in which Luis’s father shared his value of education was through consejos (cultural narratives) which are a form of linguistic capital (familial storytelling traditions which enhance intellectual and social skills). Luis’s father would often provide examples, through narrative, about the more comfortable jobs college graduates did at his job site. These messages, heard often by Luis, were powerful. Consejos are shared between family members and are powerful tools which “transmit people’s voices and open a window into the family’s perceived sense of power in their daily life when dealing with the educational system” (Delgado-Gaitan, 1994, p. 298). Luis’s father provided consejos to Luis with the intent of inspiring him to excel academically and aim high. Delgado-Gaitan (1994) posits that familial consejos are said to children in part to encourage self-sufficiency. Luis stated with certainty that his
father's *consejos* made an impact on him but it was the combination of *consejos* and support (Hossler & Vester, 1993) from his parents that motivated him. Luis recalled:

[Dad] was a forklift driver; I don’t think being a fork lifter you have to have college education but [my dad] knew the people, I guess he knows people who were up in offices and stuff, [and knew] they have college educations and they probably work 8-5 Monday through Friday. They [didn’t] have to work overnight like he used to do when I was a little kid…He probably didn’t want me to be working 11 p.m. -7 a.m.

Luis repeatedly mentioned that a person would not be able to go far with only an eighth grade education; Luis’s father had an eighth grade education and epitomized the life Luis did not want to live. Luis stated:

I will never get anywhere with an eighth grade education … and I most likely will never get anywhere with a high school diploma… and so [my parents] just didn’t want me to be having to work as hard as they do…They probably wanted me to get a good job where I only had to work Monday through Friday 8-5 which I do now.

For June, a college education and the professional options it would render were the key to being helpful and to being self-sufficient. June recalled her mother’s advice to her and her sister:

I had it drilled into my head from a very young age that you go to high school, and then you go to college… I’m the first one in my family to go onto grad school but [school was] just the thing you do. It was mostly my mom…we would watch Lifetime [movies]…all the time… [me], my mom and my sister, and [my mom]
always emphasized that if you don’t want to be like [the character in the movie] if your husband ever leaves you or if he’s mean you can just leave him because you’re going to have your own job and your own money. It was a recurring theme…you don’t need that boy, you’re going to college and you’re going to get a job…

For June, and education was not only the key to a well-paying profession, it was also a necessity for survival and independence as a woman.

Lizet was taught to appreciate being of service to others by her parents (familial capital). When Lizet was young, she recalls going on trips organized by the Lion’s Club in her hometown in Mexico where the goal was to reach people who needed eye exams and eyeglass donations. When she was a child these trips were like fun little getaways, as she grew older, she realized the importance of these trips and of the services her family were voluntarily providing to people who were in need. These experiences and Lizet’s fascination with the human body as well as her sister’s medical problems eventually led Lizet to her career in healthcare. Much like June, when asked, Lizet stated that when she grew up she wanted to help people. Like June’s mother, Lizet’s mother told her that she needed to have professional training with which to help others. But she was warned that simply wanting to help was not enough, a profession was necessary in order to be more intentional with the help provided to others. Like June, Lizet also enjoys doing missionary work by applying her medical knowledge.

During the interviews, participants spoke with candor and excitement about their educational pathways, experiences and the opportunities and benefits their educational achievements have provided to their lives. Moreover, study participants stated they
were academically competitive, enjoyed doing well in school and often, sought to reach the highest possible goals to be the best. This data validates Perez et al.'s (2009) academic resilience theory, specifically the notion that academically resistant students have positive academic self-concepts. Furthermore, participants’ desire to do well was fostered by their families, peers, and school personnel. Having a variety of people at home and school who can help motivate students are extremely important. These support systems also validate Perez et al.'s (2009) academic resilience theory, specifically, the fact that students were surrounded by people and networks (environmental protective factors) which fostered their success. Threaded along these findings are various forms of community cultural wealth. Participants’ families and communities played a big role in the success students achieved by providing all forms of community cultural wealth: familial, social, aspirational, resistant, linguistic, and navigational capital. These findings validate the notion that Latino/a students come to educational institutions possessing vast quantities of community cultural wealth which fosters academic resilience and educational success.
CHAPTER 5
LIFE IN ALLIED HEALTH SCHOOL

Today is the first day of your allied health educational life and you are being welcomed during the new student orientation in an amphitheater style classroom with 130 of the brightest minds you will ever encounter. Sitting in this classroom you know that you beat anywhere from 500 to 1000 other applicants who also wanted to be in that spot, the one you are in right now. Being in that classroom feels like you have won the race but you also know that the race is about to begin once more but this time it will be longer and much more difficult. The privilege of being in that classroom mixes with the butterflies in your stomach which warn you about the intensity and the fear of starting such an elite professional graduate program. As new student orientation progresses and you've been told more times than you can remember “this is going to be hard” you feel like maybe you won’t come back after the break. As the first week progresses and you encounter the nausea and nerves brought on by the anxiety of your first exam in professional school you wonder if anyone else feels as sick as you do. Your professional life and future are on the line. As you recall the orientation you attended the week before, you remember the phrase “Welcome to allied health school” and wonder what you’ve done to yourself.

This chapter focuses on participants’ journeys through allied health school. The first section of this chapter presents the two most difficult issues as noted by participants: academic rigor and adjustment and social isolation. The second section of this chapter covers the environmental protective factors which were crucial to participants’ success in allied health school.
Academic Rigor and Adjustment in Allied Health School

When Luis began his first semester in allied health school he expected that he would not do well: “first semester I started out, I was nervous as hell. [During the first year of allied health school] I thought I wasn’t going to make it.” As the person who would speak to prospective students at an allied health school, I recall having to tell students that they could not expect to have much else going on outside of allied health school. I would tell students that being an allied health student was like working a full time job as students were required to be available for class Monday thru Friday from 8 a.m. to 5 p.m. Availability had to be extended to 24 hours and weekends when students began their clinical rotations. This was only students’ in class time; they would also have to allocate enough time to study, eat and sleep in between 40+ hours of being in school every week. For many students this was a difficult adjustment, especially if they were coming to allied health school from undergraduate school.

Victoria explained the rigorous schedule she adhered to as a physical therapy student:

I think that my biggest issue there was just the course load, like we were in class with lectures or labs almost every, I mean generally Monday through Friday…We went straight through [the semester without breaks], we would get two weeks off in the summer, or we would get like the month of December off for Christmas break…I felt I didn’t have enough time to really learn the material…to just be as prepared as I wanted to be for exams just because of the way [tests] would be scheduled]…I wanted to do well and I did do really well, but, I felt like I was 100% stressed out all the time.
Miguel explains the difficulties of the first semester as a physician assistant master’s student:

I think probably the most difficult part was just staying on top of all that’s expected of you. The expectations are extremely high and the test averages [are] usually in the 90-92 range. [Your classmates are] extremely motivated and extremely hard-working and those tests aren’t easy…The big challenge was just being able to absorb so much information in such a small amount of time. And later, when you’re [in] clinical [rotations], you’re being exposed to things that doctors have been doing for years and [you’re expected] to be familiar with the processes and [are] being thrown into a whole new world of medicine [every] four, six, or eight weeks later…Once you start getting comfortable with one area… it’s time to change.

Miguel noted that when he started his allied health coursework he dedicated most of his time and effort to allied health school. Since he knew this would only be a season in his life, he was totally focused on doing well in allied health school. He explains the first summer semester:

[During the ] first semester [we had to do] a repeat of all of [the] really heavy core sciences that [I had] had in college so your anatomy, your physiology, your neuroscience, all that stuff …it’s all jam-packed into 11 weeks…when I wasn’t in class I was [in the library] studying around the clock…this isn’t college anymore, this is a professional program and [you have to be] being willing to dedicate the time and energy.
Marlen explains how she felt about the academic adjustment from what she had known as an undergraduate student, who did very well, to physician assistant master’s academics:

… [when] you have all this material coming your way you can’t process it that quickly, you’re bound to lose things in between and the things are actually very important and they build on each other. So if you don’t get the very basics you cannot understand what happens with other processes involved…that’s what was very key [and] where I had to establish [some new study strategies.] at the very [beginning of my time in PA school] because if I didn’t establish it then and all this material’s packing on and packing on, all these layers are coming on… I [would] just [drown].

Marlen’s description brought the mental image of being sprayed with the fire hose; there is so much material for which students are responsible and if they miss out on any of it catching up is going to be a nightmare. As Marlen also pointed out, misunderstanding any of the information can be brutal to the student as all of the information being taught builds upon itself and requires that students have solid foundational knowledge.

Dina took a few years from her bachelor’s degree graduation to her first semester as a master’s student in her allied health program. Although she had been an award winning student throughout most of her academic life and honored as the graduation speaker for her undergraduate graduation ceremony, Dina doubted her academic ability during her first semester in allied health school.

… [The] first week of classes [comes] and I’m going to school with you know, all these smart people and of course I see the questions they have and how they
were interacting, and I’m pretty quiet, I don’t ask a whole lot of questions in class. [I wonder] am I supposed to be asking questions?...My self-esteem issues started to kick in…after we took our first round of exams in all our classes that summer…that’s when I felt [confident] because I did fairly well so at that point my self-esteem changed.

Dina’s comment was so interesting because again, she has had such a brilliant educational career that it was just beyond me that she would consider herself less smart than her peers. As she stated and throughout her time in allied health school, Dina did very well. Like other study participants, Dina had to find her studying groove and make adjustments in her study habits because her undergraduate approach to academic success was not necessarily going to help her succeed academically as an allied health graduate student.

Two of the study participants became so overwhelmed with the academic rigor that they considered dropping out. As it was noted earlier, Marlen was so overwhelmed with the volume of information that she felt like it was a sink or swim situation. Additionally, her self-doubt in her academic ability began to get the best of her and that is when she started questioning whether she was going to be able to make it through her master’s program.

I was second-guessing myself…I [recall one day I had just left] class and I walked past the main office where the faculty are and I went in and I asked [to see my faculty mentor]. I was actually going to tell her I’m [dropping] out… and I remember I was so disappointed that she wasn’t there … because I didn’t know when I would get the guts to do this again, after all that I had invested. This was
maybe mid-way in the first year … like that’s how intense all [allied health school] was…

The difficulties of the first semester of allied health graduate programs can really push students who had previously had high academic self-esteem to question their academic ability and their fit for the program. As Marlen reflected on the hard times she experienced during allied health school, she expressed how thankful she was that her faculty mentor was not available when she was at her lowest and wanting to leave the program all together.

June had a different situation which almost drove her out of allied health school. During her first semester in the physical therapy program, June had some difficulty with a practical course (a course during which students gain clinical patient knowledge related to proper handling and transporting of patients, among other things). In this practical course there were a series of written examinations and hands-on examinations where students actually had to show the teachers how they would transport a patient. June did well on the written examinations but when it came to the patient examinations:

…if one thing’s wrong then you have to come back and do it again. And if it’s not perfect, one thing’s wrong you do it again. And again and again. And each time it’s like there’s more and more pressure. And so I would just get so nervous. I just didn’t do well at all. And I actually had to go through remediation so I had to go to observe in a hospital, observe patients being transferred.

June struggled so much with this specific part of her practical course that she actually was in danger of being dismissed from the program:
To stay in the program I [had] to write a letter to the chair of the program [asking to be allowed to stay and she rejected my letter and later I had] to write a letter to the [associate dean of the school]...I really, really, really wanted to give up because all this was going on while [my classmates] had moved onto the second semester...I was having to miss classes from the second semester to go talk to people and go get [this first semester class] straightened out. And [faculty] had to put together a committee...to listen to my case and it was just this huge mess for this one hour class.

The allied health school's academic affairs committee ruled in favor of June and allowed her to remediate the course once more; her participation in this study is a testament to the fact that she successfully graduated from the program. This situation was detrimental to June's socialization into the physical therapy profession and her overall self-esteem. During our interview, she stated that only a year after being out in the field as a clinician had her self-esteem in her physical therapy abilities been restored; it happened after she learned that her boss at work did not know everything there was to know about practicing physical therapy: "even my boss...Sometimes we get [an unusual patient case and] he's like I don't know what the hell that is and we look it up." This made June feel at ease about not knowing anything and allowed her to give herself permission to not know it all and to have to use resources during her career.

Social Isolation from Family and Peers

Alumni spoke about the social sacrifices they had to make in order to give their allied health education all of the attention it required to succeed. Many of the participants had been highly involved in extracurricular and community outreach
activities and had to give all of those activities up when they became allied health students. Even more importantly, alumni had to give up time with their families and for some it was difficult to find a group of like-minded peers who made them feel comfortable.

_Familial Isolation_

When Lizet began her allied health degree she was engaged to be married and she and her fiancé agreed that living apart while she was pursuing her master’s degree was worth the sacrifice of living apart. Lizet reflected on the loneliness she felt not only being isolated from her fiancé but also away from her parents, siblings, and her niece,

>[My family] knew when I had to miss [family gatherings and holidays]…It was so bad, a couple fourth of Julys we had a test right after the weekend and it would suck, you had to stay. And the fact that I didn’t have anybody here to say well, I’m going to go and celebrate for a little bit and then go home and study, no, I got stuck here. It’s either I go [home] and drive for five hours or not go at all…I think that was the painful thing for me.

Lizet added that because she was so lonely during her time away from her family attending allied health school, she ended up isolating herself: “I guess that I became very independent and in a way kind of lonely my husband [noticed that] I [became] very lonely.”

Just like Lizet, Marlen also felt the strain of not being able to spend time with her family. She stated that her 31 month allied health program was difficult on her because in order to do well she had to isolate herself from family time:
It was hard because like I said before I wasn’t available and I couldn’t really do things. [My family] would get together a lot and before…we would [all] have dinner almost two or three times a week and all of a sudden I was just never there. That was hard on me as well as them, but I think I just took it the hardest because it just made me resent certain things more and I felt like I just couldn’t be with my family and that wasn’t fair, but in the end they always made themselves available one way or another so I didn’t feel left out. I was always able to be a part of their lives.

The need to forego family time in order to focus on her allied health studies made Marlen resentful. None the less, Marlen’s family adjusted to her new demanding school schedule in order to give her the opportunity to participate in family gatherings even if it was not as often as before her time in allied health school.

Peer Isolation

Lizet became antisocial because she found it hard to relate to people in her program. When asked about her relationships with her peers, Lizet stated that she connected with just a few of them. One of the reasons Lizet found it hard to relate to her peers was because of the differences in socio economic status. Lizet recalled being annoyed when she would hear her classmates talk nonchalantly about their homes when to her, those homes were “mansions” and homes that anyone in her family would be “crazy happy with”. Lizet noted that the difference in backgrounds between her and most of her peers would sometimes come to light in classes and she found that the lack of her classmates’ exposure to people of a variety of backgrounds caused dissonance and an inability to connect.
Lizet recalled asking some of her classmates why they entered the allied health field and becoming annoyed with their responses: “[They said] I want to get good money...I want to be smart. I want people to know I can cure somebody.” Lizet agreed that her professional allied health degree would allow her to become “somebody that somebody can admire” but her main reason for being in allied health school was to help others not so much for self-glorification.

Lizet did find a girl who she considered to be just as humble as she was and she determined they were more socially compatible because they connected on financial aid and student loan topics. She described this classmate’s background: “she grew up on a ranch with nothing and she learned to be very diverse and I loved her...I think we were [the only] ones that had a low-income background and we clicked.” The comment about the classmate’s diversity knowledge and embrace related to the fact that Lizet could not make connections with their classmates because they were “very American”. When I asked Lizet to expand on what being very American meant she basically stated that Americans are highly unlikely to speak another language and basically have an awareness of people and cultures outside of their own. Thus, her one really close friend in allied health school qualified as being diverse and different from other Americans because she spoke multiple languages, had friends from a variety of backgrounds, and had knowledge about the American immigration system.

She [has been to many] missionary trips to Mexico so she, she’s used to being around the poor and she grew up also having Asian people [around her] who were also low-income. She understands the whole immigration process which most people have no idea how it works and you’re like what? She has friends
that have gone through becoming a resident or having to marry somebody to be able to get their residency. She understands immigration processes and she hangs out with all kinds of people...

Lizet was comfortable with this particular classmate because her knowledge of so many things that are important parts of Lizet’s being (like immigration status and being Mexican) were things about which she was knowledgeable. Moreover, this friend was sympathetic and could personally relate to being a low-income person and had already been introduced to a variety of cultures and people. This meant that Lizet did not have to take the time and energy that it sometimes takes to educate someone about her immigrant and Mexican identities and how they affect her view of the world.

James also felt like he lacked meaningful and trusting relationships during his time in allied health school. This isolation was due in part to a lack of ethnic diversity and blunt discriminatory comments he would hear coming from his classmates. Moving from the Midwestern U.S. to Texas, James had preconceived notions about going to a “red state”. To his delight, James found that the city he moved to for school had a high volume of democrats and was not as “red” as he expected it. When it came to his allied health school experience he stated,

The school though, it was kind of shocking because although I went to a predominantly white high school there was still a very big Latino presence. Not a very big African American presence, but we had Latino professors and we had like 30% Latino kids. And my undergrad was very, very diverse; a lot of international students from everywhere and also domestic ethnic minorities too. And since I was involved in that community a lot I just surrounded myself in a lot
of diversity. And at [allied health school]... I was the only person of color, the only queer person. So I just felt I was tokenized a lot; my classmates [had] never been exposed to people who might be different than what they grew up with. Just hearing a lot of comments that made me not very comfortable... shocked me that there were people out there that thought things like that.

I asked James for examples of tokenism or discrimination and he reported:

   Actually in our Spanish class, for example, just like very generalized comments about any kind of ethnic community that makes you think does that person not have a single Black friend or a single Latino friend that shatters all their like stereotypes of the community?... Outside of that Spanish class, whenever we would refer to Latinos or non-white [people] I would always get asked my opinion. Not in a way that would be enlightening but more like oh, well, you answer for all your people.

   I actually taught James's Spanish class and can attest to the insensitive and tactless comments his classmates would make. When he and I (both the only Latinos/as in the class) would be asked a question and the question began with “why do you all…” again, assuming that James and I could and should speak for the experience of all Latinos/as, James and I would search for each other’s gaze in part as a sign of disbelief that we had just been tokenized but also to provide each other support as the racial microaggression\(^2\) occurred.

   One of the days I was facilitating a discussion in James’s Spanish course we were talking about a reading in which a Latina diabetic patient had been denied eye

\(^2\)“Racial microaggressions are brief and commonplace daily verbal, behavioral, or environmental indignities, whether intentional or unintentional, that communicate hostile, derogatory, or negative racial slights and insults toward people of color” (Sue, et al., 2007, p. 271).
exams because the clinicians caring for her in a particular clinic did not believe she would be able to handle the care required to retain her sight. The clinician who wrote the piece was disturbed by clinicians who did not empower patients to become part of their healthcare solutions. The writer went on to state that many times it was low-income and historically underserved patients who were the victims of this type of neglect. As we discussed the reading, a student shared that in her allied health program she saw that certain types of treatment options were not offered to historically medically underserved and “uneducated” patient populations due to the clinicians’ lack of trust in the patients’ intellectual ability to care for the device that provided the treatment. Her comment, and knowing that our students were being socialized into the healthcare field in this manner, made my blood boil. One of the least outspoken students spoke up against this practice. As he spoke his face and neck began to show red spots exposing the nerves he felt while by speaking up in class. While he spoke out against this practice his voice quivered with anger. I, on the other hand, happily noticed that James and I had an ally in the class.

Assuming that Latino/a and other medically underserved communities of color were automatically less educated and therefore incapable taking ownership of their treatment and denying them the treatment all together was appalling to me and some of the other students in the class. What was more distressing is that some of the students in James’s Spanish class saw Latino/a patients as incapable. Even worse was the realization that there were faculty and/or clinical rotation supervisors who were teaching this discriminatory ideology to the future healthcare providers who sat in my class. This is one of the many aggravating and condescending conversations James and I had to
sit through during our time in the Spanish class and a perfect example of James’s discriminatory experiences in allied health school.

James’s undocumented status also led him to limit his personal connections with his peers due to what he perceived to be an environment that was not sympathetic to the plight of undocumented persons. James shares that as an undocumented person in his allied health one of the biggest difficulties for him was:

...just feeling alone...I connected with my classmates because we were together so often... I would connect with my classmates to talk about trivial things but when we would get to anything that interested me in terms of like political stuff or like race relations and all those things, I couldn’t really talk to them about that. So at the beginning since I didn’t have any other friends [outside of school], I would hang out with them, but after the first semester I found friends outside [of allied health school] that helped me and made my [Texas] experience so enjoyable that I didn’t hang out with my classmates anymore after that.

James’s undocumented status was known to people in his undergraduate institution and he was actively involved in community organizations such as the Latino and LGBT student associations. As an undergraduate James found institutional and peer support for his gender, racial, ethnic, and undocumented identities. In allied health school, James found the atmosphere to be inhospitable and unwelcoming of his various identities.

James and I connected during his first semester when he came to find me to address his concerns about the lack of support for underrepresented students and to also express his concern about the lack of diversity at the school. During our visit,
James told me about how the international student affairs office staff (who kept contacting him asking him about his visa status) responded when he told them he asked about the type of support offered to undocumented: “I just made a comment saying, oh, I’d definitely like to stop in [to the office] just to see if there are any resources for undocumented students, if there’s some sort of group or, um, yeah, just some sort of network or something.” He explained that his reasoning for asking that question was because “[during] my undergrad [education] the intercultural office was super welcoming to everybody if you had some other different identity that didn’t even have a group, they’d welcome you and they’ll talk to you about it and if you wanted to start a group you can. It was just very different dynamics.” Going from an undergraduate campus that was very supportive to an allied health graduate institution that lacked the social and personal support typically offered through student affairs offices in undergraduate institutions, left James weary about how much he could share about himself. Furthermore, this lack of support and response from the international affairs office staff at the allied health school made it clear to James that if he needed personal and social support systems to remain engaged and successful during school he was going to have to forge and create those systems for himself. Being an undocumented student in an atmosphere where neither peers nor institutional support services seemed to have his best interest in mind made the allied health school environment one in which James felt he had to tread lightly and trust no one.

For June the isolation came partly because of her academic problems during her first semester. While she was going through her academic remediation and potential
dismissal from the physical therapy program, June did not talk to any of her classmates about the situation. She explains:

I'm pretty sure nobody [in my class] knew because I didn’t start telling people until after it had happened [and when I did] they were like oh, no, I can’t believe that happened to you! During that time [though] I felt like everybody knew and everybody thought I was stupid or everybody was judging me. I just felt paranoia…I’m the only one struggling and nobody else is and they’re doing fine…I felt like I was struggling alone...

Part of the reason why June assumed that her classmates had an idea about her situation is because she was aware that the faculty knew. June’s allied health program assigns all students a faculty mentor who advises them during their time in the program. While June was going through her academic remediation process, she was excluded from a group advising opportunity. She recalled: “right when everything was going on, [the faculty mentor] sent an email with [all my class co-advisees’ names] but my name [was not] on there and so the girls were asking me why weren’t you on the email? Did you know we were meeting? I felt like even he was against me.” Being excluded from the email was very harmful to June’s self-esteem and sense of belonging at a particularly vulnerable time in her program. Moreover, June grew worried with her classmates’ concern for not showing up to group advising, she assumed they might have known the reason why she was not invited. June stated that her exclusion from the group advising invite made her feel like everyone in the program was against her: “I felt like oh, great, the whole staff knows and they think I’m stupid and [my faculty advisor] doesn’t even think I’m going to stay…It’s just hard when you feel isolated and like you’re
June’s statement is a very powerful testament to the way in which students can be further isolated in times of stress. Although faculty and staff might have been rooting for June in her fight to stay in the program, their support was not felt by June as she underwent the academic grievance process. Furthermore, and as June aptly stated, the lack of support made her feel more isolated which hurt her self-esteem and caused her to be paranoid thinking that faculty and staff in the program thought she was not smart and were not really fighting to keep her there.

Academic rigor and social isolation which occurred inside and outside of the allied health school were the two most prominent difficulties noted by study participants. Although these difficulties pushed some of the participants to the edge and could have led some of them to leave their allied health programs, they were able to persist due to their personal resilience, familial and peer support networks as well as the environmental factors which allowed them to carry on successfully.

Environmental Protective Factors

Perez et al. (2009) noted that academically resilient students were those whose parents supported and valued school, had peers who valued school, had grown up in households with both parents, participated in extracurricular activities and community service opportunities, and had positive role models. To measure environmental protective factors, Perez et al. (2009) measured students’ parental support, adult mentoring, and student participation in community organizations that provided a positive influence to the youth. In this study, environmental protective factors that emerged from the data were family and peer support systems. In all the interviews participants talked about the factors which helped them overcome the difficulties they encountered while in
allied health school and aside from their personal protective factors, family and peers provided the most support to get students through their academic programs and difficulties.

It is important to note other environmental protective factors such as living in a two parent household and being involved in extracurricular and community service opportunities, as noted by Perez et al. (2009) were also present in all of the participants’ lives. In their study, Perez et al. (2009) found that students who had two parent households were more likely to be academically resilient. All participants in this study came from two parent households and although participants had long been out of their parents’ homes, at the time of the interviews they all stated that their parents remained together. Another important note is the fact that in order to be competitive and to gain acceptance into their allied health graduate programs, all students had to have a long history of extracurricular involvement and community service. Although these points were not greatly discussed during interviews it is important to highlight that all study participants had these characteristics which Perez et al. (2009) found to be important environmental protective factors for academically resilient students. Lastly, students clearly had the personal resilience and academic preparation to succeed in their allied health graduate programs, but they all agreed that without the external support they received, mainly from their families and peers, degree completion would have been much more difficult, and for some, not possible.

Family

Family members were the most important environmental support system for study participants. Aside from being the environmental support system which was
mentioned the most times, family members were the rock on which participants’ leaned during their most difficult times in allied health school.

Luis’s familial support was partly monetary. When he enrolled in allied health school he no longer had time to work and therefore support himself. He explains that: “…whenever I moved to go to [allied health school my parents] gave me money…to survive… they paid for tuition… when I got my first job they told me that the only thing that I don’t have to pay for is the food on the table or rent until I’m 25.”

While he attended allied health school, Luis’s parents covered all of his expenses. On top of that, when Luis had a medical emergency his parents were quick to help cover those expenses as well. As Luis had explained to me, all of the money his parents lent him was part of the fund they started for their six children to borrow from to cover college expenses. This was done in part also to help the children save themselves the hassle of high interest rates charged by any lender. Luis’s parents continue to help him even after the completion of his allied health doctorate. At the time of our interview, he explained that he was living back home with his parents only required to help pay for his food. “…I actually moved back home now mainly to pay off student loans.” Luis’s parents continue to help out their son; the support did not stop once his degree was completed.

Another way in which Luis’s parents supported his allied health education was by just letting him take care of things.

[My parents] didn’t hassle me on studying and again because I’m 22 years old, I’m an adult. I have to take care of my own stuff. And they knew, ahead of time that I was going to be pretty busy … I missed a lot of family stuff, like family
outings…and so [my parents] were like okay, well, we’ll see you when we see you…that was really [my parents’] big role is they just kind of just let me be so I can get the job done.

Being given the freedom to focus on their studies was one of the greatest ways families supported participants. A myth about Latinos’/as’ low achievement in higher education states that their families states are a barrier and/or hindrance to completion and that they don’t value education (Valencia & Black, 2002). This study showed the contrary and one of the ways in which students were supported by their families was by being granted the freedom to focus on their studies and to reach as high as their goals would take them.

Lucy would talk with her parents often about her experiences in allied health school: “they [were] always [there] just to listen if I needed to vent or if I was having a rough time… they were [at school] to visit me [too].” Having parents travel to be physically present with the students was a big deal for multiple reasons. For one, participants had so much studying to do that a 3 hour drive, each way, was seen as 6 good study hours gone. Therefore, having parents travel to see the participants allowed them to continue to focus their efforts on their schooling. Secondly, participants expressed the necessity to be close to their families and talked about how difficult it was to have to take so much time away from them. Through visits, families provided some respite from the daily wear and tear of allied health school and gave some necessary nurturing which helped participants keep going.

A lot of times [my parents] would come and visit me, I rarely went back [home] during [allied health school] because I just didn’t feel like I had the time to drive
over five hours to my house. [My parents] didn’t have any problem driving up to see me; they always came to visit me. They wanted to help, [they would] go buy you groceries, they always offered to do anything when I really needed it because they knew I was overwhelmed…So I mean I don’t know that I could’ve done it without my parents’ support.

Victoria’s quote exemplifies what family visits did for her, they not only nurtured her emotionally but also physically and mentally.

As June struggled in allied health school thinking that her allied health faculty did not believe in her ability to overcome academic difficulties to get her on to the next semester, her family and her father especially helped her to hang on.

During that time I felt like everybody knew [about my problem] and everybody thought I was stupid or everybody…was just judging me. I just felt that kind of paranoia, oh, no, I’m the only one struggling and nobody else is and they’re doing fine. [If] my dad…hadn’t talked to me I probably wouldn’t have finished. I was already looking into other careers… and I thought well, I’ll just do one of these because it’s probably not going to work out. I was just so discouraged, but [my dad] really was key in my staying.

At a time when June felt alone, isolated, and unsupported by allied health faculty, it was her father’s encouragement which helped fuel her to persist and to successfully defend herself in the academic grievance process and to get through her allied health degree. Going through that grievance process profoundly affected June. Additionally, since she felt she lacked faculty support, she felt that she had only her family to rely on during the most challenging time of her life. She said that “…since not everybody [in
allied health school] was [supportive of] me it started to weight on me and I started to think well, maybe I’m not cut out for this. It was hard to, to decide, no, I’m doing this and I don’t care what anybody says because I’m kind of doing it alone in a way.” June felt alone at the allied health school. She credits her family and her boyfriend as being the people who helped her overcome her insecurities and see her dream of becoming a physical therapist become a reality.

For James his parents’ support was extremely important. Allied health school was the first time James had lived away from his parents. At that point his parents were no longer living in the U.S., they had moved back to their Latin American home. Although his parents lived far away, James was able to keep in touch with them and receive their support during his time in allied health school.

My parents always play a big role in my life…They don’t make decisions for me but they’re always there to give me options and then I say okay, well, that’s a good idea, I don’t know about this, I don’t know about that. [My parents also] helped me out financially…they were there if I had any problems, I’m sure…I talked to them about my experiences with my classmates and feeling uncomfortable and all those things.

Having his parents be his confidants and the people who advised him was extremely helpful especially given the fact that the allied health school explicitly told James that they had no services or additional support to offer to undocumented students like him. He added:

I’m very, very, very privileged in that respect. [I might have]…my immigration status and perhaps [other] barriers with my sexual identity and all those things,
but [I’m] very privileged in other ways of having my family support when a lot of
other gay kids might not have that support [and again] the economic [support],
ever having to worry about that.

James recognized that having his family be able to financially support him
through a graduate program in the U.S. was an extreme privilege. Given that James
knew from personal experience the issues many undocumented students have to
overcome including, but not limited to funding, for school gave him a perspective of
gratitude about his situation. Moreover, James recognized that having his parents
support his sexual identity was also a big deal; hence his gratitude for the multiple ways
in which he is privileged.

Victoria credits her parents for their financial support but most importantly, for
their emotional support during allied health school.

I think the main role [my parents] played was just supporting me obviously
financially also, but more emotionally. Helping me to find ways to relax, find ways
to just understand that I was going to get through [allied health school], it was
going to be okay. My now husband… also [played] an important role being
supportive and encouraging. I completely don’t know that I could’ve, not without
my parents support.

Victoria mentioned her husband, as another great supporter while she attended
allied health school. For a couple of the participants, their spouses were the most
important support they had. Marlen, for example, had the support of her husband in a
variety of ways. He helped her overcome her self-doubt about her ability to complete
her allied health program; he helped take care of the home and of the cooking, and
even helped her study.

My husband …assumed taking care of the dishes, he was going to do dinner, he
was going to iron my clothes for me for the next day. I mean, just the smallest
thing…so I didn’t have anything to worry about except what I had to do for
[physician assistant] school. [During my clinical] rotations, when I had to go to
[the hospital] for my internal medicine [clinical rotation], he would be the one to
take me, pick me up, and take me at 3 in the morning... Or my [emergency room]
shift, he would be the one to pick me up at 5 in the morning or whatever it was.
He was always there.

He even took on a role during in Marlen’s study sessions. When Marlen started
her allied health degree she had only been married for a very short time. Study sessions
served as dates for her and her husband. She noted his impeccable penmanship as he
helped her create flashcards as she told him what information he had to write on there.
That time was helpful for her as she reviewed information aloud but also for them as it
provided a time and place for them to be together. Marlen’s husband was very good
about asking her to be detailed in her descriptions of information and in the end the
review felt more like a conversation rather than a study session. She stated that by the
time they were done working on the flashcards she felt comfortable with the information
because of the depth with which she and her husband had discussed the topics. Marlen
said that “he still jokes about [all the studying] today” claiming “that my degree is his
degree as well… because he earned it just as much as I did…It’s completely true.”
Marlen’s husband played a very significant role in her allied health education and he truly did help to make that degree happen for her.

For Dina, her mother and husband were the most important familial support:

My mom, once she saw what I was trying to gain [educationally and professionally] and what would come out of this [degree] was a little more [supportive], I would call her on test days and she’d say well, I’m going to pray for you. She was trying to give me some spiritual and emotional support…Of course my husband always had faith in me. If it wouldn’t have been for him I probably would’ve never applied to [physician assistant] school.

Dina’s parents did not agree with her decision to move to another city to pursue her allied health degree, leaving her husband behind. But as Dina’s quote implies, her mother came around once she figured out what becoming a physician assistant meant and what it would allow her to do. When I asked Dina how she informed her parents about what her allied health graduate program meant and what it would allow her to do she said that during one of her visits at an allied health school she received an information pamphlet for families of those interested in the program. Once her mother read the pamphlet she had a better understanding the program her daughter was about to begin and the type of assistance she would provide to others. Dina’s parents still did not agree with her leaving her husband behind to go to school.

While Dina waited for her parents to get over the fact that she’d left her husband in another city to go to school, her husband was the person who cheered her on and appeased her concerns and self-doubt.
For Miguel and Victoria, extended family also played a big role in their allied health education. Miguel said:

There’s that old saying that says it takes a village to raise a child and I absolutely think that’s true. I mean I was obviously primarily raised by my mom and dad but my grandparents [and my extended family] really had a hand in forming who I am and forming the habits that I have come to develop on the years and, um, really they prepared me to a, to come into an environment like [allied health school] and succeed.

Miguel stated that his family, nuclear and extended, taught him the respeto (respect) and discipline which allow him to have the rapport which sets him apart with patients. He also credits their teachings with giving him the chance to connect with people at a deeper level and for allowing him to establish solid and meaningful relationships during his time in allied health school.

When I asked Victoria who in her home community helped her succeed in allied health school she also credited her parents and some extended family. She recalled having her parents pass well-wishes from her aunts and uncles. These messages and support from her family was important and helped Victoria especially in times when she needed the support most.

Although I was not surprised to hear that family members were credited as being the most helpful and supportive throughout the participants’ allied health education, I felt compelled to ask why students did not rely more on their peers. Some of the participants stated that they did not reveal their true concerns and difficulties with campus entities and peers due to a fear of seeming weak or like they should not have
been given an opportunity to be part of the program because they were proving to not be apt for it.

**Peers**

Although family played the most important supportive role outside of the walls of the allied health school, within the school peers were the most supportive to participants in this study. Participants stated that peers were a great source of support because they were going through the program together. There was no need to explain the difficulties or the hardships as was the case with family.

Luis explained that, in his allied health program, all first year students were assigned a peer mentor, a second year student, who would provide informal assistance and guidance during their allied health educational process. All of the three allied health programs represented in this study had implemented some type of peer mentoring and it was helpful for most participants. Luis said that his peer mentor gave him his anatomy dissection kit and book. Some of his other classmates received much more though “all these typed up notes that were just fresh like they must’ve typed it up themselves and now they just handed it to us.” Those notes were like gold for Luis and his classmates and the notes were shared widely with the rest of the class, as Luis stated “everyone was sharing everything.” Being able to get a hold of notes before topics were covered allowed Luis and his classmates, and generations before them, to prepare before class in order to get ahead in class.

Lucy, Victoria, and Marlen agreed that their peers were helpful study companions. “It was just the larger volume and more intense studying that once again I think it was manageable because you had a group of people that were going through
the same thing that were able to motivate and help and professors are really supportive if you ever needed it.”

Victoria said that it helped that her class got along really well because they were each other’s sounding boards when things didn’t make sense. “We kind of dealt with [the academics] together. If we had concerns about something we were kind of able to talk to the staff and have safety in numbers, and um, maybe a little bit more power in numbers if there was something that, you know, we felt like wasn’t working…” Victoria and her classmates found safety in numbers which was especially important because she was in the first doctoral class of the physical therapy program at her school; previously a master’s degree in physical therapy had been the only offering. Since they were in the first doctoral class and the curriculum was new, Victoria and her classmates were asked to be vocal when curricular changes were needed. As her quote expresses, having open and clear communication within her class was necessary to discuss necessary changes because this not only affected their grades, it also affected the academic progress. In the end, Victoria felt that she and her peers “really bonded over this really tough [academic] experience [that bond with my peers also] really helped me to be successful in the program.”

Marlen agreed that the support she received from her classmates really helped. Marlen found a group of classmates who were similar to her; they were married, had families, and were close in age to Marlen. Having a group to whom Marlen could relate in a variety of levels gave her comfort and allowed her to see others, just like her, who were making it in allied health. For her, studying with her classmates was extremely helpful: “[we would] quiz each other…people made [acronyms] to remember certain
things…You kind of got to share that experience which made things click, made me remember certain things because of a certain conversation you had had with [classmates]."

Both Victoria and Marlen made it a point to state that their particular classes got along very well. Marlen explained that the class that was a year ahead of her and the one that was a year behind did not have the camaraderie or the cohesiveness her class enjoyed. Victoria also alluded to the fact that her class got along well but warned that not all classes within those programs enjoy the same friendly and helpful atmosphere. James illustrates some of the competition that can ensue between peers: "I wanted to kill [my classmates] when everyone was looking for [clinical] residencies, everyone got super competitive to the point where it was just…ridiculous…particular people wanted to take every single [clinical] residency out there, even when they were cities that they didn’t even really want…” Since there are a very limited number of residencies nationally, it was even worse to James that his classmates would apply for more than what they needed and for places where they wouldn’t even want to live.

Peers were especially important in times of stress and difficulty. Their support certainly was a complement to the familial support all participants were receiving. Lizet recalled: “everybody tried to quit…everybody goes through that phase at very different stages of school and when I wanted to [to quit] my friend kept me [in school].” When one of Lizet’s friends also contemplated leaving school, she was able to return the favor by reminding her classmate to “focus on school, keep it up…your family’s expecting…something good out of you.” Being able to remind one another why they are
attending allied health school and to keep each other accountable was a great way to retain peers.

Luis’s peers “kept me in check, but especially with our group projects. If we had to do a presentation, I always made damn sure that I did my very, very best on those presentations because I knew if I screwed up it’s going to screw up their grade. And so I didn’t want to do that to them.” Luis felt even more responsibility to do well when his peers were also going to be personally affected by his academic performance. Not to say that it was only the group projects that kept him in school and successful, he had personal drive and would also do well on his own, but doing a good job in order to help his peers do well made Luis work extra hard.

Although June felt isolated and unprotected by her allied health faculty, in times of hardship, she was able to find some support through peers. One friend, Susy, became her “golden friend”: “I call her my golden friend because she [prayed for me], I opened up to her about [my academic grievance process] and she was just such a wonderful encouragement.” When Susy was having problems of her own, June was also able to return the favor and encourage her and help her get over her situation. Susy and June actually ended up being roommates, providing support for each other inside and outside of class.

Like I already mentioned, June and Lizet did not connect with many of their peers, but the few peers they did bond with had a profound impact on them academically, professionally, and personally.

James struggled to find trustworthy peers within his allied health program which led him to seek peer support outside of the school. “I think one particular friend that I
made, another undocumented guy who was also gay, was my best friend [while I was at allied health school] so I guess he played a really big part [in my allied health education].” When he determined that his classmates were not going to be the people who he could trust and be himself with, James became involved in community service organizations outside of school and with the gay community in the city where he was attending allied health school.

For Miguel, peer support meshed with family support. As mentioned earlier, Miguel’s wife also attended the same allied health school and pursued the same degree. Therefore, Miguel’s academic success is attributed in part to his peers in his class but also to his wife. Miguel’s wife gave him important insight about what to expect from his program and how to successfully navigate the system. He acknowledged that he “had a little bit of an advantage having a wife in the program, but it was an advantage that I was willing to share with everyone because she was very detailed and had a lot of really awesome outlines…so I would just distribute those among the class and we would all use those to study which were really helpful.” In the end, Miguel and his classmates all benefited from his wife’s knowledge and class notes.

**Institutional Support**

Although not as prominent in the data and not recognized by many participants as the lifelines which helped them most to cope with the stresses of school, students did mention that there were some allied health faculty, staff and clinical rotation supervisors who were also a part of their success in allied health school.

All participants were asked to describe their relationships with allied health faculty. Lizet’s response captures the essence of the experience of most students:
“They assign you a person to work with...any difficulties or anything that you need you
go to [them], they have a meeting twice every semester just to see how you’re doing, if
you need anything.” All students at the allied health school are assigned a faculty
advisor who keeps up with students as they progress academically. As someone who
taught at the allied health school from which these students graduated and who
attended a departmental meeting on a regular basis, I can say that students are
discussed in those meetings. If ever there are any concerns with any of the students, it
is the role of the faculty advisor to meet with that student to touch base and address the
situation. This works well for most students and actually gives them an opportunity to
address any concerns as soon as they arise (and faculty notice them) rather than
waiting for final grades when it might be too late to do anything.

Lizet appreciated having mandatory meetings with her faculty advisor. She stated
“that’s one of the things I like about the school is that they kept [me] on track. Obviously
there are not that many students so [the school and faculty] are investing in you so they
want to make sure that you stay with them.” What Lizet stated is very true. Class sizes
at this specific allied health school are very small (largely due to the lack of funding to
expand) and I used to tell students that they were precious to us; they were the select
few who made it into the programs and we wanted to make sure they succeeded. I saw
it as a tragedy to lose any of the students for any reason because they had worked so
hard and for so long to get to the school. I also saw it as a tragedy to the healthcare
field because of the desperate need there is for allied health professionals; vacancies in
the field keep growing and the number of graduates is not keeping pace. I stated all of
this to the students so they knew how much at least I cared for their success but I know first-hand that some of the faculty shared my feelings.

For Lucy, being known to her faculty on a first name basis was important, moreover, she appreciated the "open door policy; their offices [were] always open, you [didn’t] have to schedule an appointment and wait, you just walked in and said hey, I don’t really get this, can you go over it? And they were more than happy to, so it was a really great environment there. I always felt like if I ever had a question I didn’t have to hesitate to ask." Additionally, Lucy enjoyed being held to a higher standard: “I feel like [faculty] held us to a high standard compared to other schools and I liked that because I felt like it made us more driven to do [well].” When I asked Lucy how she knew her school had higher standards which in turn made her and her peers be more competitive, she stated it was through her involvement in her the Texas Association of Physical Therapists, which all of her peers were required to be members of by their school, and her attendance to the regional meeting that she was able to see the difference. This is another thing this particular school does well; the faculty and staff are intentional socializing their students into the profession early in their academic careers. This helps students’ professional networks expand early in their career and provides them opportunities to learn about what is going on in the profession at the state and national levels. Furthermore, it encourages students to become politically involved through, for example, campaigns advocating for the rights of physical therapists and their patients. Students in all the programs at this particular allied health school were involved in their professional associations early in their academic careers.
Miguel raved about the support from the faculty in his program throughout his entire time as a student. He emphasized the importance of the support he received while he was in the clinical stage of his degree:

After every rotation [my faculty advisor and I] would meet and we would always make sure that everything was in line and addressed. Once it came time for graduation all the little things about getting certified and taking your test and all that stuff were all taken care of. I leaned pretty heavily on the faculty and my wife [who had also been a student in the program] to get through all the challenges that came up.

Faculty helped students manage their academic and clinical duties necessary for successful completion of the program. Faculty support especially toward the end of the students’ educational careers and as important milestones such as certifications were eminent, was imperative.

James compared the support he received as an undergraduate to the support he received as an allied health graduate student; the allied health school was not keeping up with what he had previously experienced.

[Institutional support] was the total opposite in grad school and I don’t really know if that’s just the nature of grad school or just the personality of my particular professors because they’re not seeing us for four years, they’re seeing us for 18 months and then they’re going to see a whole new group of kids and then another group of kids 18 months after that. [The faculty were] friendly people, but it was just like okay, you’re doing well, well good for you. You can see me if you need help with any class material or if you want suggestions for residency.
James especially missed the support he received at his undergraduate support due to his undocumented status. James states his faculty in allied health school were more aloof when it came to his migratory status: “I felt like they didn’t care that I was undocumented, they were indifferent. They were like okay, well, that sucks, but you’ll make it work somehow. As opposed to my undergrad professors were like okay, what are we going to do? Legislation is out there how can we, what can I do, you know. It was just different mentality, I think.” Even if the faculty at his undergraduate institution could not do anything to remedy the issues and stresses arising from being undocumented, James felt that their concern for him because of his situation and their desire to provide immediate assistance spoke volumes. Not having that kind of support negatively affected James’s experience at the school.

One particular staff member in the physical therapy department was mentioned by all three of the physical therapy graduates in this study. Luis and June recalled him as being one of the reasons they chose to attend their specific allied health institution. Luis remembers Sam\(^3\) fondly “he was just really friendly individual obviously you need to have someone who’s very friendly [helping the students]…Sam is the one that made direct contact with people [helping prospective and current students as the department’s education coordinator].” Luis emphasized the need for the department to have the first point of contact for students be engaging and approachable. Part of Sam’s charm was that he did not directly oversee and evaluate students, thus, he was a person with whom students could feel more at ease. Additionally, Sam made himself available to students to help them with more personal things. Luis recalls going to Sam to request proof of enrollment to lower provide to his insurance company to receive a student

\(^{3}\) Pseudonym given to the staff member to protect his anonymity.
discount. To Luis, Sam’s presence enhanced the department’s overall ambiance making it amicable and relaxed.

Students appreciated having faculty mentors with whom they could address academic concerns. A few participants mentioned that one staff member in their department helped to supplement the academic support they received from their faculty. Some staff members provided more social and personal support, they served a student affairs type of role but were not officially student affairs professionals nor was that part of their professional role. They provided a helping hand or an ear to listen to their academic and personal concerns; rather than being focused solely on their academics.

Participants were asked about support systems in undergraduate and allied health graduate education. When comparing the two, it is evident that faculty, staff, and student relationships at the undergraduate level were much more personal and delved into students’ lives and concerns in a more intentional manner. In allied health school, faculty did not connect as deeply with students, according to participants, in part because they are training students who in a matter of thirty-one months or less will become their professional peers. The reality of the eminent future professional relationship is what keeps some of the faculty from making deeper and more meaningful personal connections with students. I know this because this was a topic of conversation which I brought up with faculty at the allied health school where I was employed. While I understand the need to keep a professional distance, I also see the need for students have to be able to connect with faculty on a deeper level by being allowed to discuss more personal matters, should the need arise.
As participants spoke about faculty and staff who mentored them in undergraduate education, it was those who were more intrusive in their advising manner who won them over and who they appreciated most. Students appreciated faculty who cared for them authentically (Valenzuela, 1999), and who saw the students’ success as a personal matter for which they felt responsible. This is really the type of relationship which made students feel cared for at their undergraduate institution and which actually motivated them to thrive. When students are authentically cared for, their “material, physical, psychological, and spiritual needs...guide the educational process” (Valenzuela, 1999, p. 110). In allied health school material and physical needs are met for the most part but the lack of psychological and spiritual support from faculty and staff makes the experience incomplete. While family and peers help to fill those psychological and spiritual support voids, having that support complemented at the institutional level is detrimental to the students’ well-being and academic success.

Caring relationships with faculty and staff help students make deeper and more meaningful institutional connections. But, students may also feel cared for through their school’s curriculum. The allied health school from which all study participants graduated only offered one foreign language course in two of the departments. Additionally, matters of patient and clinician diversity were insufficiently addressed in the classroom. After I left the institution, the Spanish courses were no longer offered as I was the only faculty member who taught those courses. The provision of courses such as the Spanish course I taught or even courses on the diversity of patient populations within which students can identify and relate to the curriculum also show care and concern for students. Valenzuela (1999) stated that:
To make schools truly caring institutions for members of historically oppressed and subordinate groups like Mexican Americans, authentic caring...is necessary but not sufficient. Students’ cultural world and their structural position must also be fully apprehended, with school-based adults deliberately bringing issues of race, difference, and power into central focus. (p. 109)

As James mentioned, when vital parts of students’ identities are ignored or dismissed (in the curriculum and otherwise), as were his undocumented status, sexual, and cultural identities, students feel like they are left to survive on their own; without feeling institutional support or concern for their communities and identities or the complexities they bring. The professional distance faculty insist on having with students makes it necessary for them to ignore and even deny important parts of students’ identities which require institutional attention and concern. Holistic student support which takes into consideration the whole student as Valenzuela (1999) describes it, has extremely positive effects on students’ academic well-being and their success.

This particular allied health school is doing good work connecting with diverse youth and prospective students by hosting information session and visits and participating in events recruiting historically underrepresented student populations. When students arrive on campus they appreciate being assigned a faculty advisor and peer mentor who they can address when they have academic concerns. But this is not enough according to some of the participants. These relationships are superficial and did not fulfill their needs during their time in their allied health graduate programs. Thus, it is imperative that allied health schools consider how they can balance the professional relationships they are trying to forge with students while also being mindful of their
deeper and more personal needs which might require overstepping that professional boundary once in a while. This would make much more connected and fulfilled students and possibly ease the stresses caused in allied health school.

Without a doubt, family was the most important support network for participants. Family members were the keepers of participants’ most honest and deepest concerns about allied health school. They also provided advice which helped preserve students’ souls and overall well-being as they traveled the difficult allied health graduate education path. Peers were played the second most important support role as they helped participants cope with the personal and academic stresses in allied health school. Being able to rely on their peers allowed participants to find new and more manageable ways to learn and retain the grand amounts of information they had to know to successfully complete their allied health degrees. Moreover, being able to talk about the academic challenges and adjustments they had to make in order to succeed also appeased and helped students survive.

It was a powerful combination of factors that really helped all nine study participants overcome the academic difficulties they encountered during allied health school. As Miguel aptly stated, it takes a village to raise a child. I too agree that it takes a village to help an allied health graduate succeed. In this study, it is evident that the village is mainly composed of family, peers, and institutional agents; but family was most important.

Participant’s Advice to Future Latino/a Allied Health Graduate Students

During our interviews I asked participants to give advice to future Latino/a allied health graduate students. Luis’s advice is to stay in school and to wait to start a family
until after students complete their allied health education. He also urges future Latino/a allied health students to volunteer as that is how his allied health professions network was created and grew to benefit him greatly. Lastly, he said that in order to get to where he was now he “just studied really hard and I busted my ass to get to where I needed to be… just know that life’s going to suck for a while but then eventually there’ll be the light at the end of the tunnel.” As Luis stated, the road is long and hard but keeping your eye on the prize will help you get there and the rewards will be sweet. Lizet agrees that discipline is definitely necessary in order to succeed in an allied health graduate program and also emphasized that although allied health school will be a challenge, it too will end and reaching your goal will be well worth the pain. June recommends that future Latino/a allied health students find a great mentor with whom they can share their struggles but from whom they can receive support and encouragement and to talk about how they coped with the multiple stressors of allied health school. June also advices future students to “depend on your family for support when you need it.”

Lucy encourages Latinos/as, especially those who are Spanish speaking, to become healthcare professionals because of the great need which exists for bilingual and bicultural professionals. Miguel recommends students pursue allied health for themselves rather than doing it for someone else because you are more likely to reach the goal if you have set it for yourself. He also encourages students to work hard in preparation for allied health school because good grades and a great preparation are necessary to do well in a professional program. James advises future Latino/a allied health students to become involved in extracurricular activities and community organizations. For James, those organizations helped connect him to his campus
community and also allowed him to be more outgoing. James also advises future students to be aware of their multiple identities “it’s really important to label yourself in some respects, [to] know what it means to be Latino and know what it means to be Mexican or Puerto Rican…or also know what it means to be gay and it’s okay to label yourself and to stand by those identities.” Staying true to yourself and bringing the richness of you to allied health school will be beneficial for your classmates and your future patients and it also won’t make you compromise who you are.

Victoria wants future Latino/a allied health students to know that they have a vital role to play in healthcare and that there is definitely room and a need for them in the field. She also encourages future students to give themselves the opportunity to observe and shadow people in different fields as this exposure will allow them to learn about professions they might not have even known existed before. Along the lines of Victoria’s advice, Marlen also recommends that future students really focus on accumulating volunteer and shadowing experience in healthcare settings as that is one a vital part of the allied health socialization and application process. Finally, Dina recommends that future Latino/a allied health professionals come to the field because they are passionate about it rather than because they expect that they’ll “become a millionaire” by working the field.

Participant’s Advice to Allied Health Schools to Retain and Graduate Latino/a Students

Study participants also had words of wisdom to share with allied health schools. The first suggestion was shared by June, Luis, James, Victoria, and Marlen: advertise allied health professions opportunities to the Latino/a community. James stated that
when young people think about going into the medical field their mind tends to focus on becoming a physician. He states that while that becoming a physician is the health career most youth consider when contemplating a career healthcare they might decide that medical school is not for them or that they might not be as competitive or have the money to get themselves to and through medical school. Providing a wide range of options for students interested in the healthcare provides them the opportunity to enter the field, if that is indeed their wish, and to be in a career which may be more appropriate for their lifestyle and professional goals. Suggestions were made to continue to attend career fairs as early as middle school and definitely to high school students because those are crucial times of exposure to the variety of allied health professions. Dina, Lizet, and Lucy stated that they actually make themselves available to young students to give them the opportunity to observe them to learn about their specific profession.

Lucy and Miguel both discussed the importance of joint programs where undergraduate institutions create partnerships with allied health graduate institutions. These partnerships allow eligible students to be admitted to an undergraduate institution and almost simultaneously into an allied health graduate program if they maintain specific academic requirements. Students noted a few examples of programs in Texas that offer joint admissions into undergraduate and medical institutions for those students interested in in pursuing medical degrees.

Miguel stated that having allied health degree programs with missions to educate allied health professionals interested in serving medically underserved populations also have great draw for underrepresented students. He cited the example of two allied
health institutions in Texas which are in areas with high concentrations of Latinos/as and attracts many Latino/a Spanish speaking students from the area. Miguel stated that the programs’ missions are to graduate allied health professionals interested in serving the bilingual and bicultural Latino/a population in their respective regions of the state. These specific missions draw many Latinos/as who want to go into the field in part because they want to serve the Latino/a community in those regions. Having a mission and curriculum which strives to serve medically underserved populations could have an important impact on the types of students an allied health program can attract.

Lucy added that it would not hurt if allied health programs provided financial awards in the form of scholarships to attract qualified underrepresented and low-income students. By providing this support, she thinks that more students from a variety of backgrounds might be able to make allied health school a reality.

In line with Lucy’s suggestion, Lizet advised allied health schools to have a holistic admissions process. She explained that as a low-income and undocumented student she was limited by the types of medical service opportunities in which she could participate. She noted that allied health admissions committees tend to view medical mission trips as great assets on students’ applications. Being undocumented during her undergraduate career impeded her travel to and from many places. While she understands that considerations should not be made exclusively based on residency status, she did mention that being from a low-income background could be as prohibitive for students’ participation in medical missionary trips. This also suggests that allied health institutions need to consider a wider range of medical services and shadowing opportunities. Most importantly, Lizet notes the disadvantage of students
who are first generation Americans. She stated that limited knowledge about the pre-
requisites required for allied health graduate school admission are not widely known and that puts first-generation and "less connected" students at a disadvantage. Here again, Lizet puts the ball back in the allied health school's court to provide information to students of a variety of cultural, ethnic, and economic backgrounds early in their educational lives so they can aptly prepare for admission into allied health graduate programs.

Participants based their advice to future Latino/a allied health professions students and allied health schools on their personal experiences getting to allied health education as well as on their experiences as allied health students. It is necessary to continue to seek the advice of students who experience the educational opportunities we, in higher education, are intentionally providing. Good intentions often get lost as we implement curricular and student support for students in higher education. Therefore, it would do our students good if we continually seek their insight to improve the quality of students’ educational experiences.
CHAPTER 6

CONCLUSIONS, DISCUSSION AND IMPLICATIONS

While there have been studies which have investigated the in school experiences of Latinos/as in higher education (Arbona & Nora, 2007; Gonzalez and Ballysingh 2012; Page, 2012; Rios-Aguilar & Deil-Amen, 2012) and in the health professions (Alexander et al. 2009; Barr et al. 2008; Cooney et al. 2006) none have focused exclusively on the experiences of Latinos/as who have graduated from allied health graduate degree programs. As this study shows, it takes a lot of personal, social, and environmental support factors to help Latino/a students become academically competitive and resilient to be successfully admitted into and complete an allied health graduate program. The testimonios (life narratives) of these participants provide a picture which goes beyond the numbers and graphs of previous research studies. These testimonios bring life and truth to the experiences of these nine study participants and their allied health schooling experiences.

This study contributes to the allied health literature as well as the Latino/a higher educational literature due to its focus on Latinos/as in this very specific and understudied segment of the U.S. higher education system and healthcare workforce. Most importantly, it paints a picture of the ways in which Latinos/as need to be helped and supported in order to successfully complete allied health graduate degrees which would allow them to become part of a healthcare workforce which desperately needs them. There continues to be a critical shortage of Latino/a healthcare providers in the U.S. We must also remember that although Latinos/as make up 16% of the U.S. population (Ennis, Rios-Vargas, and Albert, 2011) they make up only 5.9% of the
national healthcare workforce (National Council of La Raza, 2009). Latino/a allied health professionals form a small percentage of that 5.9% of Latino/a healthcare providers nationwide. It is vital to remember that allied health professionals are imperative to the stability and well-being of the U.S. healthcare system and that they make-up two-thirds of the healthcare workforce delivering services including diagnostics, prevention, and treatment. Allied health professionals who complete graduate degrees are an integral part of the mid-level healthcare providers who have a central role in the healthcare outcomes of millions of Americans. The fact that there is not even an exact number of Latinos/as in the allied health workforce and that they are lumped together with the rest of the Latinos/as in healthcare diminishes the great worth of the work these mid-level providers do. It also drowns their educational and professional stories and makes it more difficult to determine ways to improve educational attainment and experiences for Latinos/as seeking to become part of the allied health professions.

The purpose of this study was to examine the academic resilience and community cultural wealth factors (Perez et al., 2009; Yosso, 2005) which fostered Latino/a allied health graduate degree completion. Testimonios (life narratives) shared by the nine participants who volunteered for this study provided counter stories to the research which frames Latino/a students in an academically deficient perspective. The testimonios intentionally focused on participants’ experiences in allied health graduate school therefore making them a hybrid of this methodology which tends to explore participants throughout their entire lives. Through this study, I sought to fill a void in relation to research that focuses specifically on the experiences of Latinos/as in allied health graduate degree programs. Moreover, as the person who was privileged enough
to have these testimonios shared with me, it is my duty and honor to present the
difficulties these participants experienced and to be an active participant in fixing what
needs to be fixed in order to help other Latinos/as have better allied health graduate
experiences.

Summary of Findings

This study builds on Perez et al.’s (2009) academic resilience theory and the
community cultural wealth theory of Yosso (2005). Both theories helped to frame the
educational experiences of the Latino/a participants in a non-deficient manner and
these theories allowed me to showcase the veracity of the strength, intelligence, and
resourcefulness of the participants in these stories and the communities that have
nurtured them. Familial background and culture had strong influences on the lives and
educational trajectories of the participants of this study. Moreover, this study shows the
importance and effects of peer, personal, and school networks on the success of the
nine Latino/a allied health graduates. Finally, this study presented the realities of allied
health graduate school, the difficulties participants encountered and the ways in which
they overcame them in order to reach their allied health professional goals.

Life Before Allied Health School

Seven of the nine study participants grew up in families who delivered explicit
messages about the value of education and its importance for personal and
professional advancement. Two of the participants did not receive these messages
explicitly but were not prohibited by their families to partake in educational opportunities
which would foster personal and professional advancement.
Five of the participants in this study were first-generation college students and four of the participants came from households in which at least one parent had completed a bachelor’s degree. Within those four households there were two in which at least one parent had completed a master’s degree. The varied educational attainment in each household provided a variety of educational information and resources for participants. Participants who came from households headed by parents with college credentials benefitted greatly from their parents’ college going information and advice. Those who came from families with less experience in the U.S. and higher education systems surrounded themselves with peer groups and school networks which supplied educational information and support needed for their successful advancement. In fact, three study participants noted that their parents either moved from one neighborhood to another in order to give their children the opportunity to attend more elite K-12 institutions which would render better college preparatory curricula that would help their children’s educational advancement. The variety of ways in which the value of education was shared with students made a big impact on their personal and professional goals and helped push them through the K-16 pipeline and all the way through the allied health graduate degree pipeline.

Valuing education was not enough to successfully progress through the educational pipeline. All of the participants shared that they had very strong personal drives which led them to be competitive inside and outside the classroom. Multiple participants stated that they had grand desires to succeed from an early age and that those desires are what drove them to excel inside and outside the classroom.
That personal drive was often coupled with familial influences which served as the water which would help their seeds of success grow. Families, mostly parents, influenced their children through their own professional choices. Two participants were raised in homes where at least one parent worked in the healthcare field. Five participants grew up watching their parents do manual and blue-collar labor and witnessing how harsh and inflexible those labor opportunities can be; this helped participants to work to have better opportunities for themselves. Many of the parents of these five students also made examples of themselves to their children by asking them to take a look at their lives and to think twice about circumventing higher educational and white-collar/professional careers through “consejos imbued with sabiduría or intellectual knowledge gathered from every-day learning” (Nuñez-Janes & Robledo, 2009, p. 94). Essentially, parents embodied the outcomes and hardships rendered by lives without higher education and better jobs and wished better for their children. This is aspirational capital, one of the tenants of Yosso’s (2005) community cultural wealth theory.

Peers also had a great impact in the lives of study participants. Peers provided friendly competition which helped students determine how high they should set their educational sights. Moreover, peer networks provided participants, who grew up with parents who had little formal education, networking opportunities which provided vital “insider” information related to college preparatory courses and college going information. Peers and their families also helped participants see what great potential they had not only to do well in high school but in life. Had it not been for some of these
peers some students might have taken a long time to realize the great potential they had to be successful.

School personnel also played an important role in the positive development of participants’ educational identities. School counselors and teachers were mentioned by some participants because of their provision of important college going curricular opportunities they might not have learned about otherwise. For some participants it was the words of encouragement and validation received in school that made an impact. For others it was actually being handed applications for scholarship programs and magnet school admission that made the difference and spoke loudly about others’ belief in their potential to succeed.

*Life in Allied Health School*

**Academic Rigor and Adjustment**

All study participants stated that the academic rigor of allied health school and the adjustment it required were the most difficult parts of their professional degrees. For many students, going to school from Monday to Friday and 8 a.m. to 5 p.m. was physically and mentally draining. Moreover, many of the participants stated that studying the grand amounts of information they were required to learn outside of their 40 hours of school per week was just an immense and sometimes impossible task. Determining better and more efficient ways to study was imperative to the success of the participants and with the a little help, all students found ways to adjust to the rigors of professional school.

Some participants struggled with the academic rigor of allied health school because while they were used to studying, they were also used to having personal time
outside of school. Being in an allied health graduate program did not allow for much personal and recreational time which participants needed to help them relax and regroup. Other participants struggled with the academic rigor because they had been out of school for anywhere from one to four years. Getting back into the swing of academic life and one which was much more arduous and intense than undergraduate school proved to be a test of mental and physical stamina.

Social Isolation from Family and Peers

The social isolation participants experienced due to their demanding professional school schedule also weighed them down. This finding was the second most prominent after academic rigor and adjustment and it validates findings by Bayer (2011) which noted that students from underrepresented communities generally tend to feel isolated in STEM.

Participants cited that the busy schedule of allied health school kept them from having dedicated time for family and friends. Participants who lived in a different city than their family while they attended allied health school had an especially difficult time being away from their families. Holidays were often spent away from family preparing for exams. Many family events came and went without the presence of study participants and this lack of involvement with their families weighed on them heavily. For those participants who lived at home, it was hard to exclude themselves from their family life to focus on their allied health studies. Being aware of family activities and events which were going on around them had negative emotional impacts. This exclusion from family life made some participants angry and resentful but, those negative feelings were often turned into positive action as they made students work
hard in order to stay on track to reach their academic goal and get back to life with their loved ones.

Peer isolation was also an issue. Many participants moved from their hometowns to attend allied health school which meant it was necessary to build a new circle of friends. With the limited time participants had during school, it was very difficult to create safe and meaningful peer networks. Some participants established friendships with peers within their allied health programs. Other participants found it very difficult to bond and connect with their allied health peers due to differences in cultural, socio-economic, and sexual identities, as well as immigration status. Some study participants stated that they were the only Latino/a in their program; for some it was difficult to be the only person of color in the program. The lack of ethnic, cultural, socio-economic, and sexual diversity made it very hard for some study participants to form meaningful and sustainable friendships which would have helped students more easily navigate some of the difficulties of allied health school.

Environmental Protective Factors

Latinos/as in this study counted with important environmental factors which helped them overcome the difficulties they encountered in allied health school. These factors came in the form of strong familial and peer support systems.

Family was the most important support system cited by participants. Family members allowed students the freedom to express themselves and their true feelings about themselves as allied health students. With family, participants were able to share their vulnerabilities without the fear of being judged and having their futures as allied health professionals jeopardized. Participants shared they were unlikely to really open
up about their problems, concerns, and fears in allied health school with allied health faculty, staff, and peers because they did not want to have their image and future professional careers tainted by doubt from those to whom they might disclose their perceived problems, self-doubt, and fears. Family members, then, provided emotional, physical, and mental respite from the stresses of allied health school. All participants stated that the completion of their allied health degrees would not have been possible without the help and support of their family members.

Although peers were also a key finding in the social isolation section of this dissertation because some participants were not able to form meaningful, relaxed, and trusting relationships, peers did have a positive impact on the allied health educational experiences of participants. This finding is congruent with what Palmer et al. (2011) found in their study; underrepresented students in STEM fields rely on their peers and this reliance and support leads to completion and persistence.

Peers were often the people with whom students could bond about the difficulties of allied health school. Even though some participants did not reveal all of their concerns and problems in detail, they were able to complain about how a test went or having a mean faculty member. For some participants, their peers helped to keep them accountable, engaged and in school. For others, peers played an important role in the formation of successful study habits. As some participants struggled to find study habits which would help them retain and address the massive amounts of information they were studying daily, it was their peers who exposed them to a variety of study ideas and skills which would help participants succeed. One particular participant found peer support outside of his allied health program because his gay and undocumented
identities made it difficult to open up to peers within his program. Finding allies outside
the allied health school’s walls was also important to this participant’s social adjustment
to the city and for his persistence at school.

Institutional factors also played a supportive role in participants’ success in allied
health school. Faculty and staff made themselves available to students in a variety of
ways. Often, though, this support was seen as more superficial and proved to be
insufficient for some participants, and deficient to one. Lack of acknowledgement and
care for students whole being, including their psychological and spiritual needs
(Valenzuela, 1999), made it difficult to feel that they were fully supported and
authentically cared for (Valenzuela 1999) at the allied health institution.

(un)Expected Findings

In this section, I focus on important findings which did not neatly fall within either
of the frameworks used in this study but which I found to be extremely important.

Familial Support

During this study, I expected participants to give much of the credit to their
success to support received in allied health school, specifically from faculty. Thus, I was
surprised to hear participants identify their families’ support as the most important
support system to their allied health academic success. Most participants acknowledged
faculty, staff, and peers as being helpful during their allied health education but family
ended up being the most salient support system. Family, in this study, did not refer
solely parents and siblings, family also included extended family, spouses, and in-laws.

Conversely, when students discussed advice which would help Latinos/as
interested in allied health careers messages of individualism came were prominent. For
example, Luis advised students work hard to achieve the highest grades they possibly can. Here, he gives himself credit for his academic success and his ability to focus on his academics. While he did put in the most important effort toward his educational success and those efforts are a large part of what is needed to succeed in allied health school (or educationally for that matter), he did not acknowledge the fact that his parents’ support (via payment of sporting opportunities or an interest free college savings account) were an integral part of his academic success. Likewise, Dina and Lucy did not readily recognize how living with their parents during undergraduate education allowed them to save money on room and board expenses and was another type of familial support without which college might have been more strenuous economically speaking. Participants thought of their familial support in a limited scope (academically: helping with homework or providing college-going information) and did not realize the many other ways in which their families helped them achieve their academic success (i.e. economically, providing a home, home cooked meals and emotional support through consejos).

(un)Recognition of Race

The high importance allied health faculty place on socializing students into their selected allied health profession does not consider vital parts of students’ beings such as race, class, ethnicity, sexual orientation, migratory status, and linguistic diversity and how those will intersect and affect their practice as clinicians. This lack of acknowledgement and the emphasis on “neutral assimilation” (Valenzuela, 1999, p. 109) negates vital aspects of students’ identities. In this study, James possessed the language and had experiences which helped him identify situations in which his
identities were being intentionally censored. He noted that the environment of his allied health program promoted neutral assimilation and muted the existatnce of individuality and the identities he posessed. As the undocumented gay Latino in his class, he felt he often had to hide his identities and the feelings and observations his perspective rendered during allied health scholastic activities.

I intentionally looked for experiences and instances where race was central in the data. While I did not explicitly ask students if they experienced difficulties based on their race, culture, and/or ethnicity I did look for clues and signs. James was the most vocal when it came to issues of isolation he experienced due to his cultural, migratory, and sexual identities, the lack of acknowledgement of them, their impact on his work as a clinician and socialization as an allied health professional. Marlen mentioned that during her clinical rotations she had an experience with a supervisor who “singled [her] out and made [her] feel like a minority”. When I asked her to explain how one can be made to feel like a minority she stated: “Caucasian doctors…when they would test me they would pick on me if I gave the wrong answer, really, really made me feel bad.” The treatment she received was different from the treatment her Caucasian classmates would receive while on rotations. In her view, Marlen was singled out for being a minority and ridiculed when she did not have the right answers.

Dina marveled at the low numbers of Latinos/as who were in the health professions. She stated that as she attended physician assistant departmental information sessions to figure out which school would be her best match, she kept hearing about and seeing high numbers of white females who entered and completed physician assistant master’s degrees. When I asked for her reaction to that information,
she said that it made her wonder why there were so few or no Latinos/as in the datasets. It made her wonder why Latinos/as were not present in the data, could it have been the low overall educational completion of her community? The lack of belief on the part of allied health institutions that these students could succeed which rendered low admission rates and therefore low completion rates? She wondered all of this to herself but decided that she would change the tide and at least be one of the Latinas who would be added to the number of Latino/a allied health degree completers and help fight the stereotype. Again, Dina’s resistant capital (Yosso, 2005), kicked in as she decided to fight the low completion numbers of Latinos/as in allied health and the stereotypes they can provoke.

Participants’ cultural identities were denied in part because allied health schools focus so much on academic achievement. When Dina and the other participants attended allied health graduate school recruitment talks they were all presented information about the passing rates of licensure exams for graduates of allied health schools. This emphasis on achievement is great for recruitment purposes, but its emphasis throughout the duration of an allied health graduate program “may lead youth to conclude that adults do not care for them” (Valenzuela, 1999, p. 110) rather, professors and department chairs are more interested in maintaining their high passing grades rather than tending to the success and growth of the whole student.

Students’ culture became an asset only when departments wanted to talk about the diversity of patient populations. Earlier in the study, I noted that there were few classes which addressed diversity and cultural awareness at the allied health school these students attended. I know this because of my time as a faculty member and
administrator at the institution. Having witnessed the re-accreditation process some of the departments underwent in my tenure at the allied health school, I know that departments are rated based on their inclusion of courses which touch on the diversity of patient populations. Thus, allied health departments include enough diversity training to fulfill the requirements for re-accreditation. This means that lectures on diverse patient populations are minimal and superficial and that often, students who come from “diverse” backgrounds are the ones who are selected to speak for their cultural group. A few of the participants in this study mentioned that they spoke to their peers about Latinos/as. When I asked if the participants chose to speak about their cultural group they said that they were assigned to speak about their cultural group. June added “but it was me and a white guy so I didn’t think anything of it because I thought oh, well, they think that I will know more about this because I am Hispanic and so I wasn’t like offended.” But it is offensive. It is tokenism. Students experienced these microaggressions and were not able to recognize that they were being aggressed. After exchanges such as the one June and I had, participants became more introspective and pensive and dug a little deeper to see if they could identify other times they had been tokenized. Although students were not readily able to recognize microaggressions, I was able to identify some and even lived through some so I knew they were absolutely present.

James recommended that future Latino/a allied health professionals “label” themselves; hold on to and celebrate all of the identities that make them who they are. James highlighted the importance of knowing yourself and standing by your identities and to not lose yourself in the process of being socialized into an allied health
profession. I would like to add to James’s advice for future Latino/a allied health professionals by encouraging them to recognize and celebrate your multiple identities as this will help preserve your humanity and individuality thereby making you more relatable to future patients and all around happier person. Being true to you without feeling the need to censor or mute yourself is important for well-being purposes but also because it will make you a better healthcare provider.

Another manner in which race was present in the data was in the participants’ recognition of the impact their presence as Latino/a allied health professionals has on the diversity of the field and in patient outcomes. Participants recognized that their presence in the allied health workforce would help to educate their non-Latino/a colleagues about Latinos/as. Additionally, participants recognized the benefits their presence would render to Latino/a patients who they treat: the provision of culturally relevant healthcare advice and support, spending more time treating the patient rather than focusing on clearing language misunderstandings (for those who are bilingual), and improving healthcare outcomes by being able to connect to patients by creating a more relaxed and comfortable healthcare experience. Participants recognized and affirmed that cultural congruence is necessary for more effective and efficient healthcare visits. Moreover, they confirmed that, in their experience as healthcare providers, they have noticed that having a Latino/a healthcare provider does increase patient involvement and the creation of true partnerships for the improvement of healthcare outcomes (Komaromy et al. 1996; Adam, 2012).
Discussion

This study supports Perez et al.’s (2009) academic resilience theory. The factors which Perez and his colleagues theorized about (personal and environmental protective factors) emerged in this study as factors which were imperative for participants’ allied health school success. Moreover, as the data was analyzed, community cultural wealth tenets were also clearly present in the data. Specifically, aspirational, familial, linguistic, social, navigational, and resistant forms of capital were found to be of importance to the success of Latino/a allied health graduate degree alumni. These findings support the notion that students are not succeeding alone, rather, with the knowledge assistance and support of their families and communities; communities which research has depicted as deficient and educationally inadequate.

At the most stressful times in students’ allied health school experiences, it was their communities, and specifically their families (including extended family, spouses, and spouses’ families), who helped them overcome difficulties and succeed in school. This finding helps to identify the unidentified forces researchers (Alexander, Chen, Grumbach, 2009; Cooney, Kosoko-Lasaki, Slattery, & Wilson, 2006) credit for helping students persist within and outside health professions institutions. Moreover, this finding should have allied health schools considering the type of support system they should institute for students who may not have the social, familial, and other external support systems these 9 study participants had.

Implications for Allied Health Educational Institutions

Latino/a allied health students come from cultures where community is valued over individuality (Yosso, 2005). This alone is one of the most important pieces of
knowledge to take away from this study. Therefore, it is imperative that allied health
administrators, faculty, and staff realize the networks created within allied health school
are superficial (students notice!) and are not enough to provide students the support
they will need to be successful in allied health programs. Just like Valenzuela (1999)
noted in her study that authentic caring is needed by students to feel like they are
valued as humans before they are counted as students, so too do the Latino/a students
attending allied health schools need to feel that their success matters not only because
it will render 100% success rates on licensing exams, but also because they are matter
as individuals and as future colleagues. As the literature review revealed, the number of
Latinos/as who progress to graduate education in the health professions is very small.
In 2009-2010, 4-6% of graduate health professions degrees (including allied health,
nursing, and medical doctor degrees) were earned by Latinos/as (Santiago, 2012). This
aggregated statistic does not provide the actual number of Latinos/as who graduated
only from graduate allied health programs (this data is difficult to gather because of the
over 200 allied health professions that exist and absence of a central database which
houses these numbers), but when we look at the range of 4-6% and we consider that
allied health professionals are a fraction of that, we must become alarmed and the
urgency to take care of Latinos/as who sit in our allied health classrooms must kick in as
does a woman’s maternal instinct when her child is in danger. These nine study
participants are the rare diamonds who made it to graduate allied health classrooms.
They made it because they were academically qualified, were considered (by the allied
health admissions committees) to be poised and to have the adequate rapport and
personal skills to deal with people when they are in the most vulnerable states in their
life: when they are ill. Why then would faculty, staff, and clinical mentors not provide all the necessary tools for these students to succeed? The participants in this study succeeded by graduating from their allied health program and this study reveals that their success was not without issues, some of which could be remedied if faculty, staff, and clinical mentors were more intrusive and authentically caring (Valenzuela, 1999). It is problematic that these students, who were in the top 5% of the applicant pool for their allied health program, would encounter issues succeeding in their programs and that those issues would stem from institutional isolation and disconnection. This isolation and disconnect was such that it made some of these academically outstanding students question their sense of belonging and adequacy in their allied health programs. Moreover, it is distressing that these students had to deal with microaggressions and without holistic support which would help nourish their physical and spiritual well-being. While all of the participants did well academically, there was a need for more holistic support which thankfully their parents and peers were able to provide. Again remember that, even though these students succeeded, the accounts of their experiences are important because they represent the experiences of an extremely small percentage of Latinos/as who complete graduate education. Faculty and staff must recognize that just like these participants’ patients require holistic care to keep their bodies healthy, so too do their students need holistic support in allied health school to keep the student body healthy.

Five of the nine participants in this study were first-generation college students. Thus it is imperative to consider that if students who were not first-generation college students struggled to succeed, even though their parents could give them insight about
successful college navigation and success strategies, students who might not have had that insight would struggle even more. Therefore, allied health schools need to be more cognizant of the fact that first-generation college students may require more frequent individualized attention and care in order to do well in their programs. Many graduate level programs in the health professions trip over themselves to obtain funds for their institutions based on the number of first-generation, low-income, and historically underrepresented college students they enroll. They should also consider how to make that money matter to their students not just by providing more and more beautiful labs but by focusing their funding on people and programs which will help first-generation, low-income, and underrepresented students receive holistic support for successful completion.

**Student Affairs Professionals**

Student affairs offices must be strengthened in allied health institutions and more widely publicized to allied health graduate students. Many participants stated that when they really needed to let out some steam and be in a safe space and with a person with whom they could confide during their most stressful times, they often had to go to their families. While that is not a problem, it is a problem that there are no campus personnel with whom students can really feel at ease and free to express themselves without censoring their multiple identities (sexual orientation, ethnic, cultural, etc.). Having worked as the director of student affairs at an allied health school I felt horrible listening to the many ways in which participants struggled alone during their allied health journeys. All I kept thinking was that if I had known my students better or if they had been referred to me as a person with whom they could speak without being judged, I
may have been able to appease some of their concerns and just been an additional resource to make their experience less stressful.

One of the main problems I encountered as the student affairs professional in an allied health institution was how territorial departments were over their students. Students were seldom sent to me for assistance and support because departments wanted to handle students’ issues, academic and otherwise, in house. I was baffled by this mentality and often considered how horribly limited students were in accessing campus resources. As it was revealed in this study, when students are limited to resources only within their academic departments they might not be as forthcoming with their concerns because of the power differential which comes from the faculty-student relationship. At the end of the day, the faculty with whom students will be sharing their concerns has influence over their academic and professional success; for some study participants this generated a censorship and silence which was very damaging. Student affairs professionals have the potential to be those on campus personnel who students can reach out to without fear of being judged and having their professional and academic potential questioned. Also, this study proved to me that students need much more than academic support therefore, allied health institutions should capitalize on the knowledge and experience of student affairs professionals to provide supplemental support which will help students succeed.

Familial Support and Involvement

Alexander, Chen, & Grumbach, (2009) and Cooney, Kosoko-Lasaki, Slattery, & Wilson (2006) noted that there are unidentified forces which help allied health students persist and graduate from allied health professions programs. This study clearly
identifies the forces that retained students in this study: family and peers. Since familial support and involvement is so vital to the success of Latino/a students in allied health programs! It is imperative that allied health institutions implement family orientations which will help families learn about the academic journey their students are about to embark on and how they can be most helpful and supportive to them. This type of orientations may send a message to students about the institutions’ care and intentionality to involve family members in the allied health educational process. It may also send students a message that their families and how they will be affected by the student’s time in allied health school are also a concern for the institution. Moreover, implementing family programming and events such as holiday dinners and/or end of term celebrations, would provide a structured way for students to have family time in between semesters and during the semester. As many participants noted, it was difficult to have family time during their allied health educational trajectory but implementing events like those which have been suggested may provide other international ways to provide family time for those students who may need it. Allied health graduate institutions (and graduate institutions in general) must remember that orientations, and family orientations, are necessary not only for high school to college transitions. There is a crater of questions and concerns which separates students from their last academic experience to their soon-to-be allied health educational experience. As with any transition in life, this transition requires that allied health graduate schools deliver intentional orientation programming which provides more than just advice about where the parking permits are obtained or where the recreation center is located. Orientation should address concerns and issues of transition into allied health academics and also
how being an allied health graduate student will alter students’ relationships inside and outside the classroom. Moreover, family orientations must become part of the norm for allied health graduate programs interested in providing engaging and authentically caring transitional and welcoming programs for new students.

*Intentional Recruitment*

Study participants suggested that allied health graduate schools focus their recruitment efforts on communities with high Latino/a concentrations. Moreover, some participants suggested that allied health professionals and institutions begin to speak to students as early as elementary school. As Riegle-Crumb, Moore, & Ramos-Wada, 2011 have noted, students decide as early as the 4th grade if a career in the sciences will be a viable option for them. Thus, allied health schools and professionals must take invitations to elementary, middle, and high school recruitment and career fair events more seriously. During my time as an allied health student affairs professional and recruiter I received invitations to participate in recruitment and career exploration events for K-12 students. I was often discouraged from attending those events as spending time, money, and effort with such young students would not render any immediate or palpable benefit for the recruitment numbers needed for the upcoming school year. My supervisors were not particularly supportive of my attendance to these programs but they would allow me to share the invitations with individual departments and student leaders so they could opt to attend the events to fulfill community service and outreach requirements.

A way to increase Latino/a student interest in allied health education is by having school missions which focus on serving diverse and medically underserved populations.
Additionally, allied health school missions could focus on serving certain populations (i.e. Latinos/as) in areas in which those populations are highly concentrated. Population specific allied health school missions can and may be institutionalized by having curricula which focuses on healthcare issues of medically underserved populations, for example. This type of mission and its reflection in allied health school curricular offerings sends a message to prospective applicants as well as the community in which the school is located about the kind of population graduates will be trained to assist. Furthermore, a mission of service to a specific population may send an even more important message to prospective allied health applicants belonging to that medically underserved population: we (the allied health institution) care about your community and want to help train you to become a healer within your community.

Missions are not enough though. Schools should value cultural characteristics of the medically underserved populations they wish to serve and recruit to become future allied health professionals. Language is one of the most valuable cultural characteristics prospective students possess. As Saha & Shipman, 2006; Santiago-Irizarry, 1996; Vogt and Taningco, 2008 have noted, cultural and language resemblance is an asset for the patient-clinician relationship. Patients tend to be more engaged in their healthcare and have better outcomes when they can be active participants in the patient-clinician relationship. Thus, it is important to have allied health schools actively and intentionally recruit applicants who are bilingual in the three levels of language necessary for true and effective communication and patient engagement. The three levels of language I refer to are formal, informal, and medical language. Prospective allied health graduate school applicants who are fully bilingual and bicultural will be assets to any clinical
education program because of their highly important language and communication skills but also because they are likely to be able to serve and care for a higher number of Spanish-speaking patients in a variety of levels of language. Reducing the need for third party translators by having fully bilingual and bicultural clinicians can improve patient outcomes. Moreover, having allied health workers who are truly fluent in a language other than English may enable more adequate and correct care. Many times, terms, instructions, and recommendations can be ineffective if they are lost in translation. This can lead to harmful and even deadly outcomes for patients. Being able to communicate formally, informally, and medically takes a level of training and talent not readily attainable just by sitting in a few Spanish and medical Spanish courses. Thus, to make a higher impact on Latino/a patient healthcare outcomes I recommend that allied health graduate schools aggressively and intentionally recruit students who have these language assets.

**Promising Practices**

The school of allied health from which the participants graduated and where I worked was doing some things right. Hosting historically underrepresented students on campus to provide a glimpse into the health professions and allied health specifically is a wonderful endeavor that should be continued and done more than once per academic school year. Extending this opportunity to children in their younger years is recommended as research states that children decide as early as the 4th grade if a career in the sciences will be in their future (Riegle-Crumb, Moore, & Ramos-Wada, 2011). I can attest to the fact that faculty, staff, and students from the school also attended events such as career fairs at the area elementary, middle and high schools.
Continuing that work and increasing the number of contact hours would be beneficial to expose the children to the health professions. Increasing the contact time so the youth can actually build relationships with the faculty, staff, and students would also greatly benefit these outreach efforts. Additionally, providing more hands-on opportunities through these career fairs but also through longer programming, such as summer camps, would help to excite and inspire more students to become interested in the allied health professions.

Lastly, if allied health school accrediting bodies are serious about diversity being a concern, they should make the diversity of allied health program cohorts and faculty a standard by which schools are judged for accrediting and re-accrediting purposes. As Baldwin et al. (2006) stated, implementing a proper process by which allied health programs are evaluated on the diversity of their programs might actually improve diversity. Making diversity part of the accreditation process may ensure that classes and institutions become more diverse and inclusive. The current focus for allied health accreditation continues to be on student pass rates for board exams. Thus, if diversity, recruitment, retention, and graduation of underrepresented students became measures of quality instituted by accrediting bodies, there might be more and real efforts to increase diversity in allied health.

Implications for Research

Few studies have focused on the experiences of Latinos/as in the health professions in a disaggregated manner and, in the last 20 years, none have featured the Latino/a voice and experiences in allied health educational programs. This study and the testimonio (life narrative) methodology employed herein gave voice to a
community of students who was eager to tell their stories. Initially, I anticipated interviewing 4 study participants but I ended up with 9 participants who were eager to share their stories of success and survival in allied health school. Indeed, this project turned out to be fruitful for me as it allowed me to focus on a student population which has been understudied in health professions and allied health education. This exercise was also beneficial and even therapeutic for some participants as it allowed them to heal any and all wounds endured during the allied health educational experience. With this in mind, I encourage researchers to conduct more in-depth qualitative studies which feature student voices and allow them to share not only their educational experiences but also the roads that led them there. It is imperative that researchers continue to build on this work and to conduct even more research which seeks to exalt the voices of underserved and underrepresented student communities.

Since there are over 200 allied health professions, researchers would benefit from studying the experiences underrepresented students in specific allied health fields such as dietetics, prosthetics, and orthotics. Different professional educational programs may present diverse challenges for students and it is definitely important to find out what those are if we are to diversify the healthcare workforce and increase access to medically underserved communities. Other questions to answer are: What do Latinos/as who attend specific allied health programs have to say about their experiences? Since some health professions are especially vital to the provision of healthcare in this country, how can we give voice to students who are matriculating through these programs and help them be successful?
Additionally, other historically underrepresented groups such as African American, American Indian, and certain groups within the Asian American community who graduate from health professions and allied health graduate programs, should also be studied in a disaggregated manner. These studies would be great to use for comparison against the findings in studies such as this one and to determine if the issues encountered by Latinos/as in graduate allied health programs are similar to those of other historically underrepresented populations.

Utilizing theoretical frameworks such as academic resilience (Perez et al. 2009) and community cultural wealth (Yosso, 2005) allows researchers and practitioners to gain a more holistic perspective about how students are influenced and supported in their academic success. Additionally, using more community based theory and methodology provides information which may allow higher education institutions to provide better and more holistic support services which may help underrepresented students succeed.

Closing

It is widely recognized that Latinos/as do not receive adequate medical care in this country (Adam, 2012; Komaromy et al., 1996; Zayas & McGuigan, 2006). Researchers posit that if there were more Latinos/as in the healthcare workforce the inadequacy in medical treatment would be decreased as it has been noted that Latino/a healthcare providers are more likely to practice in communities with high concentrations of medically underserved persons (Mitchell & Lassiter, 2006). Latinos/as are currently present in the healthcare workforce but they are highly concentrated in healthcare support professions rather than in those in which they may diagnose and treat disease.
(Bates, Chapman, Kaiser, Chan, 2009; Santiago, 2012). This means that their patient contact is limited as is their impact on patients’ healthcare outcomes and cultural health capital. The lack of culturally congruent healthcare providers hinders patient engagement and compliance thereby destabilizing patient well-being. As the Latino/a population grows and the number of Latino/a allied health professionals decreases, we find ourselves in a dilemma which will have major negative consequences on the health outcomes of one of the of largest and fastest growing populations in this county. The decreased care and well-being of Latinos/as will have a major negative impact in the workforce, for example, as people will be unable to fulfill their work duties due to illness. For these reasons and many more, we must consider what we can do to help Latinos/as in the allied health professions pipeline reach their academic and professional goals.

If allied health schools and the health professions field in general are serious about diversifying the healthcare workforce they have to really consider and implement suggestions such as those made by these study participants who are the very people who they are trying to attract in massive quantities. The participants in this study have a heart for healthcare and service to medically underserved communities and are great assets to the healthcare field. It is incumbent upon all of us working in K-20 education to improve the educational system in order to make it more inclusive and welcoming of diverse and underrepresented student populations. Moreover, it is up to us to implement and help students establish the social and academic support systems which will empower and lead them to succeed academically. Most importantly, and as Valenzuela (1999) suggests, we must authentically care about our students and see them as individuals who deserve care, support, and guidance which will empower them to do
well and lead them to believe that they can achieve the goals they set for themselves. The success of our country depends on what we do for the weakest and neediest people in our society; if we fail them, we also fail ourselves and the whole country.
APPENDIX A

DEFINITION OF TERMS
1. Allied Health Professions- allied health professions make up one of the branches within the healthcare field which does not include physicians and nurses. Allied health professionals make-up two-thirds of the healthcare workforce and deliver services including diagnostics, prevention, and treatment. There are over 200 allied health careers some of which include dietitians, physical therapists, and rehabilitation counselors. Degrees in the allied health field range from certificates to doctoral degrees.

2. Health Professions- includes allied health, physician, nursing, and public health professionals.

3. Latino/a- Latino/a is being used in this study to identify persons who are also considered Hispanic. A 2009 report by the Pew Hispanic Research Center provided the 1977 U.S. Congress’ definition of Hispanic as being “Americans who identify themselves as being of Spanish-speaking background and trace their origin or descent from Mexico, Puerto Rico, Cuba, Central and South America and other Spanish-speaking countries” (Center, 2008). While the Hispanic identifier is used by people who fall into this category it is worth noting that people within this category also choose to call themselves Latino/a. In this study Latino/a will be used to identify people who trace their origin to the Spanish speaking countries as defined by the 1977 U.S. Congress.

4. Culturally Congruent Care- Culturally congruent care was the goal of Madeleine Leininger (1991) in her theory of Culture Care:
“Together the [clinician] and the client creatively design a new or different care lifestyle for the health or well-being of the client. This mode requires the use of both generic and professional knowledge and ways to fit such diverse ideas into [medical] care actions and goals. Care knowledge and skill are often re-patterned for the best interest of the clients…Thus all care modalities require co-participation of the [clinician] and clients (consumers) working together to identify, plan, implement, and evaluate each caring mode for culturally congruent [medical] care. These modes can stimulate [clinicians] to design [clinical] actions and decisions using new knowledge and culturally based ways to provide meaningful and satisfying holistic care to individuals, groups or institutions” (Leininger, 1991, p. 44).

5. Public Health- The Association of Schools of Public Health defines public health as:

“…the science of protecting and improving the health of communities through education, promotion of healthy lifestyles, and research for disease and injury prevention. Public health professionals analyze the effect on health of genetics, personal choice and the environment in order to develop programs that protect the health of your family and community” (Health, 2011).

6. Underserved patient populations- people that fall under this category have very limited, if any, access to healthcare and are therefore some of the sickliest in our country.

7. Underrepresented students - students who belong to an ethnic or socioeconomic group that is not widely seen in higher education institutions. Typically Latinos/as,
African-Americans, Native-Americans, and some Asian-Americans fall into this category along with people from low socioeconomic status.
APPENDIX B

EMAIL TO CHAIRS AND DIRECTORS OF ALLIED HEALTH GRADUATE PROGRAMS
Dear Dr./Mr./Mrs. (Last Name):

I hope this email finds you well. As you might already know, I am a doctoral candidate at the University of North Texas in Denton, TX and I am working on my dissertation focused on the educational trajectories of Latino/a students who have completed an allied health graduate degree.

I became personally interested in Latino/a allied health graduates through my work and time at the UT Southwestern School of Health Professions. As an administrator and faculty member, I noticed and became intrigued by the low numbers of Latino/a students in the programs. Additionally, as I began to learn about the dire consequences the lack of diversity can have on patient outcomes, especially in medically underserved populations, my interest grew exponentially.

I am contacting you because I am hopeful that you might be able to help me recruit Latino/a graduates from your programs for participation in my study by sending an email on my behalf (see document titled Email from Chairs/Directors to Prospective Participants). Please note that your alumni will be asked to participate on a voluntary basis and will be able to stop participation in the study at any time and without any repercussions.

I am looking for participants who meet all of the following criteria:

1. Identify as Latino/a, Hispanic, Chicano/a, Mexican-American, Puerto Rican, or any other roots that link the alumni to Latin-American descent;
2. Are graduates of allied health masters and/or doctoral programs;

I thank you for your consideration of my request and appreciate any and all assistance you can provide.

Please don’t hesitate to contact me if you have any questions about my study or anything else, I’ll be glad to answer them. My email is xxx and my phone number is xxx-xxx-xxxx.

Respectfully,

Mayra Olivares-Urueta
Doctoral Candidate, Higher Education Department
University of North Texas
APPENDIX C

EMAIL FROM ALLIED HEALTH GRADUATE PROGRAM CHAIRS AND DIRECTORS

TO PROSPECTIVE ALUMNI PARTICIPANTS
Hello (Alumna/us’s Name),

I hope this email finds you well. Please read the message below from Mrs. Mayra Olivares-Urueta. If you are interested in participating in her study please email her directly at xxx.

My name is Mayra Olivares-Urueta and I am a doctoral candidate at the University of North Texas in Denton, TX. I am working on my dissertation focused on the educational trajectories of Latino/a students who have completed an allied health graduate degree.

Dr./Mr./Mrs. (Administrator’s Name) identified you as a successful alumna of their allied health program and as someone who might be interested in participating in this study. Your decision to participate is completely voluntary. If you decide to participate know that you may choose to stop participating at any time, no questions asked.

If you agree to participate in my study, I will interview you on three separate occasions during the spring of 2013. Each interview will last about an hour.

I am looking for participants who meet all of the following criteria:
1. Identify as Latino/a, Hispanic, Chicano/a, Mexican-American, Puerto Rican, or any other roots that link the you to Latin-American descent;
2. Are graduates of allied health masters and/or doctoral programs;

Please don’t hesitate to contact me if you have any questions about my study, I’ll be glad to answer them. My email is xxx and my phone number is xxx-xxx-xxxx.

Respectfully,

Mayra Olivares-Urueta
Doctoral Candidate, Higher Education Department
University of North Texas
APPENDIX D

INTERVIEW PROTOCOL
1. Please tell me about your family history.

2. Tell me about your educational history.
   a. When did you know you were going to go to college?
   b. Did anyone in your immediate family go to college?
   c. How did your family influence your educational goals?
   d. How did your family support your educational aspirations?
   e. Did anyone else outside of your immediate family influence and/or support your educational goals? Who was it? How did they influence and/or support you?

3. What made you choose the college/university you attended?
   a. What drew you to it?

4. Tell me about your experiences in undergraduate education.
   a. Describe your relationships with your peers, faculty, and staff.

5. What type of support did your family provide while you were going to college?

6. Did you experience any barriers in undergraduate education?
   a. If so, what were they? How did you do to overcome them?
   b. Who/what helped you overcome barriers in college?
      i. What was their role? What did they do?

7. Why did you decide to go into allied health?
   a. Why did you choose to attend this allied health school?
   b. Tell me about your experiences there.

8. What difficulties did you experience while attending allied health school?
a. Describe the most difficult part about allied health school.

b. How did you overcome these difficulties?

c. Who/what helped you overcome them?

9. How did you adjust to allied health school academically and socially?

   a. Describe your relationships with your peers, faculty, and staff.

10. What role did your family play in your allied health educational experiences?

11. What academic preparation helped you succeed in allied health school?

12. What or who in your institution helped you succeed in allied health school?

13. What or who in your home community helped you succeed in allied health school?

14. Did you have role models who affected your allied health educational experience? How did you become acquainted? How did they impact you?

15. How much did your peers affect your allied health experience?

16. How did your family background and family values influence your persistence in allied health school?

17. How do your family background and family values influence your practice as a clinician?

18. What advice would you give to Latino/a students interested in allied health?

19. What things should allied health schools do to increase the number of Latinos/as who attend and graduate from allied health programs?

20. What would you like to share about your college/allied health educational experiences that we have not covered?
APPENDIX E

DEMOGRAPHIC QUESTIONNAIRE
1. Where were you born?

2. Where your parents born?

   Parent 1- Parent 2-

3. Where were your grandparents born?

   Grandparent 1- Grandparent 2-
   Grandparent 3- Grandparent 4-

4. Did you grow up speaking a language other than English? If so, which language?

5. Is English your first language?

6. Did you participate in courses for English language learners? If so, how many years?

7. What is your parents’ and, if applicable, siblings’ highest educational attainment? (Put a put a clear circle below your parents’ and siblings’ highest educational attainment).

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<th>Mother</th>
<th>Father</th>
<th>Sibling 1</th>
<th>Sibling 2</th>
<th>Sibling 3</th>
<th>Sibling 4</th>
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<tbody>
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</tr>
</tbody>
</table>

8. What year and month did you graduate from high school?

9. What year and month did you first enroll in college?

10. Did you ever attend community college? If so, was that your first higher education institution? How many semesters were you enrolled in community college?

11. Did you ever have to take a break from college? If you did, why did you have to take a break? How many semesters were you gone before you re-enrolled?
12. Although you may not know exactly, can you circle the amount that provides the best estimate for your parent’s household income while you were in high school?

$15,000 or less  $15,001-$35,000  $35,001-$55,000  $55,001-$75,000

$75,001-$95,000  $95,001-$115,000  $115,001-$135,000  $135,001-$155,000

$155,001-$175,000  $175,001-$195,000  $195,001-$215,000

$215,001-$235,000  More than $235,000

13. Write down the pseudonym you would like to have me use to refer to you in the study: ________________________________
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