


**Factors that Influence the Enrollment and Academic Success of Hispanic Students
in Allied Health and Nursing Programs at a Midwestern University**

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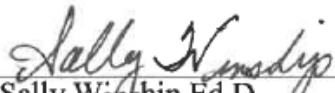
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Abstract

Research indicates there is a deficit of minority health care providers in the United States, which is partially due to limited diversity among applicants to health sciences programs. Increasing the proportion of minority health providers to more effectively reflect the communities served has been identified as a strategy to reduce health disparities. With the continued growth of the Hispanic population in the United States along with data indicating there is a direct correlation between lack of cultural diversity of healthcare employees and health disparities, the number of Hispanic students enrolling in nursing and allied health programs needs to be increased.

The purpose of this study was to ascertain factors that contribute to enrollment and academic success of Hispanic Students in allied health and nursing programs. Eight Hispanic students currently enrolled in or recently graduated from allied health or nursing programs at Midwestern University were interviewed. Data obtained from the interviews were analyzed to identify themes. Eight themes emerged including (1) insufficiency of college-going information; (2) affording college; (3) fitting in; (4) support and assistance; (5) work and life balance; (6) intrinsic factors; (7) increasing diversity; and (8) financial aid and scholarships. The findings present potential solutions for colleges as they work to increase the number of Hispanic students enrolled in and graduating from allied health and nursing programs.

Dedication

This dissertation is dedicated to my husband who is the smartest individual I have ever known. While he may not have earned a traditional education, his passion for learning has motivated me throughout my educational pursuits. I am inspired by his journey from Mexico to the United States and his perseverance through incredible challenges. Because of his journey I was compelled to complete this research in an effort to help others overcome barriers to the pursuit of their dreams.

Acknowledgements

This journey was made possible by the encouragement and support of many individuals. To my husband who has always believed in and supported me, thank you for your patience while I completed this work. To my family, thank you for your encouragement and cheerleading every step of the way. Thank you to my colleagues and friends who offered tips and advice that kept me on the path. Without the inspiration and support of Dr. Vickie Kelly, I would not have begun the program at Baker University and the road to finishing would have been much more difficult if she were not there to keep me going.

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Fields3

Chapter 1

Introduction

During the first decade of this century, the Hispanic population in the United States grew from 15.2 million to 50.5 million individuals, accounting for 16.3% of the total population of the United States (Ennis, Rios-Vargas, & Albert, 2011; Reyes & Nora, 2012). It has been predicted that these numbers are expected to rise over the next few decades, tripling by the year 2050 (Healey, 2013). Unfortunately, the allied health and nursing workforce has not kept pace with the increase in the country's Hispanic population. In a study conducted by Snyder, Stover, Skillman, and Frogner (2015), it was determined that 5% of the nation's registered nurses and approximately 10.9% of the entire healthcare workforce identified as Hispanic. Research has demonstrated that health outcomes are improved when there are similarities in ethnic representation of health care providers and the patients served (Healey, 2013). Increasing the numbers of Hispanic students enrolled in health care programs may be one way to improve health outcomes in the United States, particularly in communities with high numbers of Hispanic residents. While a few states have identified the need to increase enrollment of Hispanic students, the numbers of Hispanic students enrolled in health care programs across the nation continues to be low (Cason et al., 2008; Healey, 2013; Reyes & Nora, 2012).

Background

The numbers of Hispanic citizens have increased significantly, and that growth is expected to continue (Healey, 2013; Reyes & Nora, 2012). It has been further predicted that by the year 2080, approximately 51% of United States' citizens will be minorities

with the largest sub-population being Hispanic (Healey, 2013). The continued growth of the Hispanic population and their access to quality healthcare has been a topic of increasing interest over the past several years.

In 2005, Fleming, Berkowitz, and Cheadle completed a review of a Robert Wood Johnson Foundation-funded program titled, Cross-Cultural Education in Public Health (CCEPH). In this review, the authors identified several issues ethnic minorities face in the United States that contribute to disparities, including disproportionate levels of disease, higher rates of poverty, lower rates of access to medical care and healthcare education, higher mortality rates, and the burdens of discrimination. Burkholder and Nash (2014) described the challenges that new immigrants and non-native speakers face when attempting to develop social networks. For example, it can be difficult to understand where to access care and many individuals do not have community connections where resources may be shared. Burkholder and Nash (2014) explained that strict immigration policies and fear of retribution can cause some individuals to avoid seeking health care, particularly if they do not identify with the providers. Language and cultural barriers are common in all areas of healthcare. There are often challenges with verbal communication along with differences in the actual definitions of health and well-being. It is common for personnel in healthcare institutions to attempt to teach non-Spanish speakers how to speak medical Spanish in order to provide basic treatment to patients. Unfortunately, much can be lost in translation. There also exists the continued dilemma of non-verbal, cultural dissimilarities (Burkholder & Nash, 2014; Fleming et al., 2005).

Continued growth of the Hispanic population in the United States, along with data documenting a direct correlation between the lack of cultural diversity in the healthcare workplace and health disparities, point to the need for an increase in the numbers of Hispanic students graduating from allied health and nursing programs. In their 2015 study, Snyder et al. reported that 5% of registered nurses and approximately 10.9% of the entire healthcare workforce was Hispanic. Additionally, the percentage of Hispanic nurses who graduated with a bachelor's degree or higher was even lower (Marquand, 2014). Table 1 illustrates the percentage of Hispanic professionals employed in a variety of health occupations, along with the percentage of change within a nine-year time period between 2004 and 2013.

Table 1

Percentage of Hispanic Professionals Employed in Allied Health and Nursing Fields

Health Professions Occupation	2013	Change from 2004
Physical Therapists	2.8	-6.1
Occupational Therapists	5.1	0.9
Physical Therapist Assistants and Aides	9.7	0.1
Occupational Therapy Assistants and Aides	3.5	-1.5
Respiratory Therapists	6.5	2.6
Radiation Therapists	5.3	-13.4
Diagnostic-Related Technologists and Technicians	10.3	-0.5
Medical and Health Services Managers	6.7	1.8
Licensed Practical and Licensed Vocational Nurses	8.7	1.5
Registered Nurses	5.0	5.0

Note. Adapted from *Healthcare Workforce Data: Hispanic Distribution*, by Snyder et al., 2015.

Retrieved from <http://depts.washington.edu/uwrhrc/uploads/>

FINALREPORT_Facilitating%20Diversity%20in%20the%20Health%20Workforce_7.8.2015.pdf

Research has indicated the deficit in minority health care providers in the United States is partially due to limited diversity among applicants to health sciences programs (Fleming et al., 2005). Increasing the proportion of minority health providers to more effectively reflect the communities served has been identified as a strategy to reduce health disparities (Fleming et al., 2005). To address the deficit of minority health professionals, higher education institutions should place emphasis on increasing the number of Hispanic students enrolled in allied health and nursing programs.

To understand the broader issues associated with the lack of Hispanic students graduating from allied health and nursing programs, it is also helpful to examine the overall barriers with regard to the pursuit of post-secondary education. In a paper titled, *Lost Among the Data: A Review of Latino First Generation College Students*, Reyes and Nora (2012) identified several important statistics. First, only 37% of Hispanic high school graduates between the ages of 18 to 24 were enrolled in two or four-year colleges or universities at the time their study was completed. This compared to their White counterparts with 49% enrolled in post-secondary education. Additionally, only one in ten Hispanic adults between the ages of 18 to 24 held a college degree and about “half of all Latino college students had parents whose highest level of education was a high school diploma or less” (Reyes & Nora, 2012, p. 2). Data obtained from the United States Census Bureau for the year 2012 indicated that the number of Hispanic adults enrolled in two or four-year colleges or universities between the ages of 18-24 had increased to 49%, while the number of White, non-Hispanic individuals in the same age range had decreased to 47%. The number of Hispanic students enrolled in two or four-year colleges or universities has continued to increase and reached 2.4 million in 2012.

Additionally, the high school dropout rate for Hispanic students has decreased at a faster rate than any other population, falling to a record low of 15% in 2012, which was less than half the rate of 32% in 2000 (Lopez & Fry, 2013). According to several studies, education has been cited as an important issue for Hispanics and its importance has been linked to increases in college enrollment (Krogstad, 2016; Lopez & Fry, 2013).

While the data demonstrated an increase in overall pursuit of post-secondary education by Hispanic students, only 14.5% of Hispanic individuals ages 25 and older had earned a bachelor's degree, compared to 51% of Asians, 34.5% of Whites, and 21.2% of African-Americans (Lopez & Fry, 2013). For the current study, enrollment data from a Midwestern University were examined. The results indicated in 2017, 10.2% of total enrolled students identified as Hispanic. In that same year, 9.8% of declared majors in allied health and 7.5% of declared majors in the school of nursing were Hispanic. While the percentage in allied health was slightly higher than the past four years, the percentage in the school of nursing had declined within the same time period. Further research showed 0% of allied health faculty and 4.3% of school of nursing faculty identified as Hispanic (Midwestern University, 2018).

Statement of the Problem

As noted previously, there is a direct correlation between lack of cultural diversity of health care professionals and health disparities among minority patients (Cason et al., 2008; Fleming et al., 2005). Livingston (2013) reported that 27% of Hispanic adults reported having no specific healthcare provider. They were twice as likely as African-Americans and three times as likely as non-Hispanic Whites to lack a regular health care provider. Livingston (2013) also determined that 37% of Hispanics between the ages of

18 to 29 and 27% of Hispanic individuals with a high school diploma or lower were less likely to utilize a consistent health care provider as compared to their counterparts in other ethnic groups.

Limited diversity among applicants to healthcare educational programs has contributed to the dearth of minority professionals (Fleming et al., 2005). Increasing the proportion of Hispanic health providers to more effectively reflect the communities served has been identified as a strategy to reduce health disparities (Fleming et al., 2005). With the continued growth of the Hispanic population in the United States along with data indicating that there is a direct correlation between lack of cultural diversity of healthcare professionals and health disparities, the number of Hispanic students enrolling in nursing and allied health programs needs to increase (Cason et al., 2008; Fleming, Berkowitz, & Cheadle, 2005).

A few states in the nation with particularly high numbers of Hispanic residents have identified the need to increase enrollment of Hispanic students (Cason et al., 2008; Healey, 2013). Within those states a small number of colleges and universities have developed successful healthcare education recruitment programs to address the needs of the country and surrounding communities (Cason et al., 2008). For example, an urban community college in Northern New Jersey identified the need to provide marketing materials in both Spanish and English to prospective students, along with educating the community about the shortage of Hispanic health care professionals through relevant media channels (Healey, 2013). Several studies have identified other barriers to enrollment for Hispanic students as related to their non-Hispanic counterparts including lack of minority faculty and deficits in student diversity (Nuciforo, 2015). Although

efforts have been made in specific communities, colleges and universities continue to have low numbers of Hispanic students and the state of Kansas is no exception (Reyes & Nora, 2012). To increase the number of Hispanic students in Kansas who enroll in nursing and allied health programs, it is important to identify factors that inhibit enrollment, along with those that are essential for increasing enrollment and insuring academic success. For this study, academic success has been defined as maintaining required grade expectations for remaining in or graduating from the desired allied health or nursing program. Furthermore, academic success included the student's perception of readiness during preparation for clinical internships and professional employment in healthcare.

Purpose of the Study

The first purpose of this study was to identify factors perceived to inhibit enrollment for Hispanic men and women who are enrolled in or have graduated from allied health or nursing programs at a Midwestern University. The second purpose was to determine factors that were perceived to promote enrollment of Hispanic men and women in nursing or allied health programs at a Midwestern University. The third purpose was to identify factors that were perceived to inhibit the academic success of Hispanic students in allied health or nursing programs at a Midwestern University. The fourth purpose was to ascertain factors that were perceived to contribute to the academic success of Hispanic students in nursing or allied health programs at a Midwestern University. The fifth purpose was to identify solutions recommended by the participants for removing barriers to enrollment and academic success of Hispanic students in allied health or nursing programs at a Midwestern University. The sixth purpose was to

identify solutions recommended by the participants for promoting enrollment and academic success of Hispanic students in allied health or nursing programs at a Midwestern University.

Significance of the Study

The results of this study are important for faculty and administrators who are responsible for student enrollment in university nursing and allied health programs. Identification of barriers to enrollment by Hispanic students who are enrolled in or who have graduated from nursing or allied health programs at a Midwestern University may increase the need for the development of an enrollment plan specifically targeted to members of the Hispanic community. Faculty and administrators at the Midwestern University where the research study was conducted may identify changes that should be implemented in allied health and nursing programs to promote academic success among Hispanic students. It has been shown that implementing programs to increase the numbers of Hispanic students graduating from allied health and nursing programs is critical for the overall health of the community (Cason et al., 2008; Fleming et al., 2005). The results of the study are essential for eliminating barriers to successful enrollment and subsequent graduation of Hispanic students from health care programs at the Midwestern University where this study was conducted. Parents of Hispanic students are aided by this information as they work with kindergarten through post-secondary schools to guide their children through college and into successful employment. Community healthcare partners with growing numbers of Hispanic clients will benefit from an increase in the diversity of allied health and nursing professionals. The results of this study are important for legislators and community leaders as they work with healthcare facilities

and universities to increase the number of Hispanic healthcare providers. Finally, the data from the current study contributes to the overall knowledge base of research on the subject regarding strategies to increase enrollment and academic success of Hispanic students in allied health and nursing programs.

Delimitations

Lunenburg and Irby (2008) described delimitations as boundaries identified by the researcher that define the purpose of the study. The delimitations for this study included the following:

1. The study was conducted at a specific Midwestern University.
2. The sample included Hispanic men and women at the university who were enrolled in allied health or nursing programs, or those who had graduated from the university's allied health or nursing programs within the past three years.
3. Only data gathered in 2018 were analyzed.
4. Perceived barriers to enrollment, factors that promoted enrollment, and factors that were perceived to contribute to or inhibit academic success were analyzed.

Assumptions

Assumptions are claims made by the researcher that are accepted for purposes of the research (Lunenburg & Irby, 2008). This study was based on the following assumptions:

1. All participants understood the interview questions and responded honestly.
2. The interpretation of the data accurately reflected the perceptions of the respondents.
3. All student data (demographics) were current and accurate.

Research Questions

Lunenburg and Irby (2008) posited that research questions are essential parts of the introduction and provide the guiding framework for the dissertation. Six research questions guided this study:

RQ1. What do Hispanic men and women who are enrolled in or have graduated from allied health or nursing programs at Midwestern University perceive as factors that inhibit enrollment?

RQ2. What do Hispanic men and women who are enrolled in or have graduated from allied health or nursing programs at Midwestern University perceive as factors that promote enrollment?

RQ3. What do Hispanic men and women who are enrolled in or have graduated from allied health or nursing programs at Midwestern University perceive as factors that inhibit academic success?

RQ4. What do Hispanic men and women who are enrolled in or have graduated from allied health or nursing programs at Midwestern University perceive as factors that promote academic success?

RQ5. What do Hispanic men and women who are enrolled in or have graduated from allied health or nursing programs at Midwestern University identify as solutions for removing barriers to enrollment and academic success?

RQ6. What do Hispanic men and women who are enrolled in or have graduated from allied health or nursing programs at Midwestern University identify as solutions for promoting enrollment and academic success?

Definition of Terms

The following terms are defined for the purpose of this study:

Allied Health. This category of health professions includes those professions that are separate from nursing and physician categories. Allied health professions consist of a variety of diagnostic and treatment occupations and make up approximately 60% of the United States' healthcare workforce (Association of Schools of Allied Health Professions, 2016).

Community Health Worker. This term refers to individuals in a community who promote health and nutrition while acting as a liaison between their communities and health care entities (Brownstein & Allen, 2015; Patient Protection and Affordable Care Act of 2010).

Ethnic Minority. This is terminology used to represent non-white ethnic groups (American Psychological Association, 2010).

Hispanic. The United States Census Bureau (2010) defined the term Hispanic not as a race of people but as a group of individuals originating from a region where the predominate language is Spanish.

Healthcare Workforce. The World Health Organization (2010) defined this term to include everyone involved in actions directly enhancing health care. Clinical staff, as well as management and support staff, are included in this definition (World Health Organization, 2010).

Latino. According to the U.S. Census Bureau (2010), Latino is a term used to identify a person originally born in Latin America who resides in the United States or an individual who resides in Latin America.

Organization of the Study

Five chapters were developed for this study. The first chapter provided an introduction to the topic and identified the need for increasing the enrollment of Hispanic students into allied health and nursing programs in the United States. Chapter 2 includes the literature review providing background information and studies that support the need for an increase in the number of Hispanic healthcare professionals, along with studies that identify barriers to enrollment and potential strategies to increase enrollment and academic success of Hispanic students in health professions programs. Chapter 3 provides a description of the methods and research design used for this study. Chapter 4 presents the research study results. Chapter 5 includes a summary of the study, major findings related to the literature, implications for action, and recommendations for future studies.

Chapter 2

Review of the Literature

There has been a significant pattern of growth in the United States Hispanic population over the past few decades. Reyes and Nora (2012), along with Nuciforo (2015), reported that Hispanic individuals accounted for 16.3% of the total U.S. population in 2010. Snyder et al. (2015) and Azziz (2015) indicated that the Hispanic population in the United States grew to 17.1% in 2014. It has been suggested that Hispanics are the fastest growing demographic and their numbers are expected to triple by the year 2050 (Marquand, 2013; Reyes & Nora, 2012). Similarly, a 2008 Pew Research Center report projected the Hispanic population will triple in growth from 42 million in 2005 to 128 million in 2050. Furthermore, Hispanics will account for 29% of the total U.S. population in 2050, compared to 14% in 2005 (Passel & Cohn, 2008).

While there has been continued growth of the Hispanic population, there has been limited growth in the number of healthcare professionals who identify as Hispanic. In 2004, the Sullivan Commission produced a report that identified Latinos as ‘missing persons’ in the healthcare workforce. In 2015, Snyder et al. and Azziz wrote that the dearth of Hispanic healthcare professionals continued to persist with 10.9% of the entire healthcare workforce comprised of Hispanic individuals. Cason et al. (2008) and Marquand (2013) reported 2% of the nation’s registered nurses were Hispanic and the numbers at the bachelor’s level were even lower. Healey (2013) suggested Hispanic nurses were the most underrepresented of all demographics. In the physical therapy (PT) profession, only 4.5% of the United States’ PTs are Hispanic (Nuciforo, 2015).

The contradiction between the significant growth in the overall Hispanic population and the dearth of Hispanic health professionals has been reported to be a serious public health issue. Some health agencies have even referred to this lack of diversity in the healthcare workforce as a public health crisis (Baldwin, Woods, & Copeland-Simmons, 2006). As it has been widely reported that the lack of a culturally diverse workforce contributes to health disparities and negatively impacts health outcomes in the nation, it is imperative that allied health and nursing programs continue to investigate ways to improve the pipeline of Hispanic health professionals while also identifying strategies to promote the enrollment and academic success of these students.

This literature review examines multiple facets of the issues surrounding the lack of Hispanic health care professionals, along with factors relating specifically to improved recruitment and retention of this demographic into allied health and nursing programs. This chapter is organized into three primary sections: a) background information and context for the study, b) the deficiency of Hispanic students in allied health and nursing programs, c) theoretical frameworks.

Background Information and Context for the Study

In order to provide a basis to support the need for increased recruitment and graduation of Hispanic students in allied health and nursing programs, it was necessary to understand the overall impact to society and the current demographics specifically related to number of Hispanic healthcare providers. Equally important was the need to investigate resources that described the numbers of Hispanic students at various levels of education including K-12 and those at post-secondary institutions. There was a significant amount of data related to health disparities focused primarily on

underrepresented minorities as a group. A growing number of studies have concentrated on Hispanic populations and some of those reports have been included in this section. Workforce statistics were plentiful with regard to healthcare professions including physicians, dentists, and nurses. Data regarding allied health professionals was somewhat limited and several authors indicated there was a need for more research in those areas. Educational data related to K-12 and post-secondary institutions were also found in multiple sources. The sections below are divided into three parts including: a) health disparities; b) support for diversity in the healthcare workforce; and c) pursuit of education by Hispanic students.

Health Disparities. Racial and ethnic minorities in the United States are at a higher risk for disparities in many areas of health care including access and the quality of care they receive (Agency for Healthcare Research and Quality, 2011; Gonzales, 2013; Institute of Medicine, 2002). The National Institutes of Health (2009) defined health care disparities as “differences in access to or availability of facilities and services” (p. 1). Multiple studies have demonstrated that members of minority groups suffer a disproportionate burden of disease as compared to their White counterparts (Dawson, 2013; Fleming et al., 2005; Hansen, 2014). Bond, Cason, and Baxley (2015) and Nuciforo (2015) discussed the (2002) Institute of Medicine (IOM) report titled, *Unequal Treatment: What Healthcare Providers Need to Know About Racial and Ethnic Disparities in Healthcare*. The IOM researchers concluded that minorities were less likely to receive necessary services, including procedures determined essential by their provider. Even when minorities had insurance and lived in areas where access issues were not prevalent, they remained at a disadvantage. Bond et al. (2015) indicated

increased numbers of minority nursing students and Nuciforo (2015) reported more physical therapy students would help bridge the gap of access to healthcare in certain communities. Olivares-Urueta (2012) identified similar contradictions and indicated not only did minorities have difficulty obtaining necessary medical care, but they also received lower quality of care. Additionally, while minorities comprised one third of the United States population, they made up more than half of all uninsured.

In Hansen's (2014) report, a number of issues were identified including lower health service utilization by minorities, lack of health insurance, receipt of lower quality care, more chronic disease, and premature death. Minorities are represented in larger numbers within the United States' designated health professions shortage areas. The geographical issue, combined with inequities related to various social determinants of health such as access to care, education, health status, lower income levels, genetics, and environmental concerns, contributed to the continued disparities in communities of color.

Hispanic individuals, in particular, face the aforementioned challenges, along with others related to language and cultural barriers. They have disproportionate levels of serious illnesses including asthma, obesity, and diabetes (Healey, 2013; Livingston, Minushkin, & Cohn, 2008). Livingston et al. (2008) reported additional statistics related specifically to healthcare access by Hispanics. The lack of regular health care providers was especially prevalent among males, Hispanic individuals between 18-29 years of age, and those who possessed a high school diploma or less. A majority (80%) reported they received health information from various alternative sources including social media, television, and radio.

Access to healthcare and receipt of high quality healthcare have been even greater issues for those born outside of the United States, those who had not assimilated well, individuals who spoke limited English, those who did not have any type of citizenship status, or those who had come to the U.S. recently. Strict immigration policies and fear of deportation were identified as factors that discouraged Hispanic individuals from seeking care (Burkholder & Nash, 2014). The IOM report in 2002 identified the need for a culturally competent workforce who could increase access to high-quality health services for all minorities, including Hispanics. Such competence would help to insure a higher quality system of health care delivery (Baldwin et al., 2006).

Support for diversity in the healthcare workforce. Research in the United States has demonstrated minorities experience disparities in access and quality of healthcare received (Dawson, 2013; Fleming et al., 2005; Gonzales, 2013; Hansen, 2014; Healey, 2013; Livingston et al., 2008; Mitchell & Lassiter, 2006; Olivares-Urueta, 2012). Hispanic individuals are particularly vulnerable based on extenuating factors including immigration status and linguistics (Agency for Healthcare Research and Quality, 2011; Burkholder & Nash, 2014; Hansen, 2014; IOM, 2002; Livingston et al., 2008). Livingston et al. (2008) reported, “More than one-fourth of Hispanic adults in the United States lack a usual healthcare provider” (p. 1). They also stated that one in four Hispanic adults indicated that they received lower quality medical treatment and believed it to be based on their race, financial status, and their inability to speak fluent English. In 2011 the Agency for Healthcare Research and Quality (AHRQ) conveyed Hispanic individuals received lower quality care on 39% of quality measures, along with decreased access on 63% of access measures as compared to their non-Hispanic, White counterparts. Healey

(2013) reported that by the year 2080, 51% of the United States population will be minorities and the largest subpopulation will be Hispanic. This increase in the overall population of ethnic minorities and the discrepancies in healthcare received required a closer examination of specific reasons for support of improved healthcare workforce diversity.

It has been shown that when healthcare providers have similar cultural and linguistic backgrounds to their patients, health outcomes are enhanced (Fleming et al., 2005; Hansen, 2014; Healey, 2013; Olivares-Urueta, 2012). Davidhizar and Shearer (2005) indicated that a “culturally diverse nursing workforce that mirrors the population served is essential for the delivery of culturally sensitive healthcare” (p. 10). In both mental health and primary care settings, Hispanic patients were much more likely to report higher satisfaction if their provider shared the same ethnic background (Olivares-Urueta, 2012). Gonzales (2013) wrote that there is a direct correlation between shared ethnicity between providers and patients and improved access, quality, and satisfaction.

The rationale for improved outcomes when patients and providers hold shared race and ethnicity has been demonstrated in several reports. First of all, Hispanic healthcare professionals are more likely to provide care to underrepresented communities and patients with lower socio-economic status (Dawson, 2013; Gonzales, 2013; Nuciforo, 2015; Olivares-Urueta, 2012). Hispanic healthcare providers are often able to reduce both cultural and language barriers. Language barriers often impact resource delivery, quality, and health outcomes (Burkholder & Nash, 2014; IOM, 2002). Cooper (2012) stated improved communication between provider and patient was the greatest factor for improved health outcomes. As Cooper (2012) indicated, health outcomes are directly

impacted when the provider is required to focus on language and often misunderstand or overlook signs and symptoms of illness.

Several reports have provided more specific rationale for diversifying the healthcare workforce. Marquand (2013) cited a study that demonstrated a link between bachelor's degree trained nurses and improved outcomes for surgical patients. They cited a Journal of the American Medical Association (JAMA) study that indicated a 5% decrease in patient mortality when the post-surgical nursing team had a 10% increase in bachelor degree trained nurses (Aiken, Clarke, Cheung, Sloane, & Silber, 2003). As the number of Hispanic nurses receiving education at the bachelor degree level is less than 2% (Marquand, 2013), it is likely that Hispanic surgical patients will have poorer outcomes.

Hansen (2014) suggested the elimination of disparities in access to care and medical treatment might decrease healthcare costs as approximately “30% of direct medical care expenditures for African-Americans, Asians, and Hispanics are because of health disparities” (p. 2). As Hispanic individuals in particular demonstrate higher rates of diabetes and are more likely to have additional co-morbidities than non-Hispanic whites (Livingston et al. 2008), costs for care may be decreased as more Hispanic patients seek more frequent and preventative care. Burkholder and Nash (2014) specifically cited the need for increased awareness of preventative and treatment services to improve the health of Hispanic and migrant populations.

Improving the number of Hispanic professionals in the healthcare workforce allows providers to learn from one another so they may increase understanding of culture, language, values, and beliefs held by Hispanic patients. Hansen (2014) wrote that

observation of professional staff from diverse backgrounds working collaboratively enhances patients' overall confidence with the care received as they believe their values and beliefs will be respected. The IOM's (2002) report identified importance of diversity of staff in clinical encounters, as patients were less likely to mistrust the providers and refuse care.

It has been demonstrated that the diversification of the healthcare workforce will benefit Hispanic individuals and society in general (Gonzales, 2013). It has also been shown that as more Hispanic professionals enter the healthcare workforce, access to care and improved outcomes will decrease illness and enhance quality of life. Additionally, the research agenda would be improved, as more minority researchers would be able to identify questions and ethnic minority populations would gain confidence in the investigators (Baldwin et al., 2006; Hansen, 2014). As Mitchell and Lassiter (2006) divulged, diverse viewpoints in the healthcare workforce are essential in order to advance research, increase access, improve quality, and insure equity for all individuals. The underrepresentation of Hispanic and other minority healthcare providers has been deemed a public health crisis (Baldwin et al., 2006; Dawson, 2013). Researchers have agreed that diversification of Hispanic allied health, nursing, and other medical professionals is necessary for a quality healthcare delivery system.

Strategies to promote diversity in the healthcare workforce. As support for a diversified healthcare workforce has been demonstrated to be essential, much of the literature also identified salient strategies toward meeting that end. Gonzales (2013) referenced the Sullivan Commission's (2004) report that made several conclusions regarding strategies for a diverse healthcare workforce. The tactics included insuring the

diverse skills and resources of all ethnic groups were included in planning and incorporation in the workforce. The report also stressed the importance of sharing professional development opportunities, resources, and responsibilities for all individuals. The Sullivan Commission's (2004) report indicated implementation of the strategies would impact quality of care and suggested having a culturally competent healthcare workforce would help insure positive health outcomes in all populations.

Healey (2013) wrote that educating the public was also an approach that would be useful for increasing diversity in the healthcare workforce, particularly among the Hispanic population. For example, Healey (2013) reported nursing is not always recognized as a rewarding and respected profession in the Hispanic community. Educating communities on the importance of increasing the number of Hispanic health professionals would be useful as there was much information that demonstrated the positive impact from the diversification. Mitchell and Lassiter (2006) suggested underrepresented healthcare professionals were more likely to work in minority communities as they felt a desire to give back to their own communities. Olivares-Urueta (2012) cited a study from California, which reported Hispanic physicians care for three times as many Hispanic patients as compared to their non-Hispanic counterparts. Additionally, Hispanic individuals who were treated by Hispanic physicians had higher patient satisfaction rates overall (Olivares-Urueta, 2012).

Effective strategies to educate the Hispanic community and diversify the healthcare workforce have been documented in the Center for Disease Control's policy brief (Brownstein & Allen, 2015). One important approach was training community health workers (CHWs) to work in their communities to address chronic diseases such as

diabetes, asthma, cancer, heart disease, and stroke. In the Hispanic community, these professionals are known as promotores and are already respected members of their own communities. As Brownstein and Allen (2015) reported, that relationship has been essential for sharing health information with their constituents and improving the overall health of their communities.

The strategy of using promotores has been shown to be effective in both prevention and management of chronic disease through several initiatives. One example was a program developed for Hispanic males that provided education regarding colorectal cancer. Participants in the Colorectal Cancer Male Navigation Program demonstrated an increase in life expectancy of six months and healthcare savings of \$1,148 per participant (Wilson, Villarreal, Stimpson, & Pagan, 2014).

Based on the success of multiple programs, continued use of community health workers has been a focus of the IOM. In the 2010 report titled, *A Population-Based Policy and Systems Change Approach to Prevent and Control Hypertension*, recommendations were made for the Centers for Disease Control (CDC) and states to work together in increasing the number of trained community health workers. The IOM's recommendation specifically identified the use of community health liaisons in high-risk areas to educate individuals on strategies to reduce hypertension, a disease that affects Hispanic individuals disproportionately (Perez, 2011).

Furthermore, provisions were established in the Patient Protection and Affordable Care Act of 2010 to award grants to communities for using community health workers to encourage improved health behaviors and outcomes for underserved communities (Brownstein & Allen, 2015). These individuals work to provide education about health

and nutrition, social assistance, and advocacy to their community constituents. They assist members of the community with coordination and follow-up activities with their healthcare providers and help them enroll in healthcare service programs. Promotores are able to bridge the cultural and linguistic divide between community members and healthcare practitioners as well.

Twenty-three states have taken advantage of the grants through the Centers for Medicare and Medicaid Services to diversify their healthcare workforces through the use of community health workers and promotores (Brownstein & Allen, 2015). Indiana initiated a study to determine the impact of community health workers on blood pressure reduction in communities. Mississippi introduced the Mississippi Delta Health Collaborative, which is a program from the Mississippi Department of Health that provides education to improve cardiovascular health in the Delta region (Brownstein & Allen, 2015). National programs have also been established to address language and cultural needs in conjunction with the use of promotores. One example was the National Diabetes Education Program, which produces toolkits and materials in Spanish for dissemination by promotores (Brownstein & Allen, 2015).

Training programs for community health workers have also increased in number nationwide. State health departments have begun collaborating with a variety of universities and other partners to diversify the healthcare workforce by training community health workers in formal programs. An example cited by Brownstein and Allen (2015) was the collaboration between the state of New York and The University of Rochester. In the Monroe County region, community health workers received training

from the University, so they could assist their constituents with blood pressure reduction and improved cardiovascular health.

Brownstein and Allen (2015) wrote about the importance of continued research as a strategy to increase the diversification of the healthcare workforce. In their report, they identified the Prevention Research Centers (PRC) program that works in collaboration with 26 academic research centers in public health or medical schools across the United States. The use of community health workers was an example of research from the collaboration between the PRC and the University of Arizona. Best practices for addressing chronic disease and mental health needs in the Hispanic community were developed so primary care agencies could work with promotores in their dissemination. The research revealed promotores were instrumental in motivating Hispanic individuals to lower their risk for chronic diseases like heart disease and diabetes. The results of the study revealed lower blood pressure, cholesterol, and glucose levels, along with an improvement in body mass index.

Continued policy development and strategic partnership formations have been identified as salient strategies in the pursuit of diversity in the healthcare workforce (Brownstein & Allen, 2015). Partnerships between academic institutions, state, and community colleges were recommended as the institutions possess the expertise necessary to develop training and certification protocols that would empower community health workers to provide important education and leadership.

Much of the literature that identified approaches for diversification referenced the need for allied health and nursing schools to become actively involved early in the public school systems in order to increase education and eventual employment opportunities for

a wide array of students (Fleming et al., 2005; Hansen, 2014; Mitchell & Lassiter, 2006; Olivares-Urueta, 2012; Snyder et al., 2015). The outreach to public schools has been labeled the health professions pipeline and as Olivares-Urueta (2012) indicated, outreach must begin early in a child's education. Hansen (2014) wrote that not only was it important to increase the health professions pipeline from K-12 to post-secondary, but it was also critical to improve graduation rates and academic preparedness among all students. Math, science, and study skills were noted to be among the areas that needed to be enhanced in order for underrepresented students to feel confident pursuing health professions careers. Snyder et al. (2015) indicated improvement in health professions' pathways is especially important in the allied health and behavioral health fields. They also recommended increased and enriched assessment to determine which programs and interventions contribute to diversification of the healthcare workforce.

The importance of continuing to develop strategies for diversification of the healthcare workforce was evidenced in a report by LaVeist, Gaskin, and Richard (2011). Researchers concluded if racial and ethnic barriers were eliminated, approximately \$230 billion in direct medical costs and \$1 trillion in indirect medical costs linked to illness and premature death in the United States would have been eradicated (LaVeist et al., 2017). LaVeist et al. (2011) argued health disparities must be addressed because it is the proper thing to do and also because addressing them can be cost effective.

Strategies to diversify the healthcare workforce have been at the center of the work conducted by the National Center for Healthcare Leadership Diversity Demonstration Project (Dreachslin et al., 2017). The group analyzed the impact of a hospital-wide diversity plan employed in two health systems on the east coast. One of

the institutions was chosen as the control facility while the other was the intervention institution. The project consisted of a systematic and system-wide approach to organizational change that included diversity leadership, cultural competency education, and strategic human resource management. Once the multi-year project and analysis were complete, it was determined the intervention institution outperformed the control facility in several areas including diversity behaviors, reduction of implicit bias, cultural competence, along with improved human resource management, and an enhanced diversity climate (Dreachslin et al., 2017).

The Deficiency of Hispanic Students in Allied Health and Nursing Programs

Considering the well-documented information on health disparities and the support for diversification of the healthcare workforce, it is essential healthcare educators determine ways to address deficiencies of Hispanic students who pursue and attempt to complete allied health and nursing programs. Bond et al. (2015) identified the increasing minority population as the new majority in the United States and called upon educators and leaders in healthcare to prepare culturally diverse students so culturally competent care could be practiced. The demand for culturally diverse healthcare practitioners will continue to increase as the United States Hispanic population continues to grow as predicted. The Centers for Disease Control (2004) wrote that disparities in healthcare affect individuals and society as a whole thus it is imperative that allied health and nursing educators work to eliminate barriers and promote factors that contribute to the academic success of Hispanic students in health professions programs.

Pursuit of education by Hispanic students. Research has demonstrated that diversification of the allied health and nursing workforces must begin with early

educational exposure to health professions. Furthermore, educators must include students and families in the process during K-12 years and into post-secondary education. As the numbers of Hispanic students increase in general, providing early education would potentially enhance the numbers of students pursuing healthcare programs.

As reported by Azziz (2015) as well as Santiago, Calderon-Galdeano, and Taylor (2015), the number of Hispanic students in public elementary and secondary schools in the United States has grown to 24%. That growth is predicted to continue as the overall Hispanic population increases. According to Burkholder and Nash (2012), White students are still more likely to graduate from high school than their Hispanic counterparts. However, Azziz (2015) and Santiago et al. (2015) reported high school completion rates have increased and dropout rates have decreased within the Hispanic student population. Their research indicated high school completion rates among Hispanic students have grown to 65%. The researchers have predicted the trend will lead to a 42% increase in Hispanic college students by 2021 and only a 4% increase in White college students. In 2013, 49% of Hispanic high school students enrolled in post-secondary education compared to 47% of white students (Hugo-Lopez & Fry, 2013).

Upon examination of the literature related to post-secondary pursuits by Hispanic students, research demonstrated 16% of undergraduates were Hispanic (Santiago et al., 2015). The National Center for Educational Statistics (2013a) showed a slight increase in that number to 16.9%. As was the case in elementary and secondary schools, the number of Hispanic college students is predicted to grow (Azziz, 2015; Gonzales, 2013; Santiago et al., 2015). Additionally, while Hispanic college students demonstrated higher dropout rates and lower rates of degree completion than other ethnic groups (Gonzales, 2013),

that trend was also shown to be changing. The National Center for Educational Statistics (2013b) data indicated postsecondary certificates, associate degrees, and Bachelor's degrees obtained by Hispanic students almost doubled from 2002-2003 to 2012-2013. On the other hand, the number of certificates and degrees conferred to White students continued to decrease.

Azziz (2015) reported a continued positive trend for Hispanic student degree attainment with a continuing deficit in healthcare-related degrees obtained by Hispanic individuals. Santiago et al. (2015) indicated Hispanic students have obtained more academic than occupational degrees. Bond et al. (2015) reported that while Hispanic students accounted for 12% of all college students, they represented only 6% of nursing students. Nuciforo (2015) indicated only 4% of students enrolled in physical therapy programs were Hispanic. Furthermore, some research has indicated that the numbers in specific programs have declined (Bond et al., 2015). Baldwin et al. (2006) posited that in order to increase the number of ethnic minority students enrolling in health professions programs, universities and allied health programs in particular must work with accrediting agencies and government organizations to reduce the low numbers.

Further research on the low number of minority students in the allied health professions identified the importance of providing opportunities for increasing education and awareness of health careers to students in elementary and secondary schools (Dawson, 2013). The study revealed experiential opportunity, academic preparation, and self-efficacy were all factors that encouraged ethnic minority students' pursuit of post-secondary education. Dawson also reported that while many quantitative researchers have studied the deficits, very little qualitative research has been done. Much of the

literature with regard to pursuit of health professions education by Hispanic students demonstrated the Hispanic community valued college degrees and individuals were optimistic about their educational future (Azziz, 2015; Olivares-Urueta, 2012; Reyes & Nora, 2012). Increasing educational opportunities for Hispanic students, encouraging continued enthusiasm, and gaining a more comprehensive understanding of needs with regard to pursuit of post-secondary education were central themes noted throughout the majority of the literature.

Perceived barriers to enrollment and academic success. Several studies have identified obstacles that impede Hispanic students' pursuit of post-secondary education. Amaro, Abriam-Yago, and Yoder (2006) and Healey (2013) concluded family responsibilities, financial constraints, language barriers, dearth of role models, lack of assertiveness, and prejudices due to accents and communication abilities impede Hispanic students. Financial burden and family responsibilities were common themes throughout much of the literature (Baldwin et al., 2006; Cason et al., 2008; Dawson, 2013; Gonzales, 2013; Reyes & Nora, 2012). Hugo-Lopez (2009) wrote that primary reasons for Hispanic students dropping out of college included a need to help support families and a belief that continuing their education would not help them in their chosen career.

Besides financial and familial concerns, Hispanic students were more likely to be the first in their families to attend college, thus increasing challenges as they pursued higher education (Azziz, 2015; Reyes & Nora, 2012; Santiago et al., 2015). Reyes and Nora (2012) also indicated Hispanic students were more likely to come from a lower socio-economic status and be academically disadvantaged. Their research also concluded

Hispanic students rely on siblings, relatives, high school representatives, and peers when making college plans. That information was deemed essential to take into consideration as universities work on improving recruitment opportunities for Hispanic students.

A few researchers categorized barriers into themes. Healey (2013) identified four categories that included personal, academic, language, and cultural. Within each of those categories specific challenges were identified. Personal barriers included financial issues and family responsibilities, for example. Course workload and need for tutoring assistance were part of academic barriers. Language not only encompassed limited English proficiency, but also prejudices related to accents and difficulties with reading and writing. Cultural barriers included lack of assertiveness and the dearth of ethnic role models. In a qualitative analysis, Alicea-Planas (2009) identified similar themes that involved barriers such as a lack of preparation for academic challenges, need to work, relationships with faculty and peers, commitments to family, and the lack of Hispanic mentors and role models.

Alicea-Planas (2009), Dawson (2013), Gonzales (2013), and Nuciforo (2015) found a lack of minority faculty also contributed to challenges in Hispanic students' pursuit of post-secondary education. It has been demonstrated that when faculty members and students share similar cultures, there is an increased likelihood that ethnic minority students will be more likely to obtain resources necessary to pursue a college education. With the number of Hispanic post-secondary faculty at only 4% (EIE Factbook, 2015), Hispanic students are less likely to share similar cultural backgrounds of their teachers. Hispanic students also reported they were hindered by the lack of

Hispanic role models and subjected to prejudices regarding accents and communication difficulties (Cason et al., 2008; Gonzales, 2013; Healey, 2013).

Another key factor identified as particularly burdensome for Hispanic students as they pursue health professions programs was lower GPAs and ACT scores (Azziz, 2015; Nuciforo, 2015; Olivares-Urueta, 2012; Reyes & Nora, 2012; Santiago et al., 2015). Olivares-Urueta (2012) discovered Hispanic students reported increased levels of difficulty as they pursued preparatory courses for health professions programs. The students stated some courses, like chemistry, were used to “weed-out” individuals early in their college careers. Part of the fear of difficult courses reported by Hispanic students appeared to be initiated by a lack of confidence teachers had in ethnic minority students. Thompson (2008) demonstrated Hispanic and Black students were imperiled by lower expectations than their White counterparts. This often contributed to inaccurate and minimal academic advising from high school and college counselors. Murray and Garcia (2002) reported that as students’ self-efficacy was reduced by lower expectations, they were more likely to believe that challenging health professions courses were unattainable.

According to Baldwin et al. (2006), “Seventy-four percent of the mission statements of colleges and universities include verbiage of some form attesting to their commitment to diversity” (p. 117). While these universities also used specific recruitment activities designed to attract ethnic minority students, the strategies were determined to be too broad for allied health professions programs. The authors also determined health professions schools relied on their university’s general mission and did not provide a specific diversity statement related to their programs. As governmental agencies have gone back and forth over legalities of race preference for admission, health

professions programs have avoided appearances of preferential admissions (Baldwin et al., 2006). The authors suggested government regulations regarding admissions should be defined more clearly and there should be a strong commitment to diversifying health professions programs.

In addition to government agencies, health professions programs are inhibited by accreditation agencies (Baldwin et al., 2006). For accredited health programs, successful pass rates on board examinations are an indicator of educational program success and specified thresholds must be met. This has caused health professions programs to admit only those students who have higher scores on ACT and SAT examinations. As research has shown, Hispanic students often receive lower scores on such entrance examinations (Azziz, 2015; Nuciforo, 2015; Olivares-Urueta, 2012; Reyes & Nora, 2012; Santiago et al., 2015).

Barfield, Folio, Lam, and Zhang (2011) conducted a study to develop a scale that identified barriers to enrollment into allied health programs specifically. They discovered five factors that could be barriers to minority students as they pursued their education. Social influence was a primary barrier and related to how high school and college faculty related to race and culture. With limited allied health education provided during K-12 years, experiential opportunity was another potential barrier. As allied health programs are very competitive due to limited spaces based on accreditation, poor academic preparation was identified as another obstacle for minority students in particular. Along with academic preparedness, self-efficacy was noted to be a challenge, especially for minority students who often lack the confidence and belief in their own ability to succeed. Finally, self-management was concluded to be a potential barrier because

minority students reported increased family demands. Allied health programs require students to complete a significant number of clinical and internship hours, which are significant obstacles when students have families and work responsibilities outside of school.

Factors that contribute to enrollment and academic success. Gonzales (2013) wrote that it is not only important to increase enrollment, but also to insure students who enroll in programs are successful. To address both issues, barriers must first be addressed and universities should find ways to eliminate challenges for entry and academic success. Specific strategies were identified as essential, however, as Snyder et al. (2015) found, it is also crucial to continue assessment in order to determine what strategies work most effectively.

Several authors identified specific recruitment strategies that had proven successful. Nuciforo (2015) conducted a study that showed Hispanic students preferred to attend colleges close to home. Therefore recruiting locally was recognized as an important approach. Equally important was the need to increase the number of minority faculty (Nuciforo, 2015; Snyder et al., 2015) as that was determined to be a significant barrier in both recruitment and long-term academic success. Strategies for increasing the number of minority faculty included networking with community partners and recruiting from graduates.

Creating pathway programs for health professions and committing to outreach as early as elementary school were important approaches recommended for allied health and nursing programs (Healey, 2013). Hansen (2014) suggested the health education pipeline from K-12 to post-secondary should be increased and that improving graduation rates and

academic readiness among college-bound students was essential, particularly in the areas of math, science, and study skills. Snyder et al. (2015) encouraged collaborative school partnerships and the development of summer enrichment programs for underrepresented students. Fleming et al. (2005) wrote that pathway programs were essential for addressing the problem of health disparities in the United States.

In addition to implementing pathway opportunities, health professions programs should consider targeted recruitment and revised admissions policies (Snyder et al., 2015). They suggested a holistic admissions process be considered with less focus on GPA and ACT scores and more on student potential. In a report from a summit between the National Hispanic Health Foundation and the Josiah Macy, Jr. Foundation (2009), it was recommended that admissions committees focus on the background of students, their potential as leaders, and their desire to work in underserved areas of the country. It was also suggested that admissions committees be more diverse as well.

As financial issues appeared to be one of the greatest challenges for recruiting and retaining Hispanic students, multiple authors recommended strategies for addressing fiscal concerns. Healey (2013) suggested funds be reallocated to support services for minority students and that health professions programs collaborate with community partners to raise funds for support and scholarship opportunities. Providing loan repayment, loan forgiveness, and other financial incentives were identified as essential tactics (Hansen, 2014). Olivares-Urueta (2012) agreed that increasing financial incentives for Hispanic students was critical and also encouraged universities to insure information about the incentives be readily available for students and families to consider during recruitment efforts.

In order for recruitment strategies to be successful, marketing materials and information about the university must be made available to all members of the Hispanic community. Marketing to potential students, their families, and the Hispanic community to increase the understanding of the prestige of working as a health professional could be accomplished through receptions or community outreach (Cason et al., 2008). Healey (2013) reported Hispanic students believed increased education, enhanced publicity, and community outreach would attract more Hispanic nurses. It was also recommended images of nurses on marketing materials be more diverse. Providing marketing materials in both English and Spanish were encouraged. It was also deemed important to market health professions programs in Hispanic community centers, churches, newspapers, and on Spanish radio stations (Healey, 2013).

In addition to improving efforts to recruit students, it is imperative that universities work hard to insure academic success for Hispanic students in allied health and nursing programs. Crisp and Nora (2010) suggested full-time coursework increases students' likelihood of success and persistence through graduation. For students to be able to meet the time commitments of full-time course schedules, outside employment and family commitments may need to be minimized therefore including families in these plans was determined to be essential (Olivares-Urueta, 2012). Increased scholarship and work-study opportunities have been identified as strategies to address increased coursework and internship requirements for Hispanic health professions students.

Encouraging the use of support networks that include the students' families, friends, communities, classmates, and teachers was identified as another important factor for academic success (Olivares-Urueta, 2012; Reyes & Nora, 2012; Snyder et al., 2015).

Zalaquett and Lopez (2006) suggested coalitions between universities, community partners, and professionals be developed so Hispanic allied health and nursing students could be supported and mentored. Olivares-Urueta (2012) agreed Hispanic community members and clinicians were important role models for Hispanic students as they pursued and completed health professions programs. A consistent theme throughout most of the literature was the continued nurturing of family relationships. Reyes and Nora (2012) recommended that programs help insure students maintain those relationships and community connections throughout their allied health and nursing programs.

In addition to community and family support networks, on-campus support systems should be established to help insure academic success (Healey, 2013; Reyes & Nora, 2012). Healey (2013) suggested peer groups be used for support, tutoring, and establishing study groups. Holistic support that included improved academic advising and increased peer-to-peer assistance was recommended by Olivares-Urueta (2012). Cason et al. (2008) wrote that essential support mechanisms included collaborative learning with peers, along with the development of school relationships with other Hispanic students. Fleming et al. (2005) stated, “maintaining a strong sense of belonging to one’s ethnic group and commitment to its mores and values while adopting skills required to succeed academically serves to foster self-efficacy and enhance future academic and occupational pursuits” (p. 33). Emotional and academic support from other Hispanic allied health and nursing students could help to promote a sense of belonging and result in long-term academic success.

Mentoring and academic advising from faculty were also identified as crucial for the success of Hispanic students in health professions programs (Bond et al., 2015; Cason

et al., 2008; Healey, 2013; Olivares-Urueta, 2012). Cason et al. (2008) recommended utilizing organized mentorship programs that included professional healthcare organizations. Bond et al. (2015) suggested faculty members share opportunities for professional socialization at the university and through professional healthcare organizations. Faculty members who mentored and advised students with patience and through an open door policy were identified as the most supportive and motivating (Healey, 2013). It was indicated establishing a faculty liaison who exhibited sensitivity to Hispanic students' needs was important for academic success (Healey, 2013). Olivares-Urueta (2012) stated faculty to student relationships were crucial for persistence and faculty members should not only be supportive but also maintain a culture of high expectations.

While faculty relationships with Hispanic students was recognized as a crucial component, Evans (2004) promoted the development of an overall caring curriculum that would serve as a basis for understanding the cultural needs of Hispanic nursing students in order to develop strategies that would promote academic success. Such a curriculum included mutual respect between faculty and students, along with being approachable for advising and mentorship needs. Reviewing overall curriculum and insuring shared learning opportunities for all students were deemed as essential success strategies (Hansen, 2014; Nuciforo, 2015). Nuciforo (2015) wrote of the importance to emphasize diversity and provide every student with classroom and clinical opportunities designed to address multicultural issues. Providing opportunities for all students to participate in formal and informal discussions with community organizations, peers, and faculty gave students an increased sense of belonging (Reyes & Nora, 2012). Snyder et al. (2015)

emphasized the need for a more inclusive overall campus environment that promoted cultural competence.

Several researchers discussed the need for encouraging academic success of Hispanic students by helping them take ownership of their learning (Cason et al., 2008; Healey, 2013). Self-determination, the will to persist, and demonstrating resilience in the face of barriers were identified as essential characteristics to develop (Boden, 2011; Borrero, 2011; Cason et al., 2008; Reyes & Nora, 2012). Healey (2013) reported successful Hispanic nursing students were those who persisted and used available resources that included study groups, tutoring, and mentorship with faculty and ethnic nursing associations. Finally, development of ongoing teacher to student relationships was a crucial strategy for Hispanic student persistence and academic success.

Successful programs. Allied health and nursing programs that included a comprehensive array of strategies and tools to promote recruitment and academic success of Hispanic students were described by multiple resources. According to research completed by Oseguera, Locks, and Vega (2009), many of the successful programs included financial support and tutoring, along with academic and career counseling. Additionally, cultural enrichment training and academic skill building activities were provided. Their work catalogued quality academic programs that promoted academic success for Latino students.

Healey (2014) specified that model recruitment programs shared commonalities including beginning outreach to students as early as elementary school and providing opportunities for job shadowing during high school years. Healey's research concluded marketing was a critical component that should be provided in both English and Spanish

utilizing outreach mediums including Hispanic newspapers for example. The report also recommended establishment of a community recruitment professional to target recruitment in schools at every level.

Furthermore, programs that demonstrated successful academic outcomes promoted several strategies including increased funding for minority students, along with study groups and mentoring services for Hispanic health professions students. Social events and faculty workshops were used to promote cultural competence and decrease racism among peers and faculty members. In addition, assertiveness training was provided for Hispanic students as the culture does not encourage assertiveness in general (Healey, 2014). Healey reported the recruitment and retention strategies based on the results of a plan developed in a Northern New Jersey community college practical nursing program. The program completed a three-phase project including needs assessment, identification of best practices, and planned interventions as a means to increase the number of Hispanic nursing applicants and enhance the students' success throughout the program.

Hispanic Serving Institutions (HSIs) have led efforts to promote enrollment and retention of Hispanic students and their institutional practices were examined by Santiago (2008). In the research by Santiago, 12 HSIs were studied and it was revealed they shared common practices. Each of them was transparent with sharing data regarding Hispanic students with faculty members, staff, and students. They used the data to improve curriculum and processes for the students and sought to share information with other institutions to establish best practices. In addition to sharing data, they worked with

community partners to identify funding opportunities and test creative practices that could benefit the community, university, and students.

As evidenced in multiple studies, comprehensive programs that include members of the institution, community, and students are salient to the success of allied health and nursing programs as they attempt to recruit and retain Hispanic students. Snyder et al. (2015) wrote, “An important aspect of promising programs is that they are multifaceted, comprehensive programs that employ a combination of interventions such as financial supports, mentoring, and intensive training opportunities” (p. 6). Their research concluded that while medical, pharmacy, and dental programs have shown some effectiveness at increasing enrollment of ethnic minorities in general, there have been greater challenges with maintaining the students through to the professional workforce. Snyder et al. (2015) also reported there has been minimal published literature that examines the overall success of the programs. Their report highlighted various programs that utilized a comprehensive approach and offered multiple interventions.

One of the programs highlighted in the report by Snyder et al. (2015) was the University of California San Francisco’s (UCSF) Interprofessional Health Post-Baccalaureate Certificate Program. The comprehensive program utilizes a combination of social support, academic support, and mentoring for their diverse student population. According to Campbell, Berne-Anderson, Wang, Dormeus, and Rodriguez (2014), the program’s participants demonstrated higher medical school acceptance rates than students who did not participate in the program. The Office of Recruitment, Development, and Diversity Initiatives at the University of North Carolina Eshelman School Of Pharmacy demonstrated another example of a comprehensive strategy and

institutional commitment. According to White et al. (2013), establishment of the office and development of its comprehensive programs resulted in an increase of underrepresented minorities into the School of Pharmacy.

Snyder et al. (2015) compared outcomes from dental pipeline schools with non-pipeline schools through a quasi-experimental design. It was determined strategic outreach and modified admissions procedures for underrepresented minorities were tools that worked and increased enrollment of underrepresented minority students at all pipeline programs (Snyder et al., 2015). Modified admissions included holistic approaches that encompassed more than grade point average and standardized test scores, for example. Jackson (2016) defined holistic approaches as those that examine a student's comprehensive achievements including creative and life experiences. Summer enrichment programs were also found to be helpful for students entering into medical and dental programs. A study by Mathematica Policy Research (2015) concluded over half of the participants in the Robert Wood Johnson Foundation (RWJF) Summer Medical and Dental Education Program applied to dental or medical school.

Olivares-Urueta (2012) described another medical pipeline program designed to reduce health disparities by increasing recruitment and graduation of ethnic minorities into medical programs. The Urban Health Program (UHP) at the University of Illinois Chicago started in 1968 provides financial support, mentoring, internships, and research opportunities to underrepresented minorities. According to the report, as of 2008, the UHP has graduated 70% of all the Black and Hispanic physicians serving the metropolitan Chicago area. Olivares-Urueta (2012) highlighted Baylor's Pre-Medical Honors College that helps Hispanic health professions students with complete coverage

of tuition and other expenses. Once they complete the pre-medical program successfully, they receive medical school scholarships. There were 60 graduates of the Pre-Medical Honors College who entered medical school in 2002 and of those, 96.7% were Mexican-American students (Olivares-Urueta, 2012).

Another program specifically developed for Hispanic nursing students is the University of Virginia Commonwealth University (VCU) School of Nursing weekend program (Marquand, 2013). The program at VCU encourages Spanish-speaking registered nurses to attend school on the weekend in order to continue working while they work toward a Bachelor of Science in nursing degree, which allows nurses increased opportunities in their professional careers and potential opportunities to become educators, as well. The program incorporates comprehensive measures that include a full-time Hispanic coordinator, marketing to the Hispanic community, working with English and Spanish media, and classes that educate non-Hispanic students and faculty on Hispanic language and culture. The program has demonstrated success and exceeded its recruitment goals within the first two years of existence (Marquand, 2013).

While studies have examined recruitment and retention programs in medical, dental, and pharmacy schools, along with some program-specific data with regard to schools of nursing, data on allied health professional programs is sparse. Snyder et al. (2015) encouraged continued research for health professions programs, particularly as it relates to successful pipelines from recruitment through job placement. As demonstrated by the literature, it is essential for health professions schools to take a comprehensive approach and offer multiple interventions to encourage increased enrollment and academic success of Hispanic students into allied health and nursing programs.

Theoretical Frameworks

There have been several theories used consistently throughout the literature related to student integration and persistence. Several of Tinto's theories highlighted the model of attrition (1975), model of student departure (1982, 1988), and the student integration model (1975, 1993). According to Guiffrida (2006), Tinto's (1975, 1993) theory of student integration has been used in research so commonly that it is considered to be one of the most prominent in higher education. Several other theories were supported including Bandura's 1986 theory of self-efficacy, along with models introduced by Rendon (1994) and Hurtado and Carter (1997).

Tinto's (1975, 1993) student integration model posited that students enter college with two primary goals including obtaining a degree and receiving the degree from a specific institution. Achievement of academic success is dependent upon how well students feel they fit in with the university and culture. The better the students feel about the culture, the more likely they are to persist and achieve academic success (Tinto, 1975, 1993). Additionally there are two specific types of integration including academic and social. According to Tinto, students persist when they identify with the academic standards and share the same values and norms of the institution. Social integration relates to the student's ability to connect with the social system of the academic institution. Included in social integration are relationships between peers and faculty, along with participation in extra-curricular activities (Tinto, 1975, 1993).

Gonzales (2013) used Tinto's student integration model in her work titled, *Predictors of Mexican-American Nursing Student Academic Success*. Gonzales likened nursing students to first year students, which is where Tinto's theory has been most

commonly applied. As many nursing students have taken prerequisite coursework at different institutions, they enter their nursing program into a cohort of others who share the common goal to successfully complete nursing school. That experience is similar to first year college students whose primary goal is to do well enough to persist to the next academic year.

Dawson (2013) utilized Tinto's (1975) model of attrition as she examined allied health student's evaluations of their internship experiences and what role the clinical commitment played in determining student retention. Tinto's (1975) model included five factors that contribute to student retention: 1) student's attributes before entering college; 2) student's goals; 3) student's experience at the college; 4) student's commitments outside of the university; and 5) academic and social integration. Dawson cross-referenced each of the five factors in her discussion on obstacles to student's academic success, particularly during clinical internships.

While Tinto's models have contributed to a deeper understanding of the reasons students persist or drop out of college, researchers have also disagreed on how applicable the theories are to minority students. Tierney (1999) wrote that the student integration theory encourages the cutting of ties from the student's home culture, as the students are encouraged to assimilate at the university. Rather than a model of assimilation, Tierney suggested a model that makes the university more responsible for a culturally diverse climate on campus (Reyes & Nora, 2012). Hurtado and Carter (1997) argued similarly and indicated it is possible for students to maintain connections at home and in the university while demonstrating persistence and academic success. They agreed it is the responsibility of the institution to help students maintain their connection to the

community while also maintaining their cultural identity on campus (Reyes & Nora, 2012).

Furthermore, Nora's (2003) student/institution engagement model has been applied in research studies on Hispanic first-generation college students. Nora's model, along with others that are similar, examined Hispanic students by using the models to understand students holistically. The models take into consideration student's backgrounds while determining how campus culture impacts sense of belonging. Bordieu (1977, 1986) proposed a theory that suggested students use socialization processes as they pursue their educational goals. In the theory, students use the socialization processes to work toward those goals by accumulation of necessary resources including financial, social, academic, and informational (Reyes & Nora, 2012). These holistic approaches have created a new construct and "suggests that Latino first-generation college students have the potential to achieve parity with other groups in terms of educational attainment given the appropriate support" (Nora & Reyes, 2012, p. 6).

Valverde and Rodriguez (2002) highlighted supports useful for Hispanic students as they completed doctoral programs. As indicated in the Nora (2003) and Bordieu (1977, 1986) models, students in the Hispanic Border Leadership Institute Doctoral Fellowship program benefitted from financial support, mentorship, technical support, along with other emotional and moral supports. For students in health professions, Bond et al. (2008) added professional role socialization as an additional concept that contributed to academic success. This model has become known as the Adapted Model of Institutional Support for Hispanic student degree completion and combines the

Valverde and Rodriguez (2002) model with the addition of professional role socialization (Bond et al., 2008).

Self-efficacy was also determined to be a critical factor for persistence and academic success. In their review of the Cross-Cultural Education in Public Health program (CCEPH), Fleming et al. (2005) suggested that the program was based on Bandura's (1986) theory of self-efficacy. Bandura (1986) suggested self-efficacy is crucial in the consideration of careers and in fact was more important than knowledge for influencing choices both personally and professionally. The CCEPH program attempted to encourage self-efficacy through utilization of methods such as "modeling, peer teaching, and skill development" (Fleming et al., 2005, p. 32). According to Fleming et al. (2005), self-efficacy plays an important role for all students. It was deemed essential that students from ethnic minorities be taught to believe they are capable of academic success and encouraged to continue pursuit of health professions programs. By combining the holistic concepts developed by Nora (2003) and Bond et al. (2008) with Bandura's 1986 theory of self-efficacy, allied health and nursing programs could institute a framework that would contribute to persistence and academic success of Hispanic students.

Summary

Chapter 2 examined the lack of Hispanic healthcare providers and the impact to health disparities across the United States. Along with the examination was an investigation into considerations for addressing the deficiency of Hispanic healthcare providers by addressing the lack of Hispanic students entering into and graduating from allied health and nursing programs. Through an increased understanding of theoretical

frameworks as they relate to the issue, an enhanced understanding of perceived barriers and needed supports, along with benchmarking of successful programs, this research study contributed to the overall body of knowledge in an effort to improve the number of Hispanic students enrolling in and successfully completing allied health and nursing degrees. Details regarding the research design, selection of participants, measurement, data collection procedures, data analysis and synthesis of data, researcher's role, and limitations are included in the next chapter.

Chapter 3

Methods

Six purposes guided this study including (a) identification of perceived barriers to enrollment for Hispanic men and women into allied health or nursing programs; (b) determination of factors that were perceived to promote enrollment of Hispanic men and women in allied health or nursing programs; (c) determination of perceived barriers to academic success of Hispanic students in allied health or nursing programs; (d) identification of factors that were perceived to contribute to academic success of Hispanic students in allied health or nursing programs; (e) identification of solutions for removing barriers to enrollment and academic success of Hispanic students in allied health or nursing programs; and (f) identification of solutions for promoting enrollment and academic success of Hispanic students in allied health or nursing programs. This chapter describes the following: the research design used to conduct the study; process for selection of participants; measurement; procedures utilized for data collection; a description of the analysis and synthesis of the data; researcher's role; and a summary of limitations of the study.

Research Design

To effectively answer the research questions, a qualitative research design was used in this study. Creswell (2009) indicated qualitative research is a method for investigating the meaning individuals assign to a specific problem. Qualitative research provides detailed insight into social problems and allows the researcher to expand the body of literature related to the condition. In order to understand perceived barriers to enrollment and factors that encouraged academic success, it was determined that a

qualitative research design would be most appropriate. Lunenburg and Irby (2008) reported qualitative research is effective for determining patterns of meaning through investigation of individual's words and actions. Through subject interviews for this study, patterns and themes were sought in an effort to thoroughly answer all of the research questions.

As Bloomberg and Volpe (2016) indicated, the researcher must establish trustworthiness in order to obtain comprehensive responses and portray accurate depictions. For this study, the researcher attempted to provide comprehensive descriptions of participants and their responses in an effort to insure trustworthiness and transferability. Transferability is vital as it helps insure information may be shared between contexts (Bloomberg & Volpe, 2016).

The researcher selected social constructivism theory based on its tenet of reality being constructed by an individual's personal experiences as a foundational element of this research. Bloomberg and Volpe (2016) suggested researchers must become "involved in the reality of the participants" and "focus on specific contexts in which people live and work in order to understand particular cultural and historical settings" (p. 43). Rubin and Rubin (2012) stated social constructivism approaches provide knowledge about how people perceive their environments and construe their experiences. For this research, social constructivism theory was useful for comprehending the experiences of Hispanic students as they pursued and completed allied health and nursing degrees.

Selection of Participants

According to Lunenburg and Irby (2008), it is important to provide adequate details about the relevant characteristics of the research population in order for other

researchers to be able use the information and replicate data collection and analysis for subsequent studies. The population for this study included Hispanic men and women who were enrolled in or had already graduated from an allied health or nursing program. Individuals who were currently enrolled in or had recently graduated from allied health or nursing programs at a Midwestern University were invited to participate in this study. The sample included eight participants from allied health and nursing programs. The study was conducted over a one-month period, commencing in February 2018 and ending in March 2018.

As previously indicated insuring trustworthiness in qualitative research is essential and must be adhered to during the selection of participants. The researcher attempted to insure trustworthiness through several means including selecting participants who were knowledgeable in the subject area. Individuals who were already enrolled in or had recently graduated from allied health or nursing programs were invited to complete the interviews.

Measurement

In qualitative research, it is essential to insure participants' responses to questions are correctly interpreted. Bloomberg and Volpe (2016) wrote that credibility and dependability must be assured. In their description, credibility was defined as an accurate representation of the participants' comments, thoughts, and feelings. Dependability was described as the researcher's ability to explain data collection and analysis, thereby establishing an "audit trail" (Bloomberg & Volpe, 2016, p. 163).

Interview questions (Appendix A) were developed from benchmarked surveys that had been utilized in similar environments. Participants were provided transcriptions

of interviews to insure the information relayed to the researcher was interpreted correctly. Bloomberg and Volpe (2016, p. 163) described the accurate interpretation of participants' perspectives as a member check. A member check involves sharing the transcript with the participant to make sure the individual said what they intended. Participants are allowed to make changes if a discrepancy is found.

To insure dependability, the researcher utilized a team of peer reviewers who examined interview questions (Appendix A), interpretation of responses, and analysis of findings. The team was comprised of two individuals who had experience with qualitative interviewing and data analysis. Both were faculty members who held doctoral degrees and were experienced researchers.

The semi-structured interview method was used as the primary protocol. According to Rubin and Rubin (2012), this type of approach provides the researcher the opportunity to prepare questions before the interview and ask follow-up questions as needed to gain important details about the subject. Conducting responsive interviews allowed comfortable interaction so participants could reveal their personal experiences, provide clarification as needed, and offer additional information.

Interviews in the current research study were conducted with primary questions developed from the framework of two quantitative surveys. Melton's (2006) Career Education/Motivation survey instrument was utilized to frame the content of the interview questions (Appendix A), which were developed to measure factors that influenced enrollment and academic success of Hispanic students who were in pursuit of or had completed allied health or nursing programs. The second quantitative survey used

as a framework for this study was McWhirter's (2006) Perceptions of Educational Barriers Scale. The scale was used as a guide for potential follow-up questions.

Interviews also included questions about background and demographic information including family history, income, and educational levels of parents. The following background and demographic questions were asked after the interview questions (Appendix A) that addressed the research questions:

1. Which allied health or nursing program are you enrolled in or have you graduated from?
2. Did either of your parents or any other family members attend college?
3. Do/did you receive financial assistance to attend school?
4. If so, what types of financial assistance do/did you receive?
5. Did you participate in any health careers pipeline program or other mentoring programs that encouraged careers in the medical or health professions?
6. Please discuss your reasons for attending college.
7. What was your primary reason for choosing this school?
8. What were your specific reasons for choosing an allied health or nursing degree?

The following research and interview questions (Appendix A) guided this study:

RQ1. What do Hispanic men and women who are enrolled in or have graduated from allied health or nursing programs at Midwestern University perceive as factors that inhibit enrollment in allied health or nursing programs?

IQ1a. Please describe any barriers that you encountered during your pursuit of higher education.

IQ1b. What processes or factors made enrollment in an allied health or nursing program difficult?

IQ1c. Please provide any additional details that you have regarding barriers that inhibited your enrollment in the allied health or nursing program.

RQ2. What do Hispanic men and women who are enrolled in or have graduated from allied health or nursing programs at Midwestern University perceive as factors that promote enrollment in allied health or nursing programs?

IQ2a. Please describe experiences that were helpful for you during your pursuit of enrollment in the allied health or nursing program.

IQ2b. Please provide any additional details that you have regarding factors that promoted enrollment in college.

RQ3. What do Hispanic men and women who are enrolled in or have graduated from allied health or nursing programs at Midwestern University perceive as factors that inhibit academic success in allied health or nursing programs?

IQ3a. Please describe experiences that hindered your academic success from the time you began in the allied health or nursing program until the present.

IQ3b. What processes or factors made completion of an allied health or nursing program difficult?

IQ3c. Please provide any additional details that you have regarding factors that hindered your success in the allied health or nursing program.

RQ4. What do Hispanic men and women who are enrolled in or have graduated from allied health or nursing programs at Midwestern University perceive as factors that promote academic success in allied health or nursing programs?

IQ4a. Please describe experiences that were helpful for your academic success from the time you began in the allied health or nursing program until the present.

IQ4b. Please provide any additional details that you have regarding factors that contributed to your success in the allied health or nursing program.

RQ5. What do Hispanic men and women who are enrolled in or have graduated from allied health or nursing programs at Midwestern University identify as solutions for removing barriers to enrollment and academic success?

IQ5a. What are the most important things that can be done to remove barriers to enrollment for Hispanic students into allied health and nursing programs?

IQ5b. From your perspective, what are the most important things that can be done to remove barriers to academic success for Hispanic students in allied health and nursing programs?

RQ6. What do Hispanic men and women who are enrolled in or have graduated from allied health or nursing programs at Midwestern University identify as solutions for promoting enrollment and academic success?

IQ6a. What are the most important things that can be done to promote the enrollment of additional Hispanic students into allied health and nursing programs?

IQ6b. What are the most important things that can be done to assist Hispanic students so they are successful as they complete allied health or nursing programs?

Data Collection Procedures

Before conducting this study, permission was sought to conduct the study from the Institutional Review Board (IRB) at Baker University (Appendix B). Approval was granted by the Baker University IRB on February 6, 2018 (Appendix C). Once

permission was granted from Baker University, additional IRB approval was sought from Midwestern University (Appendix D) and obtained from Midwestern University in order to interview students from that specific higher education institution (Appendix E).

Prior to IRB approval, interview questions (Appendix A) were created and examined to be sure they were complete and appropriate for qualitative research. Conducting the examination was a peer review team comprised of two individuals who had prior experience developing questions for interviews and conducting qualitative research. Each of the reviewers held doctoral degrees and worked as faculty members at a university. A consent form (Appendix F) was developed and reviewed by the aforementioned individuals to insure all pertinent information was included for both IRB approval and for the participant. The peer review team agreed the interview questions (Appendix A) were appropriate and the consent form contained all pertinent information.

Once IRB approval was received, the researcher conducted a practice interview with an individual in preparation for future interviews of participants. The individual interviewed had recently graduated from the physical therapist assistant program and was of Hispanic origin. After the practice interview, which was conducted using interview procedures detailed in subsequent paragraphs, the participant provided feedback regarding specific questions, tone of the interview, and interpretation by the researcher. The interview was also video recorded to allow review by the researcher in preparation for future interviews.

Potential participants were invited to participate in the study via email requests (Appendix G). Those who agreed to participate in the study were scheduled for individual, in-person interviews. In order to gain detailed knowledge about the

participants' perceptions, a social constructivist approach was taken and responsive interviewing was conducted. Rubin and Rubin (2012) described social constructivist approaches as those used by researchers to determine how individuals perceive their experiences. Responsive interviewing is used to elicit rich details about the individual's experiences (Rubin & Rubin, 2012). As the research involved a sample that fit specific criteria and possessed knowledge about a particular topic that could be probed for deeper meaning, responsive interviewing was justified.

On the day of the interview, the researcher met with the participant in a pre-determined location at Midwestern University. A small office was utilized for the interview and was chosen based on convenience for the interviewees. The room also insured a comfortable and private atmosphere for the interviewees. The interviews were scheduled for approximately one hour. Prior to beginning each interview, participants were asked to sign a consent form (Appendix F) indicating agreement to participate in the interview. The consent form indicated participation could be terminated at any point during the interview. The consent form also indicated agreement with audio recording and note taking during the interview.

To initiate comfortable conversation, the researcher began with a few minutes of casual conversation. Rubin and Rubin (2012) stated that beginning an interview with casual conversation allows the pace of the discussion to be determined. Throughout the interview, a casual pace was maintained in an effort to insure a comfortable atmosphere for the participant. During the conversations, a responsive interviewing protocol was followed which allowed the researcher to 'form a relationship' with the participants (Rubin & Rubin, 2012). The interview included a series of demographic and open-ended

questions. Follow-up questions were conducted at times to elicit further details regarding a topic. Rubin and Rubin (2012) encouraged the use of follow-up questions to gain more detail or clarification. The authors also suggested the use of probing questions, which “encourage the interviewee to keep talking and stay on topic, ask for clarification, or ask for evidence and examples” (Rubin & Rubin, 2012, p. 119). Audio recordings and written notes allowed the interviewer to capture complete details for future analysis.

All interviews ended with a discussion of the process for analyzing the results. This included providing the participant with information about follow-up so the researcher could contact the participant once transcripts were completed. Participants were asked if they would be willing to review the transcripts to insure the information was accurate.

As recommended by Bloomberg and Volpe (2016), thorough descriptions of data collection and analysis processes have been included in this document. All associated materials and recordings have been archived for review as necessary. Dependability has been insured through this descriptive and archival process thus contributing to the trustworthiness of the research.

Analysis and Synthesis of Data

According to Marczyk, Dematteo, and Festinger (2005), three steps are necessary for conducting data analysis of interview recordings including data preparation, analysis, and interpretation. During the data preparation phase, the researcher transcribed the recorded interviews and assigned identification numbers and code names to each.

Bloomberg and Volpe (2016) recommended interviews be coded and transcribed by the

researcher as soon as possible in order to maintain integrity and include nuances such as body language.

Responsive interviews produced significant amounts of data that could be analyzed and studied for themes. Creswell (2009) indicated that once the researcher gathers detailed information, the data is formed into “categories or themes” (p. 65). The data were coded as a means of organization for final interpretation. Tesch’s Eight Steps in the Coding Process (Creswell, 2009; Tesch, 1990) provided a guide for the coding of the data in this study.

Tesch’s first step requires the researcher to read all documents thoroughly and make notes that may be useful for further analysis. The researcher should then choose one of the documents and while reading, ask the question, “What is this about?” (Creswell, 2009, p. 198). During that second step, the researcher attempts to determine the underlying meaning of the response and continues to make notes. The third step occurs once several transcriptions have been reviewed. In this step, similar topics are organized together and formed into groups. Once the topics are clustered, they are abbreviated and codes are assigned in the related areas of the text. It is important to watch for new, emerging categories during the fourth step as well. In the first step, Tesch suggested the researcher should determine ways to reduce the total number of categories and group topics whenever possible. Interrelationships between categories may be identified, as well. After step five, the researcher finalizes and alphabetizes code abbreviations. At this point data are assembled and preliminary analysis occurs. In the final step, Tesch suggested recoding data if necessary.

Transcriptions of interviews were completed by the researcher for subsequent analysis. Copies of the transcriptions were returned to all participants for review and feedback in a process known as a member check. Member checks are used to insure correct interpretation of information provided by the researcher and when there is a discrepancy, a subsequent meeting may ensue (Bloomberg & Volpe, 2016).

Once the themes were identified in the transcribed interviews, the researcher shared the questions, transcripts, themes, and interpretations with the peer review team. This process was completed to address credibility and dependability, thus insuring reliability of data interpretation.

Researcher's Role

As the researcher is the primary data collection and analysis element in a qualitative study (Creswell, 2009), it is essential that biases and prejudices be acknowledged to insure integrity throughout the project. Several experiences had the potential for causing bias from the researcher's perspective including my marriage to an individual from Mexico and my relationship with my extended family. Additionally, due to the small size of Midwestern University, I knew several of the participants and was familiar with their history at the institution. While the aforementioned factors had potential to bias my work, it was my intention to remain aware of these factors in order to maintain integrity throughout the entire process. The researcher's role is to maintain objectivity and truthfulness (Creswell, 2014) in an effort to insure trustworthiness throughout all phases of the qualitative study.

Limitations

Limitations are defined as external conditions that can potentially affect the study and its outcomes (Bloomberg & Volpe, 2016). For this research, eight allied health or nursing students were interviewed. Each of the individuals was expected to be forthcoming and comprehensive with interview responses. Additionally, the participants had to recall information they may not have easily remembered. Qualitative research possesses inherent limitations through processes including interviews, analysis, and interpretation (Bloomberg & Volpe, 2016). In qualitative studies, the researcher's own subjectivity and biases are examples of inherent limitations as described by Bloomberg and Volpe (2016). Although every attempt has been made to guard against bias, it remains a possibility in qualitative research.

Summary

The purpose of this study was to identify perceived barriers to enrollment and determine factors that contributed to or hindered academic success of Hispanic male and female students who were enrolled in or had graduated from allied health or nursing programs at a Midwestern University. Individuals who were currently enrolled in or had recently graduated from allied health or nursing programs at a Midwestern University were invited to participate. The sample included a total of eight Hispanic male and female participants. This qualitative study was conducted using a semi-structured, responsive interviewing technique.

This chapter provided a summary of the qualitative research methods used in this study. Detailed in this chapter were a description of research design, selection of participants, measurement, data collection procedures, analysis and synthesis of data, the

researcher's role, and limitations for the study. Chapter 4 presents the results of the data analysis.

Chapter 4

Results

The purpose of this study was to determine factors that influence enrollment and academic success of Hispanic students in allied health and nursing programs at a Midwestern University. Eight Hispanic students currently enrolled in or recently graduated from allied health or nursing programs were interviewed and their responses analyzed for this study. Chapter 4 includes descriptive statistics, along with themes that emerged from the interviews. Analyses of themes as they linked to theoretical frameworks are also included in this chapter.

Descriptive Demographics and Background Information

Eight Hispanic students described their thoughts and experiences regarding enrollment and academic success while enrolled in allied health and nursing programs at a Midwestern University. Seven of the participants were female and one was male. Of the eight participants, six were first-generation college students, with neither parent having attended college. One parent completed college in each of the remaining participant's families. Five of the respondents were juniors, two were seniors, and one was a sophomore.

Four of the participants received Federal grants that supported tuition and other fees and four reported receiving scholarships. None of the students participated in any high school health careers pipeline or other mentoring programs that encouraged careers and assistance in the medical or health professions. However, two participants reported participating in certified nursing assistant (CNA) training through their high schools.

Participant interviews included questions that asked the participants to reflect on their reasons for attending college. All of the students expressed desires to improve their living situation and several identified the importance of achieving a diploma as a result of encouragement from their family or friends. For example, Sofia stated, “I just really wanted to succeed and do financially well for myself.” Camila indicated, “I want to be successful. I want to be as educated as I can be. I guess I want to set an example for my daughter.” Valentina described her desire to get a better job and “Maybe not work as hard as my parents and make more. And also one of my biggest reasons was I felt like my parents helped me come all this way so I should probably get something out of it.” Finally, Alejandro reported,

I want my daughters to see, hey my old man did it, so we can do it. That’s kind of what I am trying to teach them. My mother, at the same time, I want to give her the joy once I walk.

Participants were asked to describe specific reasons for choosing the Midwestern University and allied health or nursing programs. All eight reported proximity to family as a primary reason for choice of schools. Additionally, three participants indicated the University’s programs were key components of their decisions to attend Midwestern University. Participants described their passion for healthcare and helping others as important. Valentina’s emphasis was placed on the expediency of a two-year allied health program. She stated, “I know a lot of people want to have a bachelor’s degree but to me the less time I spend in college the better.”

The interviews revealed demographic information that provided a general description of the participants. Information regarding barriers to and factors that

promoted enrollment and academic success was also provided. Analysis of the responses revealed several emerging themes, which are described in the following paragraphs.

Emerging Themes

Interviews were organized by six research questions. Several themes and subthemes emerged in responses to each research question. Based on participants' personal reports of experiences and recommendations, eight themes associated with research questions emerged, (a) insufficiency of college-going information; (b) affording college; (c) fitting in; (d) support and assistance; (e) work and life balance; (f) intrinsic factors; (g) increasing diversity; and (h) financial aid and scholarships. Some themes were evident in response to more than one research question. For example, support and assistance was a theme echoed by students in response to three research questions that addressed factors that promoted enrollment and academic success of Hispanic students in allied health or nursing programs. The following sections contain summaries of the themes and subthemes that emerged for each research question.

Barriers that Inhibit Enrollment in Allied Health or Nursing Programs

The first research question asked participants to describe barriers perceived to inhibit enrollment in an allied health or nursing program. Themes related to barriers that inhibit enrollment in allied health or nursing programs at Midwestern University included the following: (a) insufficiency of college-going information; and (b) affording college. Two subthemes also emerged within the insufficiency of college-going information theme: (a) first to attend college; and (b) secondary and post-secondary advising.

Insufficiency of college-going information. Most of the participants reported having limited assistance during pursuit of college in general. As the majority were the

first to attend college in their families, assistance from parents was not possible. Additionally, deficiencies were reported beginning in high school and within the university, as well. University advisors were reported in several instances to be helpful during pursuit of allied health and nursing programs. Two subthemes emerged regarding insufficiency of college-going information: (a) first from family to attend college and (b) deficiencies in secondary and post-secondary advising.

First to attend college. Six participants were the first from their families to attend college and reported having no parental assistance in pursuit of college. They each reported the difficulties of having to figure the process out independently, not knowing the steps to take to successfully enroll in and complete college. Camila shared,

I was just out there by myself. I mean my mom didn't really know how to help and my dad passed away when I was young, so I guess I was kind of thrown out there and I didn't know what to do.

Isabella described her experience in a similar way, "I pretty much had to do everything on my own from FAFSA, to enrolling, to finding schools, everything." Mariana's parents did not attend college and she reported being overwhelmed and "not knowing what to expect." She continued to talk about completing classes without family assistance and stated, "You know how your parents helped you with homework? I had to do it all on my own." Valentina echoed the same concerns,

I think the biggest barrier was not knowing how to go about it; it was just me figuring it out. How to go about enrolling or seeking other schools or anything in general was just kind of hard. I had to plan and it took a lot of time because I did not know how to start the process.

Secondary and post-secondary advising. Five of the participants reported deficiencies with advising when attempting to obtain college-going information, particularly during high school. The respondents indicated advisors provided limited resources and the time spent with students was brief and not very useful. For example, Camila did not receive much help from an advisor when first attending college in another state. While the advisor provided a list of courses, “she didn’t really explain what I needed to do.” Gabriela had limited resources at a high school in a small, rural town then moved to a larger high school during her junior year. Based on the urban school attended, Gabriela reported, “I just think the outreach wasn’t that much because not that many kids at my school were wanting to go to college.” Mariana indicated one had to really seek advisors in high school and in college, “Advisors provided information about what classes to take each semester and how to apply but provided only brief overviews. It was very quick and hard to figure things out independently.”

Two respondents identified insufficiencies with advising for allied health programs specifically. Gabriela encountered challenges during pursuit of an initial allied health program, which deterred her from that particular path. She stated,

It probably shouldn’t have been something that deterred me but I was like, I am going to have to work with these people for two years and to have a good relationship from the start would really help me out with the whole process.

Valentina also described challenges with advising while attempting to transfer to Midwestern University,

I talked to someone but she told me I should have stayed at the other college. She didn’t say it directly but I told her I was unable to get financial aid and I had a

scholarship at the other college but really wanted to come to the Midwestern University to the healthcare program. She just kind of told me, “looking at your situation it would be better if you just stayed there.”

Affording college. All of the students addressed financial issues as concerns and many felt there were limited scholarships available for Hispanic students at Midwestern University. In addition to the dearth of financial assistance, the difficulties of finding scholarships were discussed. Several students indicated additional challenges faced by Deferred Action for Childhood Arrival (DACA) students attending college in general and when completing allied health or nursing programs.

The participants described financial barriers as a significant concern when beginning their tenure in college and as they completed allied health or nursing programs. They identified these barriers as part of the reasons Hispanic students consider other alternatives such as working or attending technical institutions for example. Camila discussed financial challenges as being substantial, particularly for individuals from low-income families. She stated, “That’s a barrier right away and sometimes students have to work or postpone going to college for a while just to save money. I don’t think there are enough scholarships for Hispanic students.” Gabriela proposed Hispanic students “wouldn’t even bother trying to attend college if they thought they couldn’t afford it.” Alejandro added, “School is expensive and if they don’t understand the system, it makes it even more difficult. There needs to be more funding and outreach to Hispanic individuals encouraging them to come to college.”

All of the study participants made recommendations for addressing financial concerns including Valentina who stated,

Be sure students fully understand why they are taking classes as they won't take any if they aren't helpful. Give options for taking classes at community college to save money. Especially if somebody is first generation, nobody in their family is going to understand why you're in college if none of your classes help you. My dad is always like why this class? Or how does this help you? It kind of makes sense to me.

Factors that Promote Enrollment in Allied Health or Nursing Programs

The second research question focused on participant perceptions of factors that promoted enrollment in allied health or nursing programs. Support and assistance was a factor that promoted enrollment in allied health or nursing programs. All respondents identified family and friends as essential components of their pursuit of their respective allied health or nursing programs. Each of them had support networks that contributed to their success.

Support from family and friends were consistently touted as essential for each of the students as they pursued their college educations and throughout their healthcare programs. Camila and Daniela described the support from their husbands as crucial to attempting to pursue college and appreciated their continued encouragement as they worked toward completion. Sofia identified the assistance from her older sister as essential to her success. In all but one case, the support of a parent or both parents was described in detail. Each of the participants indicated parental support was crucial. Even in the cases when parents did not have the experience of attending college, their encouragement was a primary factor for the students attending college.

Support and assistance of friends was highlighted as well. Daniela talked about a friend who helped her during the application process and interviews for the nursing program. She appreciated the friend “provided information on what to expect from the processes.”

Valentina had extensive assistance from friends, both during high school and as she began college. During high school, Valentina “tagged along with a friend when she went on college visits.” She stated, “Most of my friends were really good about getting their stuff together and so I feel somehow I am kind of here too because of them. I hung around people who wanted to go to college.” Once Valentina began attending the university, she reported receiving assistance from students who were already in the allied health program she was pursuing, “They would give tips on how to do things and where to shadow for example.”

Factors that Inhibit Academic Success in Allied Health or Nursing Programs

The third research question asked participants to describe barriers perceived to inhibit academic success in an allied health or nursing program. The respondents talked about the importance of feeling a sense of belonging at Midwestern University. They also revealed how personal experiences impacted their academic success. Fitting in emerged as a primary theme and two subthemes within the theme were identified including: (a) life experiences; and (b) living arrangements.

A common theme among all of the participants was their need to feel a sense of belonging at the university and in their programs. As there are very few Hispanic students in allied health and nursing programs at Midwestern University, the students indicated concerns about fitting in. Daniela also identified age as an additional factor,

particularly in discussions about working in lab groups. According to Daniela, it was difficult to connect with younger and non-Hispanic students. “Being a non-traditional student in biology lab made it frustrating to try and find a group.”

Life experiences. As several of the participants worked outside of the university or had families to take care of, reflections on personal life experiences were a primary part of the discussions. They described how life experiences impacted their sense of belonging in the university environment. Alejandro worked other jobs, had previously owned his own business, had young daughters, and returned to college at an older age. Daniela was also a non-traditional student with a full-time job, husband, and young daughter. Daniela’s life experiences caused her to have to wait to attend college until much later in life. She was born in the United States to migrant worker parents and at the age of 15, she had to drop out of school to begin working full time on behalf of the family. Shortly after, she returned to Mexico with younger siblings and remained there for several years. Once she was able to return to the United States, she got married and immediately began working full time. She was able to complete a GED and planned to attend college at that time but soon became pregnant. Once again, school had to be placed on hold due to life experiences and as Daniela indicated, her path to college “hasn’t been easy.” She described a sense of feeling alienated from classmates because she had a different background and was unable to participate in extracurricular activities based on having to work and take care of her family.

Three participants suggested life experiences contributed to lower grade point averages when they first began college, which caused challenges to remaining connected and being accepted to allied health or nursing programs. Alejandro expressed difficulties

with two professors in undergraduate programs who made him feel alienated and caused him to lose interest, which resulted in a lower GPA. According to Alejandro, after being in a biology class for three months and asking for assistance, the professor did not know his name. He stated, “that experience left a sour taste as there were no more than 30 or 35 students in class.” He discussed the importance of encouraging professors to go the extra mile to help students and highlighted teachers and advisors who had made him feel accepted. As he indicated, the teachers and advisors who did so were the ones who encouraged him to continue to pursue his healthcare program.

Camila explained her personal life experiences that impacted her GPA,

When I graduated from college I was really smart. I had a good GPA but I think it was just the life experiences that affected my GPA. So then when I tried to apply to the program, I guess that was one of the barriers getting into the program.

Living arrangements. Participants identified living arrangements as factors related to feeling connected at the university. The majority lived with their families off campus. Five participants suggested this contributed to a lack of participation in extra-curricular activities and made it difficult to fit in a manner similar to traditional students,

Mariana felt living on campus was very important and indicated her parents did, as well. She stated her “parents encouraged that because of the importance of having the experience.” She discussed her initial challenges,

There were no dorms available at first so I had to live off campus and this limited the amount of people I met. I really missed home, especially my freshman year.

You have more time and you don’t know what to get involved in and you don’t

know people so you get homesick. I'd be in my room, I've already finished my homework, so what do I do now?

Once Mariana was able to live on campus, she reported meeting more people and becoming more involved, which helped alleviate homesickness as she felt an increased sense of belonging.

Living arrangements had an impact on Camila initially, as well. When she first attended college she stated,

I was living in a dorm, I have a four-year scholarship and only three students out of my high school were Hispanic and we got that scholarship. When I went to that college, I kind of felt like I was alone and I fell into a depression that really affected my grades, I guess. I was 30 minutes from home and I wasn't used to that.

Factors that Promote Academic Success in Allied Health or Nursing Programs

The fourth research question focused on participants' perception of factors that promoted enrollment in an allied health or nursing program. Two themes emerged in response to this research question: (a) work and life balance; and (b) intrinsic factors. Within the theme intrinsic factors, three subthemes were identified including: (a) personal motivation; (b) academics; and (c) time management.

In addition to promoting enrollment, support and assistance was also touted as essential for Hispanic students' academic success. Family and friends were considered crucial to the success of all the participants as they entered college and continued into their allied health or nursing programs. Advisors and teachers were identified as essential in this area and their encouragement enabled students to feel successful academically.

Each of the participants reported having advisors in their current allied health and nursing programs who were most helpful. Gabriela stated her advisor was very helpful and appreciated his directness, “His truthfulness really helped. He was direct. You have to do this and you have to do that and if you don’t it will be harder to get there. He provided positive encouragement.”

Mariana described difficulties figuring out which college to attend initially but on a visit to Midwestern University, the advisor whom she met with was very helpful. This was the catalyst for Mariana to choose the specific institution. Sofia described her initial experience with a career advisor at the university who encouraged her to pursue an allied health program. Camila reported her advisor’s assistance as very important and stated, “I think meeting my advisor helped me a lot. Even when I was down she always helped me and had an answer to my question.”

Teachers were also critical for the students’ success. Gabriela stated, “My professors really care and if I have a problem, they are there and I feel that has just really helped me this semester.” She added one particular professor, “understood my outside pressures and was really helpful with me.” Alejandro described his struggles with pronouncing medical terms appropriately and appreciated the assistance from one of his professors who went “the extra mile.” He reported, “My professor records difficult words so I can hear how they sound and say them correctly. This really helps with comprehension.”

All of the students identified the importance of helpful advisors and teachers as a means to promote enrollment and academic success of Hispanic students in allied health

and nursing programs. Gabriela talked about how essential it is to receive positive encouragement especially when adjusting from high school to college. She stated,

When I came to the Midwestern University I had a 4.0 as a freshman but then me just adjusting from high school, it just kind of got harder. Because I went to a high school where a lot of people don't go to college, it took a lot of adjustment and still takes a lot of adjustment. But I think more positive encouragement would have been helpful instead of it's not really going to work out type of advice.

Participants suggested advisors and teachers take more time to get to know them when explaining application processes and course selection information. Mariana and Valentina indicated this is essential as the information is very confusing and they did not have anyone at home who knew what to do. Alejandro echoed that concern and reiterated the importance of professors finding ways to assist, as in the case of the professor who helped him with difficult medical terminology.

Valentina made several recommendations including encouraging Hispanic students from different allied health and nursing programs to form study groups. She also suggested adding a medical Spanish class that Hispanic students could help teach. She also felt a cultural component could be included, "Not only could you apply medical Spanish but you could talk about other cultures and how to treat people in there. We talk a little about it for two weeks in one class." She described a personal experience,

My dad went to physical therapy and the PTA was telling him how to do abduction and she said raise your hand like you are making a snow angel. My

dad has never made a snow angel in his life. So I think it is important to learn lay terms in Spanish.

In addition to a medical Spanish course for allied health and nursing students, she encouraged the promotion of volunteering opportunities for Hispanic health professions students.

The clinic I go to has donations for low-income families so a lot of people who go there are Hispanic. And so I don't know if they ever need help with translating but they refer a lot of people to other clinics. They referred me to a general surgeon and physical therapy. So like if so and so has an appointment then you could go and translate.

Work and life balance. This theme was evident during discussions about factors that promoted enrollment in allied health or nursing programs. Work and life balance was a topic discussed as many of the respondents had to manage school, work, and families as part of their successful academic experience. Six of the participants were employed outside of the university while attending college and their respective allied health or nursing program. For these students, being employed was necessary to afford college and several of them worked more than one job. Valentina worried about paying for college and “had to have an outside job.” Sofia expressed concerns of having a full-time course load and just beginning work at a new job. She reported having to work at three jobs to make ends meet. She also included positive comments about her ability to pay for college, “I think some people don't realize they can pay for school because they think it's too expensive and they can't do anything like that. It is very doable.”

Daniela talked about managing school, work, and family. She indicated she has challenges “finding time to do everything because of work requirements.” This impacted her study time and increased her anxiety while in pursuit of a nursing degree. Isabella reported finances as a major issue,

Because I’m working full-time and I’m a full-time student, it is difficult. I pay for everything so if something were to come up, I have to work more, find time to study, find time to get everything in and I would say those are some big barriers.

Intrinsic factors. All of the students talked about personal motivations for attending college and pursuing allied health or nursing degrees. While they were encouraged by families and friends, their own determination was evident as they discussed their experiences. They also explained how they personally managed academics and time commitments as they completed college and their health professions programs. Three subthemes emerged within the theme of intrinsic factors: (a) personal motivation; (b) academics; and (c) time management.

Personal motivation. Isabella discussed personal motivation at length and often returned to the topic throughout the conversation. She stated,

I wanted to do what my family didn’t and I’m first generation so it was a big barrier because you don’t have support. Like my mom was supportive but there was no help. My dad’s not in the picture anymore but my mom was helpful.

Sofia had similar motivations and talked about college being her first break away from home. She said, “I felt I had something to prove and wanted to do well.” She also indicated financial issues were an internal motivator, “I think that’s [financial issues]

another factor for me because I pay my own school so I'm not going to waste my money and not try my absolute hardest.”

Camila described her motivation as she began the allied health program at Midwestern University stating, “I told myself I was not going to give up” and continued taking a few classes at a time after marrying and having her daughter. She said, “Even while driving to community college three times a week, I always knew that I wanted to achieve my goals so I did everything I could to do that.”

Academics. The participants identified the importance of developing their own, personal strategies to insure academic success. Most of them indicated they learned strategies that worked best over time and were not as efficient when they first entered college. Sofia talked about that issue and stated,

My very first semester, during transition from another university, I had a rough semester. I didn't do as well with grades and didn't do well overall. I don't know if it was just the transition; I think it was during that semester when I was finding out I didn't really want to go through with nursing so it just affected classes. I just wasn't inspired and it definitely hindered my academic success.

Sofia added she improved over time and began to “utilize tutors, take advantage of office hours, and all other helpful opportunities.” Six of the students felt participation in study groups was helpful, especially as they entered allied health or nursing programs. There were also suggestions made to create inter-disciplinary study groups for Hispanic health professions students.

Daniela expressed having challenges with reading and writing for the health professions and suggested that may be due to Spanish being spoken as the primary language in her home. She reported her strategies to overcome those barriers stating, “I record lectures and do whatever possible studying during breaks at work. I write everything out, word for word; the entire lecture is written. Then I re-read it to provide additional clarity.”

Time management. The participants described the importance of time management and talked about ways they balanced school, work, and family commitments. Isabella reported time management as an issue and indicated it was “difficult and stressful trying to figure out what college is like and fit everything in.” While Mariana wanted to be close to her family, she also talked about her siblings as a “distraction, which is one of the reasons I wanted to live at Midwestern University.” She added, “There’s always stuff going on, I’m always with them, we’re always going somewhere. Even if we’re home, they’re always there. I’m like their second mom.” Camila also discussed the challenges of finding time to study at home and balance family life stating, “As a mom I have to balance my time.”

Gabriela had difficulties with time management initially and talked about her situation at length.

When I began taking a full college load, my 4.0 dropped and gradually decreased because of difficulty balancing full-time school and work. Because I felt when I was in high school and taking those classes I had dedicated time to get all that done and that helped. But then I started my freshman year and I was working

anywhere from 20-30 hours a week. It was really hard to get everything in and do extra like family stuff. I think that balance was really hard for me to find.

Solutions for Removing Barriers to Enrollment and Academic Success

Participants were asked to describe barriers perceived to inhibit enrollment in an allied health or nursing program. Recommendations were made for removing barriers in order to improve experiences of future students in allied health or nursing programs at Midwestern University. Two themes emerged in this area including (a) increasing diversity and (b) financial aid and scholarships.

Increasing diversity. Respondents identified the need to increase diversity and address cultural issues as essential for removing barriers to enrollment and academic success of Hispanic students in allied health and nursing programs at Midwestern University. All of them suggested there were very few Hispanic students and faculty on campus. This contributed to challenges during certain aspects of their respective programs.

The need for increased diversity among the student population and faculty was echoed by all of the participants. Alejandro stated while the university has a diverse population in some regards, there are not very many Hispanic students and faculty. He encouraged the university to find ways to reach out to more Hispanic students and teachers.

Daniela suggested having more Hispanic teachers, mentors, and advisors and stated, "I have not noticed many Hispanic teachers." Valentina also made comments about the lack of Hispanic representation on campus. She reported,

I think it's kind of sad to say that you need somebody to represent you, but I just think how sometimes in our minds we think we can't talk to other people, we can't connect with them, like they don't understand things. And I think it's kind of sad because maybe they can but we automatically think they can't because of how they look or just how they are sometimes. But when you see somebody who look like you or that you know they have the same attitude as you, then you are more open to them or you feel like you can connect with them better.

She specifically identified the need for more Hispanic teachers stating, "If I looked at my teacher who maybe looked like me or had a last name that sounded Hispanic, I may go a little more toward that person just because I feel like they would understand my concerns."

Insuring students had access to Hispanic mentors was a consistent topic with many of the participants. Valentina described her experience at an institution that had robust first generation and multicultural advising.

It was really nice how they had it there because there wasn't a lot of diversity in the town so every month I worked with a multicultural diversity director and an advisor. They make you feel like you could vent to them so if something was kind of weird, then you could talk in a safe place.

Isabella also recommended identifying Hispanic mentors.

I think it would be helpful to have mentors who look like us because they understand the struggle and the stereotype we go through, just because there's not a lot of Hispanics who go further in their education. Some see they're not worthy as other people. Or since my family didn't do it, then I can't stick with it.

Gabriella elaborated on the need for Hispanic advisors and mentors as well, “I think it should definitely come from someone who looks like us because just having someone you feel could relate, like they’re brown, I’m brown.”

Gabriela and Mariana discussed the need to increase diversity on campus at length. Both reported having worked on initiatives to try and establish a Hispanic Greek organization on the campus but were unable to do so because the organization indicated there were not enough Hispanic students to do so. Mariana talked about their pursuit of a Latina sorority stating, “We tried to get a Kappa Delta Chi chapter on campus but we were told by the leaders that we couldn’t because there weren’t enough diverse students.”

Additional discussion centered around addressing issues of culture as a means for students to feel connected. Daniela felt it important for those who are recruiting students to understand how some traditional Hispanic families may feel about their children attending college. She reported, “My father thought women should get married and have children. They should not go to college. He had the mindset that women should be in the house taking care of family and children.”

Valentina also indicated the importance of having mentors, teachers, and advisors who could understand Hispanic culture and family dynamics. She added, “Because I am very close to my family so we take into account our family thing for our decisions.” Valentina suggested improving Hispanic representation on campus because they understand Hispanic family dynamics and this could help with “relating and connecting before student get into college.”

Financial aid and scholarships. This theme emerged in response to this research question and was identified throughout the conversations. Respondents recommended

improving the number of scholarships and refining access to financial aid opportunities for Hispanic students. The participants echoed each other as they talked about the need for additional scholarships, along with improved assistance for navigating financial aid and scholarships. Valentina identified the difficulty of managing Midwestern University's financial aid and scholarship website.

I don't think there's a lot of financial aid out there. I don't think there's enough scholarships and we're all fighting for three in this community. I looked at the university's scholarship website and it's like they have all of these scholarships but it's just websites that have generic options and there are like 5,000 of them. How am I going to look through all those? And if you look through them and at the end it says you need to be a U.S. citizen, well DACA students can't even apply to that.

Mariana proposed providing more scholarship opportunities for Hispanic students and explained, "If they're afraid that it's going to be difficult, they're going to choose a different major or different university or not go to university at all."

Sofia recommended increasing awareness of scholarships in an effort to provide more Hispanic students with resources. She discussed her challenges with finding scholarships, "They always said there are all these scholarships but I wasn't really sure where to find them" and "I'm not exactly sure where to find scholarships. I know on the main page they have scholarships for people who are just getting out of high school, but as far as other scholarships go, I'm not for sure." Valentina indicated better promotion and awareness would be useful, "especially for first generation students."

Gabriela identified the importance of providing financial aid and scholarships so Hispanic students could live on campus. She reported,

Even though my mom is here, I wanted the experience to live on campus and I can definitely tell the difference between living on and off campus. I was more involved when I was on campus and now I am not as involved.

Solutions for Promoting Enrollment and Academic Success

The final research question asked participants to identify solutions for promoting enrollment and academic success in allied health or nursing program. All participants made recommendations for improvement. Similar to responses obtained from participants associated with research question one, the theme of insufficiency of college going information re-emerged in responses to questions associated with this research question. In addition, responses related to support and assistance (similar to responses obtained for questions related to research question two) also emerged as a theme in responses to questions related to research question six. Within the theme insufficiency of college-going information, two subthemes were identified (a) education and outreach; (b) improve accessibility. Participants encouraged more education regarding health professions programs and outreach beginning early in high school. Further recommendations included making materials and online information more accessible to students and families.

Education and outreach. During the interviews, participants were asked to make recommendations regarding the most important things that can be done to remove barriers and promote enrollment and academic success for Hispanic students as they pursue allied health and nursing programs. All of the students recommended increasing

information about allied health and nursing programs and beginning outreach in early high school years. In addition to improving awareness and outreach, several participants identified the importance of helping Hispanic students believe they have the ability to attend and be successful in college.

Alejandro expressed the need for Hispanic students to see themselves “coming to school”. He also encouraged the provision of college information during high school and to specifically target Hispanic high school students to “let them know they can go to college.” During the interview, he indicated larger, more urban areas may have more Hispanic students but the high school students in the attendance area for Midwestern University “don’t seem to be hearing too much about college”.

Gabriella echoed Alejandro’s concern regarding the need for Hispanic students to feel confidence to attend college. She reported the importance of having a mentor in junior and senior years of high school,

Because a lot of people where I went to high school don’t even think about college, like that isn’t the avenue for them. Whether they choose not to or the resources are not available or they just don’t know about it. I think reaching them before they even think about going to college would make them know that it is possible for them to do that and there are resources out there to be able to help you do that.

Camila expressed the need to help students become more familiar with allied health programs and what they involve. She stated, “Sometimes when you are younger you think allied health is something that is really hard to accomplish or you’re just unaware of the requirements so people stray away from it.”

Both Mariana and Sofia suggested providing options to high school students by bringing guest speakers or healthcare career fairs to secondary institutions. Sofia stated, “I didn’t realize how many options there were in the health field” and “awareness is important.” Mariana recommended bringing Hispanic students and faculty as guest speakers, “someone the students can relate to” and to outreach to other towns and cities to attract more Hispanic students. Valentina agreed minority representation during education and outreach is essential, particularly from someone who understands Hispanic family dynamics.

Mariana recommended providing outreach and education to parents because “they can influence their children’s paths.” Gabriela encouraged the same and suggested offering more college classes to high school students that prepare them for health professions, especially at schools with large populations of Hispanic students. Valentina summed up the need for education and outreach,

I wish I would have known more about allied health programs before I started my college education because, well to me it makes more sense if I get a degree in less time. If they come here and they’re just doing general education classes, you see no direction where you are going. It is going to make them say, why am I even here, listening to music, I don’t need to watch movies. Like I said, these are classes we don’t care about.

Improve accessibility. In addition to improved education and outreach to students and their parents, several participants expressed the importance of providing materials in Spanish. The individuals indicated this would be of particular importance to

parents who speak limited English and want to be able to assist their college-going children. Valentina stated,

Having program and application materials on the website in Spanish is not necessary for me but if somebody had a very involved parent, you could show them the website in Spanish. Like a girl I spoke about, her parents are very involved and I know the mom like to tell her advice so if she could, instead of the daughter translating the document, she could go there and get the information.

Daniela also suggested creating allied health and nursing applications and forms in Spanish on the associated websites. She indicated, “The forms could be like the website for U.S. Customs and you could press one button to translate to English or Spanish.”

As in previous research questions that examined strategies for promoting enrollment and academic success of Hispanic students in allied health or nursing programs, all respondents encouraged support and assistance from mentors and tutors. This was identified as crucial for Hispanic students’ academic success. Participants felt the use of mentors and tutors should be promoted more to Hispanic students. Several indicated that tutoring hours should be increased so more people have access. Gabriela shared that tutoring options are limited within an 8:00 to 5:00 timeframe, which is difficult for working students or those who attend evening courses. Mariana shared that concern stating, “This is important for students who have to work or can’t get there during specific times.”

Mariana and Camila described mentors as important, as well. Isabella felt mentors and support groups could be useful for Hispanic students and stated, “I think having a group would help with support and making sure that if anybody needs help

there's always someone there.” She also talked about starting the support group while the student is still in high school. She stressed the importance of support groups in assisting with better decision making throughout high school and college.

Summary

Eight participants from Midwestern University were interviewed to determine factors that influence the enrollment and academic success of Hispanic students in allied health and nursing programs. The results of the analysis of data collected through interviews were presented in Chapter 4. Chapter 5 includes the interpretation and recommendations for the study. In addition, this final chapter provides a study summary including an overview of the problem, purpose statement and research questions, review of the methodology, and major findings.

Chapter 5

Interpretation and Recommendations

This study was conducted to determine factors that influence enrollment and academic success of Hispanic students in allied health and nursing programs at Midwestern University. The information contained in this chapter will provide analysis of results in three sections. The first section includes an overview of the problem, the purpose statement and research questions, review of the methodology, and major findings. The second section elucidates findings related to the literature. The third section consists of recommendations for future research and concluding remarks.

Study Summary

Six research questions guided this study and were designed to determine specific factors related to enrollment and academic success of Hispanic students in allied health and nursing programs. A review of the problem related to the dearth of Hispanic healthcare professionals is included in the study summary. Also included is a reexamination of the purpose statement and research questions. The results of this qualitative study are included in the major findings section.

Overview of the problem. Multiple studies have linked the lack of cultural diversity of healthcare professionals with health disparities among minority patients (Cason et al., 2008; Fleming et al., 2005). Livingston (2013) described specific challenges for the Hispanic population. One of the reasons for the shortage of Hispanic health providers is related to limited diversity among applicants to healthcare educational programs. The number of Hispanic applicants to allied health and nursing programs

needs to grow in order to meet the healthcare needs of an increasing Hispanic population in the United States.

Purpose statement and research questions. In an effort to address the low number of Hispanic students enrolling in and graduating from allied health and nursing programs at a specific institution, qualitative interviews were conducted at Midwestern University. The study examined factors that inhibit enrollment and academic success, along with those necessary to increase enrollment and insure academic success. Six research questions guided the interviews and analysis of themes.

Review of the methodology. A qualitative research design was used for this study. Through analysis of interviews of subjects, patterns and themes were sought to determine answers to the research questions. Invitation emails were sent to Hispanic students currently enrolled in or recently graduated from allied health or nursing programs at Midwestern University. Eight Hispanic students were interviewed and discussed their experiences in detail. All interviews were recorded, transcribed, returned to participants for member checks, coded, and the results were checked by a peer review team. As a result of the analysis of the interviews, eight themes emerged and are discussed in the following section.

Major findings. Eight themes emerged as a result of the interviews and subsequent analysis: (a) insufficiency of college-going information; (b) affording college; (c) fitting in; (d) support and assistance; (e) work and life balance; (f) intrinsic factors; (g) increasing diversity; and (h) financial aid and scholarships. Most participants reported having limited assistance during pursuit of college and their health professions programs. As many were first-generation, assistance from parents was limited. Additional

deficiencies were reported regarding lack of college-going assistance beginning in high school and continuing within the university. All of the participants encouraged more education and outreach regarding health professions programs beginning early in high school as a means for promoting enrollment and academic success.

In every interview, financial concerns were expressed. Participants said they felt scholarships for Hispanic students were limited and were difficult to find. Suggestions for improving financial processes were made by each of the subjects. Work and life challenges were also described as the majority of participants were employed outside of the university while completing their respective allied health or nursing programs.

Another common theme among all of the participants was the desire to fit in and feel a sense of belonging at Midwestern University. Personal life experience and living arrangements were examined in regard to this theme. The respondents made several comments and recommendations for improving diversity and understanding Hispanic culture as a means to enhance a sense of belonging for Hispanic students.

Support and assistance was reported to be very important for the participants. All respondents indicated they were more successful at the university when they felt supported by their advisors, mentors, teachers, friends, and families. This was an area recommended as a priority in order to insure increased recruitment and academic success for Hispanic students in allied health and nursing programs.

Intrinsic factors related to academic success merged as a theme for the participants. Each of them described personal motivations for attending college and pursuing allied health or nursing degrees. Respondents also explained how they

personally managed time commitments and academics as they progressed through the university and their health professions programs.

Findings Related to the Literature

An extensive literature review was conducted prior to collection of qualitative data. The literature examined factors related to access to healthcare for Hispanic individuals, along with information regarding pursuit of college and health professions education by Hispanic students. Cason et al. (2008) provided evidence of the existence of health disparities for Hispanics and related that to a dearth of Hispanic health professionals. The literature review also revealed a lack of Hispanic students pursuing allied health and nursing programs (Cason et al., 2008, Snyder et al., 2015). Olivares-Urueta (2012), Reyes and Nora (2012), and Snyder et al. (2015) revealed Hispanic college-bound students were influenced by their support networks including families and friends, and encouragement from teachers and advisors. Additional researchers demonstrated Hispanic students cited financial needs, fitting into college, and education about health professions programs as essential for pursuit of health professions programs (Healey, 2013; Nuciforo, 2015; Reyes & Nora, 2012). In this section, findings related to the research questions included in the current study are reviewed and aligned with existing research reported in the Chapter 2 literature review.

Barriers inhibiting enrollment and academic success. Participants in the current study described several barriers that have inhibited enrollment and academic success including lack of college-going information as well as an insufficiency of information regarding allied health and nursing programs. Each of the participants encouraged education and outreach about health careers programs to students earlier

during high school years. Dawson (2013) promoted awareness at younger ages and also suggested additional qualitative research was needed to examine deficits further. Barfield et al. (2011) recommended career information sharing during K-12 and added that increased experiential opportunities would be useful for Hispanic students. Several researchers promoted the creation of pathway programs to increase the number of Hispanic allied health and nursing students (Fleming et al., 2005; Hansen, 2014; Healey, 2013; Snyder et al., 2015).

The ability to afford college was a central theme that emerged during the interviews in the current study. Multiple studies have also addressed challenges associated with the cost of college attendance (Amaro et al., 2006; Baldwin et al., 2006; Cason et al., 2008; Dawson, 2013; Gonzales, 2013; Healey, 2013; Reyes & Nora, 2012; Yoder, 2006). Increasing the number of scholarship opportunities and providing additional financial incentives were suggestions made by the participants in the current study. Healey (2013) recommended funds be set aside for support services for minority students in allied health and nursing programs. She also suggested funds be raised through community partnerships. Additional financial incentives were reported by Hansen (2014) including loan repayment and loan forgiveness. Olivares-Urueta (2012) agreed increasing financial resources for Hispanic health professions students was essential and suggested universities insure information about specific scholarships is readily available for students and families during recruitment opportunities.

Family responsibilities were obstacles for several of the current study subjects as they were caregivers for husbands, children, or siblings. The need to work in addition to attending school was also a central issue in the current study. Barfield et al. (2011)

concluded increased family demands impacted management of school for minority students. As allied health and nursing students have to spend significant time in clinical rotations, family responsibilities are particularly challenging for many Hispanic students.

All participants in the current study reported a lack of Hispanic faculty, mentors, and advisors, which created barriers related to fitting in. Healey (2013) identified such cultural issues as one of four categories of specific challenges for Hispanic students. Several other researchers also concluded a lack of minority faculty contributed to challenges of post-secondary education for minority students (Alicea-Planas, 2009; Dawson, 2013; Gonzales, 2013; & Nuciforo, 2015). When faculty members and students share similar cultures, there is increased likelihood students will be more apt to get necessary support and encouragement to pursue college. Nuciforo (2015) and Snyder et al. (2015) determined the need to increase the number of minority faculty in health professions programs was key to recruitment and long-term academic success of Hispanic students.

Factors promoting enrollment and academic success. Participants in the current study reported strong support systems as essential for success. The support systems included families, friends, mentors, advisors, and teachers. Encouragement from support systems in high school, college, and while in allied health and nursing programs contributed to pursuit and academic success. As many of the subjects in this study were first-generation college students, support systems were even more important. Several researchers found Hispanics were more likely to be first-generation college students, thus increasing challenges during pursuit of higher education (Azziz, 2015; Reyes & Nora, 2012; Santiago et al., 2015). Reyes and Nora (2012) concluded Hispanic students rely on

a network of siblings, relatives, high school representatives, and peers when planning college. They encouraged universities to take that into consideration for recruitment improvements. A study conducted by Nuciforo (2015) showed Hispanic students prefer to attend colleges close to home which was a sentiment echoed by all of the participants in the current study.

Encouraging the use of support networks including the students' families, friends, classmates, communities, advisors and teachers was reported to be important to the respondents in this study for achieving academic success. Research on the effectiveness of strong support networks was revealed in several studies (Olivares-Urueta, 2012; Reyes & Nora, 2012; Snyder et al., 2015). Participants in the current study also recommended self-support and on-campus networks. They promoted the use of study groups as an aid to academic success. Healey (2013), along with Reyes and Nora (2012), suggested the establishment of on-campus networks as tools to help insure academic success. Healey (2013) recommended the use of peer groups for tutoring and support. Olivares-Urueta (2012) promoted the use of improved academic advising and increased peer-to-peer assistance, as did current study participants. Respondents in the current study also reported the need to feel connected to other Hispanic students, advisors, mentors, and teachers. Fleming et al. (2005) suggested maintaining a strong connection to an individual's ethnic group is crucial for succeeding academically.

Personal motivation was reported by participants in the current study to be a critical factor for success as they pursued their respective allied health or nursing programs. Several researchers also discussed the benefit for Hispanic students to take ownership of their learning (Cason et al., 2008; Healey, 2013). The will to persist and

demonstrating resilience were identified as important characteristics related to academic success (Boden, 2011; Borrero, 2011; Cason et al., 2008; Reyes & Nora, 2012). In her study, Healey (2013) echoed the need for persistence and reported successful Hispanic nursing students were those who also utilized multiple resources including study groups, mentorship, and tutoring with faculty.

Participants in the current study suggested support from multiple resources was helpful as was the quality of support received. Emotional and academic support was considered a factor for promoting a sense of belonging resulting in long-term academic success. Research demonstrated faculty members who mentored and advised students with patience and an open-door policy were considered most supportive and motivating (Healey, 2013). Healey's research was supported by information shared during the qualitative interviews in the current study. Respondents also shared the importance of faculty and advisors understanding their cultural needs. Healey (2013) and Olivares-Urueta (2012) suggested these types of faculty to student relationships were essential for persistence. Evans (2004) indicated the importance of an overall caring curriculum where Hispanic students felt cultural needs were being considered and strategies developed for the promotion of academic success. Finally, Snyder et al. (2015) promoted the necessity of a more inclusive overall campus environment that encouraged cultural competence.

Conclusions

Factors that influence enrollment and academic success of Hispanic students as they pursue allied health and nursing programs at Midwestern University were identified in this study. Through qualitative interviews and data analysis, eight themes were

identified: (a) insufficiency of college-going information; (b) affording college; (c) fitting in; (d) support and assistance; (e) work and life balance; (f) intrinsic factors; (g) increasing diversity; and (h) financial aid and scholarships. Insufficiency of college-going information and support and assistance emerged as themes in response to questions related to two research questions. Participants provided detailed responses to questions and made recommendations for the benefit of future allied health and nursing students at Midwestern University.

Implications and suggestions. The results of this study may be useful for administrators and faculty who are charged with enrollment in allied health and nursing programs at Midwestern University. Changes needed for improved enrollment and academic success have been identified and may be used by administrators, faculty, and advisors to initiate positive support for Hispanic students as they pursue and complete health professions degrees. High school personnel may also be aided by the findings from this study as they advise students for future healthcare careers. The results of this study are important for parents of Hispanic students as they guide their children from kindergarten through post-secondary education and into successful employment. Legislators and leaders in the community may use this information as they coordinate efforts with healthcare institutions and Midwestern University to expand the number of Hispanic healthcare providers.

Participants in the current study reported having limited assistance during pursuit of college beginning in junior high and high school. Many were first-generation college students who had little to no help at home. The findings from this study demonstrate that education and outreach beginning as early as elementary school can be useful for

increasing enrollment in Midwestern University's allied health and nursing programs. Making information available to students and their families has been identified as essential. Also, providing availability of marketing materials and online information in English and Spanish was recommended. Deficiencies were also reported during advising, particularly in secondary education. Findings suggest the benefit of having high school counselors working with all students to provide information regarding allied health and nursing opportunities. Participants reported not knowing what post-secondary options were available. They suggested increasing career awareness information and opportunities would likely increase the number of Hispanic students who pursue healthcare professions.

Findings from this study regarding concerns about affording college may be helpful for professionals involved in both recruitment and retention efforts. Increasing the number of financial scholarships has been determined to be extremely important. Making identification of financial support opportunities easier, explaining the application processes more comprehensively, and providing information about other financial incentives like loan forgiveness may be excellent ways to increase the numbers of Hispanic health professions programs and help insure their success through graduation.

Findings from the current research also revealed the need to 'fit in' as a need for all of the participants. As there are very few Hispanic students in allied health and nursing programs at Midwestern University, increasing diversity on the campus is a necessity. Administrators are encouraged to find ways to reach out to more Hispanic students and faculty. Insuring robust multicultural advising opportunities could help students feel an increased sense of belonging as they complete their programs.

Participants discussed recruitment in Hispanic communities as essential. This recruitment could be conducted in communities outside of the immediate proximity to the university, within a one to two-hour commute, to insure Hispanic students have accessibility to both a university preparation program and their families.

Administrators and faculty should consider life experiences and living situations of Hispanic students, particularly as they recruit and advise students. Several students had a need to care for families and work in addition to attending school. Insuring advising and tutoring hours are available at a variety of hours is essential for success of Hispanic health professions students.

The current study revealed support and assistance from faculty, mentors, and advisors as essential factors for academic success. Faculty, mentors, and advisors should take time to explain materials and requirements fully. Welcoming families during recruitment and advising opportunities may be useful as well. Advisors who are patient and direct are those the students felt were most helpful. Understanding outside pressures faced by Hispanic students who are often caring for families and working will help to retain students through graduation. Teachers are encouraged to find ways to assist Hispanic students with difficulties understanding and communicating complicated medical terminology, particularly if English is a second language.

Information detailed in the current study reiterated the importance of mentors and tutors. Participants also recommended increased opportunities to interact with mentors and tutors in a wider range of hours of availability. Creating support groups within and across health disciplines was also identified as important. High schools would benefit

from identifying mentors in the community and providing shadowing opportunities for Hispanic students.

Development of health professions pathway programs would promote awareness about career opportunities at an early age, especially if programs were initiated as early as elementary school. Finally, administrators should consider additional pathways to encourage continued increases in Hispanic students in Midwestern University's allied health and nursing programs. This could include providing full-ride scholarships for Hispanic health professions students who meet specific criteria and are willing to act as mentors for other Hispanic secondary and post-secondary students. The scholarship recipients could also be encouraged to become clinical instructors in local healthcare facilities and potentially be recruited as faculty. Increasing the number of Hispanic graduates in Midwestern University's alumni association would potentially increase the number of scholarships and funds to support future Hispanic health professions students.

Recommendations for future research. As this study was conducted at one higher education institution, it would be beneficial for additional studies to be conducted at other universities. This could be of particular use in areas of the country where Hispanic populations are increasing. Additionally, this study included only eight participants so additional respondents would add to the current base of knowledge.

While this study focused on students who were currently enrolled in or had recently graduated from allied health or nursing programs at Midwestern University, the focus of a future research study could be expanded to individuals who are preparing to apply to health professions programs. Respondents who have not yet matriculated to a post-secondary allied health or nursing program could potentially reveal additional,

important information about their experiences related to access to information, funding opportunities, and mentoring.

Other ethnic minorities are under-represented in allied health and nursing programs, as well. Therefore, conducting qualitative research with Black and Native American health professions students could be helpful in identifying needs of those populations. The data would be useful for improving recruitment and academic success and subsequently improving the overall health of the local community.

Holistic recruitment may be a means for increasing diversity thus providing a sense of belonging for Hispanic students. This may include considering factors other than GPA/ACT as entrance mechanisms. As some programs weight GPA very high, it may be beneficial to change emphasis in that area or consider only recent GPA as opposed to initial, lower grade point averages. Future studies could examine the results of a change to holistic recruiting practices as compared to traditional, GPA and ACT focused admissions.

Finally, successful recruitment and retention programs could be benchmarked and similar programs considered for use at Midwestern University. The implementation and results could be studied for effectiveness. Snyder et al. (2015) discussed the importance of using multi-faceted, comprehensive programs for recruiting health professions students. The researchers reported minimal published literature has been produced that examines the overall success of the programs.

Concluding remarks. This research examined factors that influenced enrollment and academic success of Hispanic students at a Midwestern University. The study revealed a lack of college-going information, financial concerns, importance of support

and assistance, and the need for students to feel a sense of belonging. The participants discussed their personal experiences and identified factors for removing barriers and improving academic success of health professions students. Each participant made recommendations that may be useful for Midwestern University and future students.

While the participants' experiences varied slightly, each of them were thankful for support they received during their education. They were also eager to share their stories in an effort to make improvements for future Hispanic students in allied health and nursing programs at Midwestern University. Findings from the study aligned with existing research and may promote improved processes at Midwestern University. As the community's Hispanic population continues to grow, the results of this study will be helpful for Midwestern University, students, families, healthcare institutions, and community members.

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Appendices

Appendix A: Interview Questions

The following research questions and interview queries guided this study:

RQ1. What do Hispanic men and women who are enrolled in or have graduated from allied health or nursing programs at Midwestern University perceive as factors that inhibit enrollment in allied health or nursing programs?

IQ1a. Please describe any barriers that you encountered during your pursuit of higher education.

IQ1b. What processes or factors made enrollment in an allied health or nursing program difficult?

IQ1c. Please provide any additional details that you have regarding barriers that inhibited your enrollment in the allied health or nursing program.

RQ2. What do Hispanic men and women who are enrolled in or have graduated from allied health or nursing programs at Midwestern University perceive as factors that promote enrollment in allied health or nursing programs?

IQ2a. Please describe experiences that were helpful for you during your pursuit of enrollment in the allied health or nursing program.

IQ2b. Please provide any additional details that you have regarding factors that promoted enrollment in college.

RQ3. What do Hispanic men and women who are enrolled in or have graduated from allied health or nursing programs at Midwestern University perceive as factors that inhibit academic success in allied health or nursing programs?

IQ3a. Please describe experiences that hindered your academic success from the time you began in the allied health or nursing program until the present.

IQ3b. What processes or factors made completion of an allied health or nursing program difficult?

IQ3c. Please provide any additional details that you have regarding factors that hindered your success in the allied health or nursing program.

RQ4. What do Hispanic men and women who are enrolled in or have graduated from allied health or nursing programs at Midwestern University perceive as factors that promote academic success in allied health or nursing programs?

IQ4a. Please describe experiences that were helpful for your academic success from the time you began in the allied health or nursing program until the present.

IQ4b. Please provide any additional details that you have regarding factors that contributed to your success in the allied health or nursing program.

RQ5. What do Hispanic men and women who are enrolled in or have graduated from allied health or nursing programs at Midwestern University identify as solutions for removing barriers to enrollment and academic success?

IQ5a. What are the most important things that can be done to remove barriers to enrollment for Hispanic students into allied health and nursing programs?

IQ5b. From your perspective, what are the most important things that can be done to remove barriers to academic success for Hispanic students in allied health and nursing programs?

RQ6. What do Hispanic men and women who are enrolled in or have graduated from allied health or nursing programs at Midwestern University identify as solutions for promoting enrollment and academic success?

IQ6a. What are the most important things that can be done to promote the enrollment of additional Hispanic students into allied health and nursing programs?

IQ6b. What are the most important things that can be done to assist Hispanic students so they are successful as they complete allied health or nursing programs?

Appendix B: Baker University IRB Request



IRB Request

Date 1/19/18

IRB Protocol Number _____
(IRB use only)

I. Research Investigator(s) (students must list faculty sponsor)

Department(s) _____

Name	Signature	
1. <u>Jean Sanchez</u>	<u>Jean Sanchez</u>	Principal Investigator
2. <u>Dr. Tes Mehring</u>	<u>Tes Mehring</u> <small>Digitally signed by Tes Mehring Date: 2018.01.24 13:14:38 -06'00'</small>	<input checked="" type="checkbox"/> Check if faculty sponsor
3. <u>Dr. Peg Waterman</u>	<u>Margaret Waterman</u> <small>Digitally signed by Margaret Waterman Date: 2018.01.24 13:51:06 -06'00'</small>	<input type="checkbox"/> Check if faculty sponsor
4. _____	_____	<input type="checkbox"/> Check if faculty sponsor

Principal investigator contact information

Phone 785-215-4722

Note: When submitting your finalized, signed form to the IRB, please ensure that you cc all investigators and faculty sponsors using their official Baker University (or respective organization's) email addresses.

Email jeansanchez64@me.com

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Topeka, KS 66605

Faculty sponsor contact information

Phone 1236

Email t.mehring@bakeru.edu

Expected Category of Review: Exempt Expedited Full Renewal

II. Protocol Title

Factors that Influence the Enrollment and Academic Success of Hispanic Students in

Allied Health and Nursing Programs at a Midwestern University

III. Summary:

The following questions must be answered. Be specific about exactly what participants will experience and about the protections that have been included to safeguard participants from harm.

A. In a sentence or two, please describe the background and purpose of the research.

The numbers of Hispanic individuals in the United States have increased considerably and that growth is predicted to continue (Healey, 2013; Reyes & Nora, 2012). Even with the growth and predictions of future population increases, the health care workforce has not kept pace with the increase in the country's Hispanic population. Snyder, Stover, Skillman, and Frogner (2015) study revealed that only 5% of the nation's registered nurses and approximately 10.9% of the entire healthcare workforce identified as Hispanic.

There have been several studies regarding health disparities in populations where healthcare providers' ethnicities

B. Briefly describe each condition, manipulation, or archival data set to be included within the study.

A qualitative research design has been chosen for this study. Individual interviews will be conducted to identify details regarding perceived barriers and factors that contribute to enrollment and academic success of Hispanic students in allied health and nursing programs. Students will be recruited and invited to participate in the interviews (see invitation email at the end of this category). Once selected, participants will be provided a consent form that must be signed, and as interviews will be recorded via audio, a separate line on the consent form will be provided for that procedure. The consent forms will be signed on the day of the interview, prior to beginning

IV. Protocol Details

A. What measures or observations will be taken in the study? If any questionnaire or other instruments are used, provide a brief description and attach a copy.

As this is a qualitative study, questions will be asked and responses recorded. Please see list of questions below:

Interview Questions

RQ1. What do Hispanic men and women who are enrolled in or have graduated from allied health or nursing programs at a Midwestern University perceive as barriers that inhibited their enrollment in allied health or nursing programs?

IQ1a. Please describe any barriers that you encountered during your pursuit of higher education.

B. Will the subjects encounter the risk of psychological, social, physical, or legal risk? If so, please describe the nature of the risk and any measures designed to mitigate that risk.

There should be no psychological, social, physical, or legal risk. All personal identifiers will be removed and not included in the dissertation. Participants can indicate they do not wish to respond to specific questions and may withdraw from participation at any time.

C. Will any stress to subjects be involved? If so, please describe.

There will be no stress to subjects.

D. Will the subjects be deceived or misled in any way? If so, include an outline or script of the debriefing.

The subjects will not be deceived or misled in any way.

E. Will there be a request for information which subjects might consider to be personal or sensitive? If so, please include a description.

Personal demographic information could be considered sensitive however the interviewees will sign a consent prior to participating in an interview letting them know they may choose to not answer any question and may withdraw from the interview at any time.

F. Will the subjects be presented with materials which might be considered to be offensive, threatening, or degrading? If so, please describe.

There will be no such materials provided.

G. Approximately how much time will be demanded of each subject?

Approximately one hour for the interview.

H. Who will be the subjects in this study? How will they be solicited or contacted? Provide an outline or script of the information which will be provided to subjects prior to their volunteering to participate. Include a copy of any written solicitation as well as an outline of any oral solicitation.

Description of the proposed subjects:

- a. Number – approximately 12
- b. Age – 18 and over
- c. Sex – Male and Female
- d. Race – Hispanic
- e. Other characteristics – Students who are currently enrolled in or have recently graduated from allied health or nursing programs at Washburn University.

I. What steps will be taken to insure that each subject's participation is voluntary? What if any inducements will be offered to the subjects for their participation?

The email and consent form indicate that each subject's participation is voluntary. There will be no inducements offered for participation.

J. How will you insure that the subjects give their consent prior to participating? Will a written consent form be used? If so, include the form. If not, explain why not.

Yes, a consent form will be used (please see below):

APPROVED CONSENT STATEMENT

Washburn University supports the practice of protection for human subjects participating in research. The following information is provided so that you can decide whether you wish to participate in the present study. You should be aware that even if you agree to participate you are free to withdraw at any time, without penalty.

The study is concerned with determining factors that influence the enrollment and academic success of Hispanic

K. Will any aspect of the data be made a part of any permanent record that can be identified with the subject? If so, please explain the necessity.

There will be no permanent record with subject identifiers maintained.

L. Will the fact that a subject did or did not participate in a specific experiment or study be made part of any permanent record available to a supervisor, teacher, or employer? If so, explain.

No.

M. What steps will be taken to insure the confidentiality of the data? Where will it be stored? How long will it be stored? What will be done with the data after the study is completed?

The information and recordings will be stored in a locked cabinet within the locked office of the researcher. It will be stored through completion and defense of the dissertation.

N. If there are any risks involved in the study, are there any offsetting benefits that might accrue to either the subjects or society?

There are no risks involved in the study.

O. Will any data from files or archival data be used? If so, please describe.

No archival data will be used.

Appendix C: Baker University IRB Approval



Baker University Institutional Review Board

February 6th, 2018

Dear Jean Sanchez and Tes Mehring,

The Baker University IRB has reviewed your project application and approved this project under Expedited Status Review. As described, the project complies with all the requirements and policies established by the University for protection of human subjects in research. Unless renewed, approval lapses one year after approval date.

Please be aware of the following:

1. Any significant change in the research protocol as described should be reviewed by this Committee prior to altering the project.
2. Notify the IRB about any new investigators not named in original application.
3. When signed consent documents are required, the primary investigator must retain the signed consent documents of the research activity.
4. If this is a funded project, keep a copy of this approval letter with your proposal/grant file.
5. If the results of the research are used to prepare papers for publication or oral presentation at professional conferences, manuscripts or abstracts are requested for IRB as part of the project record.

Please inform this Committee or myself when this project is terminated or completed. As noted above, you must also provide IRB with an annual status report and receive approval for maintaining your status. If you have any questions, please contact me at npoell@bakeru.edu or 785.594.4582.

Sincerely,



Nathan Poell, MA
Chair, Baker University IRB

Baker University IRB Committee
Scott Crenshaw
Jamin Perry, PhD
Susan Rogers, PhD
Joe Watson, PhD

Appendix D: Midwestern University IRB Request

Institutional Review Board (IRB)
Application for Project Approval (revised August 2017)

PLEASE COMPLETE THIS FORM IN ITS ENTIRETY

NOTE: This is a Microsoft Word form document. Please open and save the completed document using Microsoft Word. Click on Text Boxes () and begin typing to provide written information.

Investigator Information

1. Name of Principal Investigator: Jean E. Sanchez
 - a. Email address of Principal Investigator: jean.sanchez@[REDACTED]
2. Name(s) of Additional Investigator(s): n/a
 - a. Email address(es) of Additional Investigator(s):
3. For student projects, name(s) of Supervising Faculty Member(s): n/a
 - a. Email address(es) of Supervising Faculty Member(s):
 - b. Campus Phone Number(s) of Supervising Faculty Member(s):
 - c. Departmental Affiliation and Location:

IRB Certification

4. Have **ALL** of the individuals listed in items 1 – 3 above completed **and** passed all six (6) IRB Training Modules?

Yes

No. If “No,” then do **not** submit this IRB application. IRB applications must be submitted only after all of the individuals listed in items 1 – 3 above have completed and passed all six (6) IRB Training Modules.

Project Narrative

5. Is this project a Quality Assurance Initiative?

Yes

No
6. Which of the following groups will you be **intentionally recruiting** in your study? Check ALL that apply.

Children (individuals under the age of 18)

Prisoners

Individuals with developmental disabilities

Pregnant women, fetuses, and/or neonates

Potentially at-risk individuals, such as undocumented immigrants or LGBTQ individuals

None of the above will be used in the proposed study
7. Will you be asking participants questions or exposing them to stimuli about sensitive topics that could have more than minimal risk of emotional harm?

Sensitive topics might include mental health, child abuse, sexual/domestic violence, or other topics that may be considered “triggers.”

Yes

No

8. Does this research entail more than “minimal risk” (the risk of harm anticipated in the proposed research is not greater, considering probability and magnitude, than that ordinarily encountered in daily life or during the performance of routine physical or psychological examinations or tests)?

Yes

No

9. Title of Project: *Factors that Influence the Enrollment and Academic Success of Hispanic Students in Allied Health and Nursing Programs at a Midwestern University*

10. Funding Agency (if applicable): n/a

11. In 2-4 paragraphs, describe the project’s purpose(s) and benefit(s). Discuss the importance of conducting the proposed study. In particular, explain why the proposed study should be conducted (purpose) and what will be gained from conducting this study (benefit).

The numbers of Hispanic individuals in the United States have increased considerably and that growth is predicted to continue (Healey, 2013; Reyes & Nora, 2012). Furthermore, it has been projected that by the year 2080, approximately 51% of United States’ citizens will be minorities with the largest sub-population being Hispanic (Healey, 2013). Even with the growth and predictions of future population increases, the health care workforce has not kept pace with the increase in the country’s Hispanic population. Snyder, Stover, Skillman, and Frogner (2015) study revealed that only 5% of the nation’s registered nurses and approximately 10.9% of the entire healthcare workforce identified as Hispanic.

There have been several studies regarding health disparities in populations where healthcare providers’ ethnicities do not match the population begin served (Burkholder & Nash, 2014; Fleming et al., 2005; Healey, 2013). Healey (2013) reported that health outcomes are improved when there are similarities in ethnic representation of health care providers and the patients served. One way to improve health outcomes in the United States, particularly in communities with large numbers of Hispanic residents, may be to increase the number of Hispanic students enrolled in and graduating from allied health and nursing programs.

Efforts have been made in some communities however colleges and universities continue to report low numbers of Hispanic students, particularly in health programs (Reyes & Nora, 2012). In order to increase the number of Hispanic students in allied health and nursing programs in Kansas, it is essential to determine factors that inhibit enrollment and academic success, along with factors the may contribute to enrollment and academic success.

The purpose of this research is to determine factors that inhibit enrollment and academic success, along with factors that may contribute to enrollment and academic success of Hispanic students in allied health and nursing programs at a Midwestern university.

Faculty and administrators who are charged with enrollment in and graduation from allied health and nursing programs will benefit from the results of this study as they will understand specific factors that inhibit and promote enrollment and academic success among Hispanic students in health programs. Specific changes may be implemented based on qualitative data. Furthermore, the local community and healthcare partners will be aided by the potential increase in the numbers of Hispanic students graduating from allied health and nursing programs.

12. Describe the proposed subjects:

- a. Number – 12
- b. Age – 18 and over
- c. Sex – Male and Female
- d. Race – Hispanic
- e. Other characteristics – Students who are currently enrolled in or have recently graduated from allied health or nursing programs at ██████████ University.

13. Describe how subjects are to be selected/recruited. All recruitment material (i.e. email text, social media text, posters, etc.) must be submitted with this application.

Students who are currently enrolled in or who have recently graduated from allied health and nursing programs will be recruited. Faculty members and program directors will be asked to send an email (see attached) to Hispanic students currently in their programs inviting the students to contact the primary investigator for potential participation in the study. Additionally, the primary investigator will directly email Hispanic healthcare students already known to the researcher.

14. Describe the proposed procedure in the project. Any proposed experimental activities that are included in evaluation, research, development, demonstration, instruction, study, treatments, debriefing, questionnaires, and similar projects must be described.

Use simple language; avoid jargon.

A qualitative research design has been chosen for this study. Individual interviews will be conducted to identify details regarding perceived barriers and factors that contribute to enrollment and academic success of Hispanic students in allied health and nursing programs. As described in #13, students will be recruited and invited to participate in the interviews. Once selected, participants will be provided a consent form that must be signed, and as interviews will be recorded via audio, a separate line on the consent form will be provided for that procedure. The consent forms will be signed on the day of the interview, prior to beginning delivery of questions. The consent form is included for review.

Interview questions were developed from previous benchmarked surveys and those questions will be used for all interviews (see attached). The students will be interviewed on ██████████ University's campus and the interview will take approximately one hour. After each interview is complete, the students will be notified that a transcript of the interview will be provided to them for review and feedback in order to insure accuracy of interpretation. The participant will be able to identify any discrepancies and if they exist, a subsequent meeting may be necessary.

Once transcripts have been confirmed, data will be coded as a means for final interpretation. Themes will be identified and formed into groups for final analysis.

15. Have you included with your IRB application ***all*** questionnaires, tests, recruitment material, or related research instruments that are to be used?

Yes
 No
 Not applicable

16. If you are conducting your study at a site outside of ██████████ University, a letter of approval written on the agency letterhead or an email (from the agency's official email address) from the authorized individual ***must*** accompany the proposal. The letter/email should make it clear that the person is aware of the topic, task, and procedures of the study. The letter/email should also include the title/position of the authorizing individual. Have you included letter/email of approval from the outside agency/institution?

Yes
 No
 Not applicable

17. The data will be analyzed in:

Individual form
 Aggregate form
 Both individual and aggregate form

18. ***Please read completely:*** You must include a copy of the informed consent statement you plan on having participants read and sign. If participants are under 18 years of age, a consent form ***must*** be created for parental signature. If information other than that provided on the informed consent form is provided, attach a copy of such information. In the consent form, explain how the identifying information will be either anonymous (meaning the principal investigator *cannot* tie participants to their data) or confidential (meaning the principal investigator *can* tie participants to their data). The consent statement ***cannot*** include exculpatory (absolving from fault) language through which the subject is made to waive, or appear to waive, any legal rights, or to release the institutions or agent from liability for negligence.

Have you attached a copy of the informed consent statement?

Yes
 No

Not applicable

19. What steps have you taken to ensure that individual names or personally identifying information will not be associated with the data you will collect?

The risk of breaching confidentiality will be minimized by using only the principal investigator to collect qualitative data. The principal investigator will archive all consent forms, interview data, and recordings in a locked area. Additionally, any identifying data will be removed and alias names will be assigned for final reporting.

20. Will electrical or mechanical devices be applied to subjects?

Yes – If “Yes,” use the text box that follows to provide a detailed description of the steps that will be taken to safeguard the rights, safety, and welfare of subjects.

No

21. Participants in the proposed study will be:

- Audio recorded
 Video recorded
 Both audio and video recorded
 None of the above are applicable to the proposed study

IMPORTANT: If you audio and/or video record participants, your consent form must contain a statement stating that participants will be recorded. The consent form should contain detailed information about how the recordings will be stored in a secure location and what exactly will be done with the recordings. Also, there must be two (2) signature lines on the consent form: (1) where the participant agrees or does not agree to being recorded and (2) where the participant agrees to participate in the study.

I agree to conduct this project in accordance with [REDACTED] University’s policies and requirements involving research.

Jean E. Sanchez

Name(s) of Principal Investigator(s) (type your full name above)

TO BE COMPLETED BY FACULTY SUPERVISING STUDENT RESEARCH:

22. “I have reviewed this IRB application and deem it acceptable for IRB review.”

- Yes
 No
 Not a student project.

Completed applications and all attachments should be sent from the faculty supervisor’s official [REDACTED] University email account to [irb@\[REDACTED\].edu](mailto:irb@[REDACTED].edu).

The following three procedures are **required** for continued supervision of this research project.

1. At six-month intervals, until the project is completed, a Project Status Report must be returned to the Chair of the IRB Committee.
2. Any significant change in the experimental procedure, as described, should be reviewed by this Committee prior to altering the project.
3. Any injury to a subject because of the research procedures **must** be reported to the Committee immediately.



The following is for IRB Committee use only.

IRB PROPOSAL EVALUATION

IRB#

Review process (to be completed by IRB Chair):

- Exempt
 Expedited
 Full Review

IRB Member(s) assigned to review:

TO BE COMPLETED BY IRB COMMITTEE MEMBER INVOLVED IN REVIEW:

- Approved
 Not Approved
 Approved with modifications (see below)

Reasons for Disapproval:

Required Modification(s):

Recommendations:

Comments:

Appendix E: Midwestern University IRB Approval

From: IRB
Sent: Friday, February 09, 2018 11:24 AM
To: Jean Sanchez
Subject: IRB #18-10

Congratulations! Your IRB application has been approved. Best of luck with your study!



Appendix F: Approved Consent Statement

APPROVED CONSENT STATEMENT

████████ University supports the practice of protection for human subjects participating in research. The following information is provided so that you can decide whether you wish to participate in the present study. You should be aware that even if you agree to participate you are free to withdraw at any time, without penalty.

The study is concerned with determining factors that influence the enrollment and academic success of Hispanic students in allied health and nursing programs.
Data collected will include:

- * Demographic data including age, gender, ethnicity, education, family history, income, and educational levels of parents.
- * Reasons for choosing allied health or nursing degrees and reasons for selecting ██████████.
- * Barriers encountered and/or experiences that were helpful during pursuit of higher education and allied health or nursing programs.
- * Barriers encountered and/or experiences that contributed to academic success in allied health or nursing programs.

Your participation is solicited, but strictly voluntary. Do not hesitate to ask any questions about the study. The information obtained through interviews and audio recordings will be completely confidential and be assured that your name will not be associated in any way with the research findings. I greatly appreciate your assistance with this research study.

Sincerely,

Jean Sanchez, PTA, BHS, MHA
████████ University, Allied Health Department
████████ 670-1408

Signature of individual agreeing to participate in study

Date

I agree to be audio recorded: _____
Signature of participant

I do not agree to be audio recorded: _____
Signature of participant

Appendix G: Invitation to Participate Email

Hello [REDACTED] Allied Health or Nursing Student,

I am conducting research for my doctoral dissertation titled, *Factors that Influence the Enrollment and Academic Success of Hispanic students in Allied Health and Nursing Programs*. It is my hope you will be willing to assist with this project by participating in the study during spring semester.

Following are a few important points to note:

- The study will be qualitative and individual interviews will be conducted. Each interview will take no longer than one hour and will be held in a private area on campus (to insure confidentiality). The date and time will be determined based on convenience for your schedule.
- The questions asked will include some demographic information, reasons for choosing allied health/nursing programs at [REDACTED] barriers encountered during pursuit of or while in the programs, along with factors that contributed to success during enrollment and during completion of the programs.
- Your participation is solicited, but strictly voluntary. The information obtained through interviews will be completely confidential and your name will not be associated in any way with the research findings. If you choose to participate in the research study, you may indicate a preference for not providing a response to any of the questions and may withdraw from participation in the study at any time.

If you are interested in participating, please contact me at [jean.sanchez@\[REDACTED\].edu](mailto:jean.sanchez@[REDACTED].edu) within one week so we may discuss the opportunity and schedule a time to meet. Also, if you have any questions, do not hesitate to contact me and I will be happy to provide further details.

I greatly appreciate your assistance with this research study. Your information will be a valuable tool for identifying opportunities to improve enrollment and academic success for future Hispanic students in allied health and nursing programs at [REDACTED] University.

Sincerely,

Jean E. Sanchez

Jean Sanchez, PTA, BHS, MHA

Program Coordinator/Assistant Professor, Bachelor of Health Science Program

[REDACTED] University

([REDACTED]) 670-1408