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A Dissertation

Entitled

The Impact of an International Healthcare Mission on Participating Healthcare Professional Students

By

Martha S. Gallagher

Submitted as partial fulfillment of the requirements for

Doctor of Philosophy degree in

Health Education

[Signatures]

Adviser: Dr. Debra Boardley
Dr. Timothy Jordan
Dr. Lynne Hamer

College of Health and Human Services
Graduate School

The University of Toledo
May 2004
An Abstract of

The Impact of an International Healthcare Mission on Participating Healthcare Professional Students

Martha S. Gallagher

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Demographic changes in the US influence the delivery of healthcare and health education. To provide the best care and education, healthcare professionals need to increase cultural sensitivity. Educators from different disciplines increasingly recognize the importance of addressing the issue of culture. Participating in an international healthcare mission is one method to increase cultural awareness. Although changing demographics have altered how healthcare professionals practice, there is little research on the different methods to prepare future healthcare professionals to be culturally sensitive. Published research on the impact of an International Healthcare Mission (IHM) on participating healthcare professional students is notably sparse.
The purpose of this research was to explore the perceived effects of an IHM on participating healthcare professional students. Thirty-two students from U.S. healthcare professional schools participated. None took coursework to prepare them for an international mission. This study used both qualitative and quantitative methods, also known as methodological triangulation. Semi-structured interviews of IHM student participants (n = 9) provided qualitative data. A survey framed by Wilson’s Impact of an International Experience model provided complementary and supportive quantitative information to themes that surfaced from interviews. Within the survey, several questions explored the impact of the mission on the student’s professional and cultural self-efficacy. These later questions validated cognitive, affective, and selection processes as regulators and mastery experiences as a source of self-efficacy within Bandura’s theory of self-efficacy.

Triangulated methodology provided an enhanced picture of the phenomenon researched. Students reported gains in substantive knowledge, perceptual understanding, growth as an individual, improved interpersonal connections, as well as enhanced self-confidence. The information discovered from this research support both Wilson’s model and Bandura’s theory of self-efficacy. Further, this research highlights the value of an international healthcare mission to enhance student awareness, understanding, respect and sensitivity to people from other countries, cultures, and economic situations. Additionally, participants indicated that IHM experiences enhanced their provider-patient interactions, multicultural teamwork, and increased their knowledge of factors impacting a client’s health status and reception of healthcare services. Recommendations include 1)
study replication, 2) modifications of selected survey items, and 3) development of a
course with an IHM service-learning component.
DEDICATION

Early lessons learned are lasting.

This dissertation is dedicated to my father,

Richard Warren Shoemaker, Ph.D.

November 8, 1918 - January 13, 2004

Professor of Mathematics

University of Toledo

1946 - 1987

You provided a firm foundation of love and fatherly support throughout my lifetime.

Your commitment to inspire and mentor an inquisitive mind and to challenge
me to strive for excellence has resulted in this current academic endeavor.

Beginning in my elementary school years, I remember family dinner conversations
that often started with your question,

“Well, what did you learn in school today?”

Here’s today’s answer, Dad.
ACKNOWLEDGMENTS

The preparation, research and writing of this dissertation required many participants, to whom I am very grateful. Family, friends, and colleagues provided a solid foundation of support, as well as well-timed encouragement.

My husband has, once again, encouraged me through another challenge to attain a higher educational goal. His steadfast support has added new meaning to “through good times and bad times” in the wedding vows he took over 26 years ago.

The participants of this study gave of their precious spare time to share their thoughts, feelings and mission experiences. These future healthcare professionals demonstrated the “caring for” and “connecting with” others that is a personal value beyond measure in our too-often technological healthcare disciplines. I wish each of them success and happiness in their personal, educational and professional goals.

My committee members have each generously shared their time and expertise. Dr. Lynne Hamer provided encouragement and gentle guidance through the qualitative component of this research. Dr. Timothy Jordan shared his expertise with survey development and greatly aided displaying the results of the quantitative research in a clear, concise manner. My committee chairperson, Dr. Debra Boardley provided academic advise, encouragement, and editorial suggestions through many chapter versions. Often too, she provided emotional support.

To all who helped in the many ways needed,

Thank you.
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Chapter 1
INTRODUCTION

This chapter will introduce the reasons for this research and the need for culturally sensitive, globally aware healthcare professionals. The following are found in this chapter: 1) background, 2) statement of the problem, 3) significance of the problem, 4) conceptual frameworks used in the research, 5) educational experience considered, and 6) an overview of this study. The terms used in this research as well as the delimitations and limitations are also presented.

Background

Because of changing demographics, healthcare professionals are more likely to work with individuals, families, and communities from a variety of cultural backgrounds (Flynn & Aiken, 2001). These inter-cultural interactions occur with increasing frequency as travel, migration and methods of communication change. Rapid shifts in technology, economic need and political upheaval are contributing factors. As a result of these shifts, U.S. demographics are moving away from a predominantly white, western European populace. Previously small racial groups increased dramatically in the 1990s, with the most notable increases seen in the Hispanic and Asian segments of the U.S. population.
By 2050, non-Hispanic whites will decrease to an estimated 53% of the U.S. population, down from 73.6% in the late 20th century (Salimbene, 1999).

Statement of the Problem

Expanding cultural diversity in the US can create new challenges for healthcare professionals as each cultural group uniquely defines health and illness (Salimbene, 1999). Effective health promotion, care, and education as well as teamwork require thoughtful, culturally sensitive communication and an appreciation for the influence of culture on health. One method to increase cultural awareness is through the participation of healthcare professionals on international healthcare missions (IHM). This research will explore the personal and professional impact of an IHM on participating healthcare professional students.

U.S. demographics are changing rapidly because of forced and voluntary migration of people worldwide. Worldwide, there were 13 million refugees in 1996. Previously, refugee movement occurred mainly between developing countries. Currently, migration has shifted towards developed nations because of improved communication and transportation (Stalker, 1997). Legal migration to the US was 911,000 in 1996, providing haven for 7% of the 13 million refugees that year. In the US, the percentage of foreign-born persons increased by 44% over the ten years between the 1990 and 2000 census (U.S. Census Bureau, 2002a). Foreign-born persons living in the U.S. totaled 28.4 million in 2000 and accounted for 10.4% of the U.S. population (U.S. Census, 2002b).

The distribution of immigrants in the US is uneven. Nearly 67% of the 28.4 million foreign-born persons live in Western (39.9%) and Southern (26.8%) states, particularly those from Latin American countries. Nearly 23% of resettled immigrants to
the US live in the Northeast, and approximately 11% reside in Midwestern states (U.S. Census, 2002b). Healthcare professionals living in geographic areas with a higher proportion of immigrants are undoubtedly facing the challenges involved in offering culturally sensitive health care.

Immigrants are a heterogeneous group. The two largest segments of foreign-born people in the US are of Hispanic and Asian origin. Of the 28.4 million immigrants, Hispanics account for 51%, Asian born 25.5%, European born 15.3%, and 8.1% are from other parts of the globe (U.S. Census Bureau, 2002b). The Hispanic population in the US increased over 35.2% from 1990 to 1998 (U.S. Census Bureau, 1999). Asian-born persons in the US accounted for nearly 26% of the foreign-born, up from 19% in the 1980s (U.S. Census Bureau, 2002 c). Heterogeneity within these immigrant groups is also great. For example, those counted as Hispanic could be from a Central or South American country, the Caribbean, or Mexico. Those grouped as Asians include persons from countries such as India, Viet Nam, China, Korea, or the Philippines. The cultural differences between and sometimes within these countries can vary widely. Cultural heterogeneity between and within immigrant groups creates new challenges for healthcare professionals to provide culturally appropriate health care and health promotion.

**Significance of the Problem**

Changing U.S. demographics affect how healthcare professionals practice. Purnell and Paulanka noted, “perhaps no other professional group in society has recognized the impact of cultural diversity on its work as much as the health profession” (1998, p.4). Albert defined culture as “social norms about the way society functions” (1996, p.203).
Corin (1995) further connected health and culture, noting that an understanding of the cultural determinants of health are significant to comprehending the epidemiology of health and disease states. This connection thus further demonstrates the impact of cultural diversity on healthcare professionals at all levels of care. To ensure high quality professional performance, all healthcare professionals must commit to enhancing cultural and linguistic sensitivity (Salimbene, 1999). An ability to offer culturally sensitive health care and promotion should improve client understanding and compliance (Carrillo, Green & Betancourt, 1999).

A healthcare professional’s ability to provide culturally sensitive care could, at a minimum, reduce potential threats or stresses to a client’s environment and beliefs, and optimally enhance the patient’s self-efficacy for positive, health promoting behaviors. One theory and one model will be used in this study to frame the research inquiry. These constructs will be introduced next.

**Conceptual Framework**

**Bandura’s Theory of Self-Efficacy**

Bandura’s Theory of Self-Efficacy is a component within the Social Cognitive Theory. Self-efficacy plays a role in the connection between culture and health. Bandura presented the concept of reciprocal determinism in Social Cognitive Theory (1986). The concept of reciprocal determinism accords the interaction between environment, behavior, and personal factors as key to an individual’s construction of reality (Pajares, 2002). The human component of the triad of person, environment and behavior possesses the capability for self-reflection. Self-efficacy beliefs are molded through self-reflection,
thinking and behavior. Since culture influences each component of the triad of reciprocal determinism, culture influences self-efficacy, and thus affects actions that influence personal health behavior. In a similar manner, self-reflection of one’s professional role behavior and effectiveness can influence self-efficacy and thus impact personal career development.

There are four predominant sources for human self-efficacy: 1) mastery experiences, 2) vicarious experiences, 3) social persuasion, and 4) physiological and emotional states. Four additional factors influence the development of personal self-efficacy, including: 1) cognitive, 2) motivational, 3) affective, and 4) selection processes. The components affecting self-efficacy are discussed further in chapter two.

**Wilson’s Impact of an International Experience Model**

“The Impact of an International Experience” (IIEM), a model by Wilson (1993a, p.16) will be used to frame this research. This model depicts two categories of an individual’s growth that occur because of an international experience. These two categories each have two components. In the category titled “Gaining a Global Perspective”, the learner develops in component areas identified as substantive knowledge and perceptual understanding. In the category titled “Developing Self and Relationships”, the student grows in the component areas identified as personal growth and interpersonal connections (Wilson, 1993a). Details of this model are in chapter two.
**Education of Healthcare Professionals**

**Healthcare professionals’ education**

Healthcare professional students receive both didactic and experiential coursework through directed classroom, lab, and clinical experiences. Learning occurs through different domains: cognitive, affective, and psychomotor (Cranton, 1989).

Cognitive learning is the acquired substantive knowledge required to practice as a healthcare professional. The success of cognitive learning is in part dependent on student beliefs in personal learning abilities, resources and motivation. For example, anatomy and physiology knowledge is substantive information for most health care disciplines. A student who expects to successfully mobilize needed substantive knowledge will likely succeed and probably enhance their self-efficacy beliefs.

In the affective learning domain, a student explores discipline beliefs. For example, there are several theories of nursing. Each of these theories provides a model for students to apply knowledge holistically and systematically to the practice of nursing. The benefit of human self-reflection offers each student the capabilities to weigh the beliefs of the healthcare discipline studied with personal beliefs and values. At a higher level of learning, the student or practitioner’s use of one theory over another to guide his/her professional practice may reflect personal values and attitudes.

The psychomotor learning domain includes the physical or technical skills used within the health care disciplines. For example, a health educator may use a game to instruct a child about street safety or safe biking. A medical student may learn technical skills such as venipuncture and suturing. The student’s perceived effectiveness in this
learning domain may affect the magnitude and strength of the student’s self-efficacy beliefs as a healthcare professional.

U.S. healthcare professional students prepare to work with clients from increasingly diverse cultures through a variety of classroom and clinical experiences. The importance of developing cultural sensitivity is recognized by practitioners in health education (Denboba, Bragdon, Epstein, Garthright, & Goldman, 1998), nursing (Sommer, 2001), and medicine (Geiger, 2001; Loudon, Anderson, Gill & Greenfield, 1999; Rafuse, 1994). It is important for healthcare professionals to be culturally sensitive. Lack of cultural sensitivity can impede the relationships between healthcare professionals as well as between the givers and receivers of healthcare when they are from different cultures, thus having a negative impact on the interactions needed for effective teamwork and care (Carrillo, Green, & Betancourt, 1999; Lester, 1998a, 1998b).

Individuals experience culture uniquely. Individual, affective perception of culture may influence lifestyle and behavior. Healthcare providers who learn to recognize the relationship between cultural beliefs and health behavior are in a better position to promote health and provide optimal care. Healthcare professionals exposed to people from other cultures and countries may consider the impact of culture, environment, social norms, perception of health and disease on self-efficacy and behavior. Such healthcare professionals are better prepared to promote health effectively through culturally sensitive teaching. It is not known if current health professional students receive sufficient cognitive preparation, motivation, and affective experiences to enhance their self-efficacy to be culturally sensitive practitioners.
Cultural sensitivity is becoming an urgent responsibility of the health care professions (Geiger, 2001). The education of a healthcare professional includes the ethical responsibilities a professional has to one’s discipline and society. The codes of ethics for dietitians, health educators, physicians and surgeons, nurses and occupational therapists note the need to recognize the influence of culture, environment, social and economic factors to provide effective care (American Occupational Therapy Association, 2000; American Nurses’ Association, 1985; Coalition of National Health Education Organizations, 1999; College of Physicians and Surgeons, 2002; Nutractive, 2002).

Didactic instruction for healthcare professional students to develop cultural sensitivity may include assigned readings and classroom discussions. Clinical experiences may include assignments to care for individuals from another culture (Carrillo, Emilio, Green & Betancourt, 1999; Sommer, 2001). Some healthcare professional students are assigned international Internet contacts (Thomas, Walpin & Tuella, 2001) or clinical experiences with clients, student peers or team workers from other countries and cultures (Azad, Power, Dollin & Chery, 2002). Other healthcare professional students have an international experience in a healthcare setting, as will be discussed further in chapter two. We do not know which educational method is best to develop cultural sensitivity in healthcare professional students. As noted by Geiger (2001), what lacks “is evaluation, namely, measures not merely of changes in knowledge and attitudes but also of changes in outcomes. We do not yet know what really works” (p 1700).
**Experiential learning**

Healthcare professional schools have long used experiential learning in a variety of clinical settings to provide students with hands-on, practical application of discipline-specific knowledge and skills. Experiential education is “a planned, affective, individual, thoughtfully evaluated component of an educational program” (Wallace, 1993, p.16). Experiential education builds affective upon cognitive learning within a personally meaningful environment. This type education is emotionally engaging (Proudman, 1995), and could hold promise as a method to influence student self-efficacy through mastery and vicarious experiences. Some U.S. healthcare professional programs have created curricula to address cultural issues and the impact of culture on health using a “patient-based, cross-cultural curriculum” (Carrillo, Green, & Betancourt, 1999). Other healthcare professional programs provide international experiences (Bond & Jones, 1994; Currier, Omar, Talarczyk & Guerrero, 2000; Fraser, 2001; Hadwiger & Hadwiger, 1999; Kollar & Ailinger, 2002; Rosenkoetter, Reynolds, Cummings & Zakutney, 1993). These authors presented evidence that experiential education in an international setting provided rich learning for participants. This rich learning could be further enhanced through the affective domain, as self-reflection may be influenced by psychological and emotional states.

**International learning through service on missions**

A specific type of experiential learning is service learning. Service-learning is defined as an activity that combines both service and learning objectives for the purpose of changing the service provider and recipient. Further, the National Service-Learning Clearinghouse notes that service-learning “is accomplished by combining service tasks
with structured opportunities that link the task to self-reflection, self-discovery, and the acquisition and comprehension of values, skills, and knowledge content (retrieved March 3, 2004, from http://www.servicelearning.org/article/archive/35/). Educationally designed, service-learning programs provide for student learning through preparatory coursework, immersion in a work setting, and reflection after the experience (Albert, 1996).

International healthcare missions (IHMs) combined with academic programs could be a source of service learning. IHMs have the potential to reinforce classroom presentations of cultural issues and discipline-specific ethical responsibilities, and augment the preparation of future healthcare professionals. Experiential learning in an international setting provides opportunities to apply discipline-specific cognitive and psychomotor learning in a multicultural, multidisciplinary environment, which, in turn can enhance affective learning. Further, service-learning offers opportunities for mastery experiences to influence the magnitude and strength of healthcare professional students’ self-efficacy. Little information is available on the impact of an IHM on students who volunteer. Healthcare professional student volunteers on an IHM that is not a component of their school’s coursework generally do not receive advance preparation for or guided reflection after the experience, a distinction that is important to note.

Available opportunities for an IHM may influence individuals, and the reverse may be true: individuals may influence opportunities available. In the case of an IHM, a student may welcome or shun an IHM opportunity presented, or may seek out a specific type of mission experience to enhance individual interests, educational or professional strengths. This is supported by Bandura’s concept of reciprocal determinism, where personal factors, behavior and environment interact reciprocally (Pajares, 2002). Self-
efficacy beliefs are at the core of reciprocal determinism, as an individual’s perception of his or her capabilities influences responses to environmental factors. To clarify, one individual may be challenged by an environmental factor, perceiving it as an opportunity for growth; another individual may perceive the same stimulus as a threat based on one’s self-efficacy beliefs. Pajares also noted that self-efficacy beliefs are fundamental to motivation, personal satisfaction, and accomplishments, to the point that these beliefs are based more on personal perceptions than objective facts. Self-efficacy thus influences choices, actions, motivation, effort expended, thoughts and emotional reactions. Experiences create self-efficacy beliefs and thus affect a healthcare professional student’s participation on and perception of an IHM. Bandura’s theory of Self-Efficacy is further explored in chapter two, and its use in this research detailed in chapter three.

International opportunities for Healthcare Professional students

In the Toledo, Ohio area, a variety of schools offer courses to prepare health care and allied health professionals. The degrees included are: baccalaureate and masters in nursing (BSN and MSN respectively); doctorate in medicine (MD); physician assistant (PA); baccalaureate and masters in pharmaceutical science (BSPS, MS in Pharmaceutical Sciences); a doctor of Pharmacology (PharmD); masters and doctorate in medicinal chemistry (M.S. and PhD respectively); masters in physical therapy (MPT); masters in occupational therapy (MOT); masters in public health (MPH); and a doctorate in health education (PhD). These area academic programs currently do not offer international health coursework or an international service learning component to the professional program. Students from the above professional programs who participate on an IHM do so on their own time and at their own expense; hence, their IHM participation is neither
experiential nor service learning. The lack of both pre-mission academic preparation and post-mission academic reflection regarding their international experience is of particular interest in this research. Under these conditions, the students’ perceptions of the mission experience have not been biased by academic input, and therefore, their perceptions are more truly a result of self-reflection, or reflection without direction from someone else.

Healthcare professional students in the above-mentioned programs are able to get international experiences through a variety of area health mission groups, several of which have chapters in other locations in the US. Included are Development of Vietnam Endeavors (DOVE), International Services of Hope (ISOH), Midwest Medical Missions (MMM), Peruvian American Medical Society (PAMS), Solid Rock Missions (SRM), Philippine American Group of Educators and Surgeons (PAGES), Special Commission on Relief and Education (SCORE), St. Paul’s Lutheran Church, and Students for Medical Missions (SMM). Collectively these groups make up the Toledo Area Mission Groups (TAMG). Non-academic health professionals direct these locally organized IHM, commonly referred to as “medical missions.”

Each IHM has objectives and goals written by the non-academic organizers of the international mission. These organizers do not write learning objectives for healthcare professional students. The local healthcare mission organizer, not an academician, assigns the student’s role on the IHM. Participating students do not receive advance classroom preparation specific to the mission experience. This fact distinguishes these IHM experiences from both experiential and service learning. Advance didactic mission preparation, written student learning objectives, and evaluation of the educational learning experiences on healthcare missions are aspects of educationally designed
experiences which are not components of these IHM. Because of these aspects, in combination with scant research on this topic, little is known about the impact of an IHM on participating students.

Overview of the Study

Purpose

The purpose of this research is to elicit information from student healthcare mission volunteers about the perceived impact of an IHM experience on their personal and professional development. In addition, this research will serve to gain an understanding of the healthcare professional student’s perception of the experience on their professional and cultural self-efficacy. Information may also be obtained that could support participant’s growth towards a global perspective and increased cultural sensitivity. Wilson’s Impact of an International Experience Model will frame this mixed-method, interpretative research, while Bandura’s Theory of Self-Efficacy will guide quantitative questionnaire development and interpretation of potential gains for healthcare professional students in the area of promoting health and providing care for individuals from other cultures.

Research approach

The perceptions and impact of an IHM on participating healthcare professional students will be explored using qualitative and quantitative methods. Wilson’s IIEM will frame the study. Semi-structured interviews of IHM student participants will provide qualitative data. Student, self-completed surveys based on the four components of Wilson’s IIEM will provide quantitative data that may support the themes that surface
from interviews. Within this framework, several questions will specifically elicit responses to explore the impact of the mission on the healthcare professional student’s self-efficacy. The following chapter will explore recent literature on methodological triangulation as a research method. Further discussion of the methodology for this research will follow in chapter three.

**Research questions**

1. What is the perceived impact of participation on an international healthcare mission on a healthcare professional student?

**Subquestions**

1. What was /were especially meaningful experience(s) for the student related to the IHM? Why?
2. Did the student’s cultural sensitivity self-efficacy change because of his or her IHM experience?
3. Did the student’s experiences on an IHM change his or her professional practice self-efficacy?
4. Was the student’s perceived ability to explore health beliefs and behaviors of people from other cultures altered by the IHM experience?

**Quantitative Research questions**

The quantitative component of this research study will determine:

1. Will respondents report a perceived change in the following areas after participating on an IHM:

   A. Substantive Knowledge

      1. Of a different country or culture
2. Of professional cognitive development

B. Perceptual Understanding
   1. Appreciation of U.S. healthcare resources
   2. Professional behavior
   3. Broadened perspectives

C. Personal Growth/Growing as an Individual
   1. Change in self-confidence
   2. Changed personal insight
   3. “Connecting” in professional practice

D. Interpersonal Connections
   1. Working with others
   2. Gained respect for other culture people

II. Will respondents report a perceived change in Self-Efficacy related to IHM experiences in the following areas:

A. Mastery experiences
   1. Professional
   2. Cultural

B. Cognitive processes

C. Affective processes

Delimitations of the Study

The delimitations of this study were:

1. Between-methods triangulation can potentially bias the researcher’s understanding and interpretation of the findings. Generally a literature review
is conducted prior to a quantitative study, while this review is held until after data analysis in a qualitative study. As the questionnaire items were developed prior to qualitative data collection and after the literature review, the potential for researcher bias to the qualitative findings exists.

2. The potential for self-selection bias exists among study participants. Only students who agreed to participate in the research were included.

3. A purposeful sample of participants was used. As such, these participants were a subgroup of healthcare professional students.

**Limitations of the Study**

The limitations of this study were:

1. The type of IHM experienced could influence the student’s perception. For example, a student who worked in a hospital-based mission had different learning experiences than a student who worked in a day clinic set in a remote village.

2. A maturation effect could influence the student’s perception of their IHM experiences. For example, a student’s experiences and progression through their healthcare professional educational program, and the distance from the IHM experience could cause a change in the student’s responses to survey questions.

3. The student’s report of the impact of his or her IHM experience may be underestimated or overestimated due to reader bias.

4. The students may report what they perceive as socially acceptable changes rather than actual changes.
5. For students who were interviewed, the potential for multiple-treatment interference exists. The subjects interviewed may have reported different survey responses because of their recent recall and reflection on the IHM experiences.

6. The different educational focus within each healthcare discipline may bias the student’s perception of the IHM experience.

7. The small numbers of pilot and research participants who were available for instrument reliability testing. No items were deleted or changed from the questionnaire. The intent of the survey was to discover the impact of an IHM on participating healthcare professional students. Although quantitative research ideally should be done on a random sample of participants, and large numbers of volunteers used to ensure the power and generalizability of the findings, this was not possible in this research. First, a random sampling of healthcare professional students might not yield any students who had participated in an IHM. Second, the purpose of this research was to discover the mission impact on students who did not receive any advance preparation in order to explore their non-biased perspectives of the experience. Some healthcare professional schools offer an international experiential learning, and these students could not be accurately excluded using a random sampling. Further, for the qualitative component of this methodological triangulation study a purposeful sampling was required. As the number of possible participants was known to be low, if the qualitative participants were not included in the quantitative portion of the study, the total number of survey
participants would be further decreased, and thus further weaken the findings of the study. A final rationale for not altering or eliminating any questions was the relatively positive statistical findings from the small pilot study on the PIHMQ.

**Definitions of Terms**

**Culture**

Culture is the collection of beliefs, values and behaviors held by a group of people. Further, environment, gender, education, ‘race’, and age help to define a culture. Ethnicity may be an aspect of culture (Carrillo, Green & Betancourt, 1999).

**Cultural sensitivity**

For the purposes of this study, cultural sensitivity is an individual’s ability to recognize, value, respect, and respond to different beliefs and attitudes that are held by another person. Several different terms are found in current literature with distinct yet similar concepts, including cross-cultural, multicultural and transcultural (Machado, 2001). Other terms found include cultural relativism, cultural diversity (Baker, 1997), cultural competence (Geiger, 2001; Lavizzo-Mourey & Mackenzie, 1996; Meleis, 1999) and cultural openness (Wenger, 1999). Here, these terms will be used interchangeably with cultural sensitivity.

**Cultural sensitivity self-efficacy**

For the purposes of this study, cultural sensitivity self-efficacy is the individual’s perceived capabilities to respond to people from another cultural background in a manner that recognizes and respects the different cultural beliefs held by those other people.
**Healthcare professional student**

For the purposes of this study, a healthcare professional student is an individual in an educational program to prepare for a professional discipline in the field of health care. This may include students studying to become physicians, dentists, baccalaureate prepared registered nurses, advanced practice nurses or nurse practitioners, physical therapists, occupational therapists, physician assistants, registered dietitians, pharmacists, and graduate health educators.

**Interpersonal connections**

For the purpose of this research, interpersonal connections are defined as the continuation and maturation of a relationship or communication with persons from another country or culture.

**Professional self-efficacy**

For the purposes of this study, professional self-efficacy is defined as an individual’s perceived capabilities to perform health discipline tasks and responsibilities in an effective manner. For example, professional skills for an advanced practice nurse would include history and physical examination and diagnostic skills. A physical therapist’s skills would include planning and implementing a regimen of therapy for a patient with recent hemiparesis.

**International healthcare mission**

For the purposes of this study, an international healthcare mission provides health services by healthcare professionals from a developed country for citizens of a developing country. The duration of a short-term mission is less than one month. The
term healthcare mission expands on the care services provided, including medical, surgical, dental, pharmacotherapy, nursing and health promotion.

**Perceptual understanding**

Perceptual understanding is one of the four components of Wilson’s Impact of an International Experience Model. For the purpose of this research, it is defined as the integration of facts and broadened perspectives that develop critical thinking skills.

**Personal growth**

Personal growth is defined as the perceived change within an individual which results in increased self-confidence, a changed personal attitude or outlook on life, and/or a greater appreciation for personal resources.

**Substantive Knowledge**

Substantive knowledge is factual information that adds to an individual’s intellectual development. It is one of the four components of Wilson’s IIEM.

**Summary**

This chapter outlined the rationale for this research and need for culturally sensitive healthcare professionals. Academic experiential education is known to enhance the integration of cognitive, affective, and psychomotor learning. International learning experiences may further enrich a healthcare professional student’s personal and professional growth as well as prepare him or her for changing client and workplace demographics. In some academic settings, integration of an IHM experience is lacking, and thus a potentially rich opportunity for multicultural service learning may be missing. This research will explore healthcare professional students’ perceptions following a non-
academic IHM using methodological triangulation, Wilson’s IIEM, and Bandura’s Theory of Self-Efficacy.
Chapter 2

REVIEW OF THE LITERATURE

This chapter explores relevant current literature to support the need and methods planned for the proposed research. This review includes the influence of culture on health, Bandura’s Theory of Self-Efficacy (TSE), Wilson’s Impact of an International Experience Model (IIEM), and literature on student international experiential learning. Research using Bandura’s TSE, Wilson’s IIEM, as well as literature on the impact of an international health mission (IHM) on participating healthcare professional students is of special interest. Finally, the research method, triangulation, is presented as the appropriate technique for this study.

Literature

The influence of culture on health and health behaviors

Understanding the influence of culture on health and health behaviors is important for optimal delivery of health care, health promotion, and health education. The concept of culture can include such aspects as race, gender, age, socioeconomic class, religion, as well as ethnicity and country of origin. Culture is also influenced by politics and societal structure (Culley, 1996). All these components of culture potentially influence an
individual’s health and health behaviors. Denboba et al., (1998) noted the influence of culture on:

(1) how health, illness and disability are perceived; (2) attitudes toward healthcare providers, facilities, and how health information is communicated; (3) help seeking behaviors; (4) preferences for traditional versus non-traditional approaches to health; and (5) perceptions regarding the role of family in health care (S-47).

To acknowledge the influence of culture on health behavior and health, a healthcare professional should provide health care, promotion, and education in a manner that respects the unique practices of individuals from different cultural, immigrant, and minority groups. Compliance to a healthcare professional’s recommendations to maintain, improve, or restore health can be positively impacted when the client-provider relationship is based on cultural respect and sensitivity. Non-compliance may contribute to poor health and increased health disparities, particularly among minority persons (Denboda et al., 1998). For example, reduced health self-efficacy in immigrants in the US can be attributed to anxiety, uncertainty with the use of the English language, and lack of knowledge or prior experience with the U.S. health system (Elder, Apodaca, Parra-Medina & Zingia de Nuncio, 1998).

Self-efficacy is a reflection of one’s perceived capability to perform a particular task (Elder et al., 1998); self-efficacy is thus an important variable to target to promote positive health behaviors and reduce health disparities. To reduce health disparity among minority groups, healthcare professionals need to dispel prejudice and ignorance about other cultures (Culley, 1996) while providing an environment to maximize factors
influencing health behavior self-efficacy. Authors from various health professions agree (Baker, 1997; Berger, 1998; Denboba et al., 1998; Doswell & Erlen, 1998; Geiger, 1996, 2001; Gostin, L., 1996; Langston, 2001; Laviola & Twomey, 2002; Loudon et al., 1999; Machado, 2001; Rafuse, 1994; Vance, 1999). Additionally, planners who set goals for the U.S. Healthy People initiative recognized the need to reduce health disparities among minority groups (USDDHS, 1992).

One goal of Healthy People 2000 was to reduce health disparities in special populations, recognizing that these population groups experience an above the average incidence in disease, disabilities, and death (USDHHS, 1992). Those in this special population segment included some ethnic and racial minorities, disability and low-income groups. Healthy People 2000 objectives were set to reduce defined health disparities. The 1995 Midcourse review of these objectives noted progress in the right direction between 50 to 56% of the time, wrong direction 11 to 35% of the time, and no change occurred up to 4% of the time. Unfortunately, no tracking data was available for these objectives 10% to 39% of the time (USDHHS, 1996). From the mid-course review, it would appear that health services for these targeted groups only partially met the Healthy People 2000 goal.

Planners of Healthy People 2010 recognized the continued need for further progress to reduce health disparities among people with differences that occur because of race, education, income, sexual orientation, disability or geographic location (USDHHSa). The Healthy People 2010 planners identified the diversity of the U.S. population as both an asset and a challenge to meeting the goal of elimination of health disparities. The diversity is considered an asset when increasing numbers of healthcare
professionals are either not native-born U.S. citizens or are children of immigrants. These changes offer the benefits of cultural diversity on the health team, the potential for a client to find a healthcare professional from their same culture or country, health team members with a wider range of first languages, and a ready reference person for native U.S. team members. These same assets can also provide challenges for health teamwork, team communication, and goal attainment.

Progress towards health equality is possible through empowering people with health information, enhancing safety, and improving access to health services (USDHHSb), ideally by a culturally sensitive healthcare professional providing care for persons from another country or culture. As Denboba et al., (1998) noted, culture influences the attitudes an individual has towards healthcare providers, receipt of the health information, as well as help seeking behaviors. Therefore, to further reduce or eliminate health disparities among the above-identified special populations, healthcare professionals need to be prepared to recognize and be sensitive to the cultural factors that influence health behaviors and impede self-efficacy. Towards this preparation, healthcare professional students can learn about cultures different from their own through classroom or textbook didactic methods, clinical experiences in the US with individuals from other countries, or international experiences.

**Bandura’s Theory of Self-Efficacy**

Bandura’s Theory of Self-Efficacy (TSE) is a component to understanding an individual’s strength and direction of intention and behavior. “Perceived self-efficacy is defined as people’s beliefs about their capabilities to produce designated levels of performance that exercise influence over events that affect their lives” (Bandura, 1994,
Albert Bandura developed the concept of self-efficacy from a behavioral and social learning framework (Stajkovic & Luthans, 1998). TSE is positioned within the larger context of human agency and Social Cognitive Theory. In 1977, Bandura introduced the concept of self-efficacy, and refined the construct in 1986 (Bandura, 1986). More recently, this construct advanced to the Theory of Self-Efficacy (Bandura, 1997). Personal beliefs of efficacy are 1) the key factor of human agency, and 2) both an individual and a social construct (Bandura, 1997; Pajares, 2002). This reciprocal interplay between people and their environment is also noted in Bandura’s broader Social Cognitive Theory (Bandura, 1997). In this research, TSE offers an organized approach to explore the perceptions and potential influences behind health professional students’ self-efficacy.

Self-efficacy directs an individual’s thoughts, feelings, drive, and behavior (Bandura, 1994). For individuals with a strong sense of self-efficacy, a difficult task presents a welcome challenge, and the individual’s motivation to succeed in these situations enhances interest in the activity. An individual with high-perceived self-efficacy credits failure to deficient skills, knowledge or effort, all of which are obtainable through continued perseverance. For an individual with a low sense of self-efficacy, the reverse occurs, resulting in avoidance of tasks perceived as difficult. Failures are personal threats for the individual with low perceived self-efficacy, potentially resulting in further loss of ambition and avoidance of threats. An individual with high self-efficacy is less vulnerable to stress and depression; the opposite is the norm for individuals with low self-efficacy (Bandura, 1994).
Self-efficacy is a psychological process driven by self-reflection and should not be confused with self-esteem (Bandura, 1997). Self-efficacy is task and context specific. It is dynamic, changing over time with experiences and knowledge. Self-efficacy is reflective of an individual’s belief in their capabilities rather than related to a higher or lower self-esteem. Self-esteem is a global construct, purported to be more stable and reflective of the individual’s evaluation of self-worth and personal characteristics.

**Dimensions of self-efficacy**

Self-efficacy has three dimensions: 1) magnitude or level, 2) strength, and 3) generality (Bandura, 1997). The magnitude or level of efficacy beliefs refers to the degree of complexity of the task demanded. A simple task does not demand high performance capabilities for a successful outcome; yet, a broad range of efficacy for tasks exists. Individuals consider the level of task difficulty and their perceived capability for that function to determine if their requisite skills are present or lacking. Strength, the second dimension of self-efficacy, is the certainty an individual has in their capability to successfully complete a task at a specific level. Strength is measured by asking if an individual “can” perform a task, with the individual rating their capability on a measured scale rather than using a “yes-no” response. The third dimension of self-efficacy, generality, refers to the individual’s perceived capabilities for a specific task across similar domains, or in other situations.

Generality as a dimension of self-efficacy has not been researched as extensively as the other two dimensions. Overall, self-efficacy perceptions occur within a relatively narrow domain (Bandura, 1997); however, self-efficacy beliefs from one source may extend to other, novel tasks (Pajares, 1997). The mechanism for the third dimension,
generality, may lie in how an individual’s self-efficacy beliefs influence resilience, or adaptation to various situations (Bandura, 1994), as broad positive self-efficacy beliefs may be explored when an individual is challenged to adapt to a new situation (Scholz, Dona, Sud & Schwarzer, 2001). Four sources influence self-efficacy. These are: 1) mastery experiences, 2) vicarious models, 3) physiological and emotional states, and 4) social persuasion. Each will be discussed separately, along with examples of their impact on self-efficacy for patients and healthcare professionals.

**Mastery experiences**

An individual’s perception of personal performance is the most influential component of the four sources affecting self-efficacy (Bandura, 1997; Pajares, 2002). Reflection follows participation in an activity. Reflection includes self-evaluation. As noted earlier, experiential learning is an often-used educational method to prepare healthcare professionals. A positive or successful self-evaluation raises learner self-efficacy while a negative self-evaluation lowers student self-efficacy for the specific experience. Additional experiences and academic grades will further reinforce the student’s self-efficacy. A student with high self-efficacy will have increased efficacy beliefs, or (in the case of an unsuccessful or negative experience) will feel challenged to put forth additional effort to improve by either gaining needed skills or knowledge.

In regards to health behavior of clients, an individual who has high self-efficacy may feel challenged to master new information and skills to control the progression of a health problem. A client with low self-efficacy may lack motivation to learn new knowledge and skills to control the progression of a disease; members of the health team may consider this patient “non-compliant”. A client from another country and culture
may have additional challenges to having a positive mastery experience, such as language, cultural, gender, or other obstacles which should be considered when attempting to improve the self-efficacy for these patients.

**Vicarious models**

Vicarious models or experiences also influence self-efficacy beliefs (Bandura, 1997; Lorsbach & Jinks, 1999; Parajes, 2002). Vicarious experiences, also referred to as personal performance accomplishments (Anderson & Betz, 2001,) occur when an individual observes others performing tasks. Although not as strong a contributing influence to self-efficacy, it is an important factor for its contribution to the observer’s beliefs about his or her own capabilities. For example, a nursing student observing a peer successfully performing a new technical skill will increase her belief that she is also capable of the same or similar skill. A vicarious experience is especially strong if the observer identifies with an attribute of the model person and so sees the model’s success as diagnostic for his or her own. Observing a friend graduate from medical school may positively impact a pre-medical student’s self-efficacy beliefs, or an admired orthopedic surgeon may inspire a medical student to seek a residency in the same specialty.

From the perspective of patient education, a woman contemplating radiation therapy for breast cancer may benefit from remembering a relative or friend who successfully completed similar treatments. By recalling knowledge about the treatments and how the other woman was able to deal with side effects, the client’s belief in her own capabilities to successfully complete the treatment program may be enhanced.
Physiological and emotional states

Anxiety, emotional states or moods, and stress as well as somatic states such as energy level and physical well-being also influence self-efficacy (Bandura, 1994; Pajares, 2002). The perception and interpretation of these influencing factors play a greater role in self-efficacy than the intensity of the emotional or somatic state (Bandura, 1994; Stajkovic & Luthans, 1998). Physiological and emotional reactions to an impending task may greatly influence the person’s self-efficacy. A confident, non-stressed, “good mood” increases self-efficacy beliefs whereas nervousness, fear, and a “bad” or depressed mood is debilitating to an individual’s self-efficacy beliefs (Bandura, 1994; Stajkovic & Luthans, 1998). Interestingly, individuals with high self-efficacy may identify somatic arousal as energizing, and those with low self-efficacy may perceive it as incapacitating (Stajkovic & Luthans, 1998). A healthcare professional with high cultural self-efficacy is in a better position to recognize potentially problematic physiological and emotional states in a foreign patient than a healthcare professional who has low cultural self-efficacy. An immigrant can be at a higher risk of a low health self-efficacy if he or she feels stressed by a perceived inability to run the gauntlet of the U.S. healthcare system; this client can thus be at greater risk for illness.

Social persuasion

Social or verbal persuasion is another factor that influences self-efficacy beliefs. This aspect of self-efficacy focuses on the person’s perceived capabilities rather than on improving or raising a level of ability. Verbal persuasion serves to strengthen an individual’s beliefs that he or she possesses or can possess the requisite skills to complete a job. Social persuasion can help sustain an effort to gain mastery of a task even in spite
of difficulties. This component of self-efficacy has its greatest impact on those who think they possess the potential to reach a specific target through personal action. Individuals with low self-efficacy do not weigh a positive evaluation by others as heavily as those with high self-efficacy do, and so are not impacted as affirmatively by verbal persuasion to increase self-efficacy (Stajkovic & Luthans, 1998). Unfounded persuasion invites failure that only serves to reduce self-efficacy beliefs and discredit those offering the advice.

As noted earlier, a healthcare professional with an ability to offer culturally sensitive health care and promotion can potentially improve client understanding and compliance (Carrillo, Green & Betancourt, 1999) through verbal persuasion. From the client’s view, a healthcare professional who provides culturally sensitive care could effectively utilize verbal persuasion to reduce patient stress in the healthcare and family environment to enhance self-efficacy and motivation to attain and maintain health. TSE offers a model to understand the factors that influence individual behavior. How self-efficacy impacts learning for both givers and receivers of healthcare professional services is explored next.

**Self-efficacy in different learning environments**

A learner’s perceived self-efficacy can be an essential component of the desire to learn and adapt to new environments (Appelbaum & Hare, 1996; Hirose, Wada & Watanabe, 1999; Lorsbach & Jinks, 1999; Zimmerman, 2000). Context-specific self-efficacy can influence career choice, goal setting, and the effort expended to attain the needed performance capabilities. Self-efficacy might thus influence personal adjustments to a new environment, be it graduate education in a health profession, a new job location,
or new task in the case of a healthcare professional. The location and context of the learning environment can vary, but perceived self-efficacy can positively or negatively influence the outcomes.

Research by Anderson and Betz (2001) explored the domain of social self-efficacy and its importance for career development. The researchers had two purposes for this study: 1) develop a measure for Bandura’s four sources of influence for social self-efficacy perceptions; and 2) determine if the sources of social self-efficacy performed in a manner similar to the influences on mathematics self-efficacy found in earlier research. The research also explored the differences between the sources of social self-efficacy and students who had chosen an educational major or career path.

Using the four sources of self-efficacy, (mastery experiences, vicarious experiences, social persuasion and physiological arousal), Anderson and Betz (2001) developed an instrument to measure empirical evidence for the four influences on social self-efficacy perceptions. This research used two sample groups: 229 participants who completed a preliminary version of the social self-efficacy scale, and a second group of 250 participants who comprised the major phase of research. Male and female undergraduate students from a predominantly Caucasian (preliminary group 77%, major phase group 82%) sample participated. The average age of participants was 18.8 years old. These volunteers completed the developed Social Sources Scale and additional instruments to measure constructs related to self-efficacy: a Skills Confidence Inventory, a Self-Efficacy Scale, and a Social Anxiety subscale of the Self-Consciousness Scale, Shyness Scale, and a Beck Depression Inventory. Study participants completed the scales in the order presented here.
Anderson and Betz’s Social Sources Scale was determined to be valid, with significant and several strong relationships between the four sources and measures of social confidence, social self-efficacy social anxiety, shyness, and depression. Results of this research indicated that the sources of social self-efficacy performed in a similar manner to the sources of mathematics self-efficacy. This research also supported the influence of mastery experiences and emotional or physiological arousal as consistent sources of self-efficacy. Mastery experiences and emotional/physiological arousal and verbal or social persuasion, all direct sources, contribute to calculating social self-efficacy. Although mastery experiences are considered the strongest predictor of self-efficacy (Bandura, 1997), they were not found to be the strongest predictor in this study. Further, an overlap between mastery experience, emotional arousal and verbal persuasion was noted (Anderson & Betz, 2001).

Anderson and Betz (2001) found consistent, statistically significant differences between direct experience sources of social self-efficacy and students who chose a career path versus those who had not chosen. The “career decided students” also reported higher social self-efficacy and social confidence and had lower reported levels of shyness. The findings of this research support the influence of social skills and confidence in career development and decisional processes (Anderson & Betz, 2001).

Zimmerman (2000) and Lorsbach and Jinks (1999) explored student self-efficacy in the context of learning environments. Zimmerman defined self-efficacy as a performance-based measure of an individual’s beliefs of their capabilities. Zimmerman identified student self-efficacy as a key factor for academic endeavors influencing the amount and duration of effort expended, as well as the choice of topic for those activities.
Lorsbach and Jinks (1999) support Zimmerman, adding that the choices a student makes can influence the learning environment. Students with high self-efficacy and choice of activities will challenge themselves with more difficult tasks than students with low self-efficacy. Students with high self-efficacy will also be creative in their choice of learning strategies. Although neither Zimmerman’s nor Lorsbach and Jinks’ articles were based on original research, the conclusions support the integral belief that student self-efficacy is predictive of their enthusiasm and choices for learning.

Appelbaum and Hare (1996) explored self-efficacy as an important factor for goal setting in a human resource venue. These two authors analyzed previous research on self-efficacy in a variety of human resource management topics, including employee selection processes, training needs and methodology, performance appraisal, and absenteeism.

Self-efficacy perceptions are central to choices of, and motivation for tasks. As such, self-efficacy beliefs are key to managing human resources. As noted by Zimmerman (2000), and Lorsbach and Jinks (1999) above, individuals with higher perceptions of self-efficacy are challenged to set greater goals than individuals with diminished self-efficacy beliefs. Appelbaum and Hare concluded that self-efficacy theory could contribute to understanding employee needs, better programming to train or retrain individuals, evaluating employee responses, empowering people, and developing goal setting activities (1996).

Two research articles explored the perceived self-efficacy of medical students and performance on specific tasks related to their development as a physician (Ault, Sullivan, Chalabian, & Skinner, 2002; Mavis, 2001). Mavis (2001) looked at the relationship between student perceived self-efficacy and performance on the Objective Structure
Clinical Examination (OSCE). The OSCE is a method of assessing the clinical knowledge and skills of a healthcare professional student using standardized patients with scripted history and physical symptoms, with an observer evaluating the student’s clinical performance. Study variables were OSCE performance, self-efficacy, anxiety, preparedness, hours of study, knowledge base, and clinical skills.

In Mavis’ research, 113 second-year medical students completed a survey about their perceived strengths and weaknesses before taking the OSCE (2001). The survey measured four attributes related to the OSCE: self-efficacy, anxiety, study time, and preparedness. As not all participants included an identifier, 82 surveys comprised the researchable data set. The mean age of the sample was 25.9 years, and 44% were females. OSCE performance and self-efficacy ratings had a low and non-significant correlation, yet self-efficacy ratings were related to anxiety and preparedness. Once the participating students were divided into high and low self-efficacy groups, differences were found.

Mavis (2001) found that of students with high-perceived self-efficacy, 71% scored above the mean on OSCE performance; of students with low perceived self-efficacy, 51% scored above the mean, a statistically significant difference. Students with higher self-efficacy were more likely to perform better on the OSCE than students with lower self-efficacy. In addition, the ranges of OSCE performance ratings were wider for low self-efficacy students than for high self-efficacy students; knowledge directly impacted performance, and there was a strong relationship between knowledge and the performance of clinical skills. Anxiety was associated with knowledge and clinical skills: those participants with less anxiety about the OSCE performed well on their
biomedical science coursework. Interestingly, strong performance of clinical skills was related with more anxiety surrounding the OSCE. In this instance, Mavis felt that students with better clinical skills might have more insight into their limitations. For highly anxious students, a negative relationship surfaced with self-efficacy expectations for the OSCE.

Ault et al., (2002) also researched the impact of self-efficacy on clinical skill performance. The purpose of their study was to explore the effectiveness of a skill specific workshop on the student’s ability to perform the same skill. One hundred twenty-four third year medical students were randomly divided into two groups in this research. The experimental group attended a three-module breast assessment workshop, and the control group learned breast assessment skills in an ambulatory “traditional” teaching setting. Both participating groups received the same didactic lecture from surgical faculty. Both groups completed a one-item scale rating their satisfaction of the educational value of their experience. A subset of student participants also completed a survey before and after the experience to elicit information on perceived self-efficacy related to several components of breast examination skills.

Ault et al., (2002) used the OSCE component on breast specific items and student satisfaction scores for data to explore the difference between groups on breast assessment skills. An analysis of the variance between pre- and post- experience self-efficacy related to breast assessment indicated greater skills self-confidence in the experimental than the control group. The experimental students’ performance in areas of examination skills, sensitivity, specificity of breast exam, and satisfaction were significantly higher than the control group. In addition, on completion of the clerkship, students in the experimental
group had a higher confidence in breast skills than the control group. The skills workshop modules provided students with direct experiences with breast examination and skills for diagnosis.

Ault et al., (2002) concluded from their research that the focused, direct experiences from a breast skills workshop was more effective than traditional methods of instruction to increase the confidence and self-efficacy of medical students for the clinical breast examination and diagnosis skills. The researchers felt that these findings were important beyond the obvious benefit to the patient and student, as self-efficacy beliefs impact motivation. The authors recognized that students with a higher sense of self-efficacy tend to choose tasks that are more challenging, expend a greater and more sustained effort to attain a goal, have less anxiety and more problem-solving skills than students with lower perceived self-efficacy (2002). These findings support the use of experiential or mastery learning to gain self-efficacy.

Carson, Gillham, Kirk, Redy and Battles (2002), studied the results of a program to enhance self-efficacy and patient care from medical students enrolled in a cardiovascular nutrition education program. Medical students comprised both control (n=40) and experimental (n=156) groups in this study. A cardiovascular nutrition education program was integrated into a four-week ambulatory care rotation for the experimental group. The educational program contained the following elements: a) resource materials such as pocket reference cards, 2) web-based cases, and 3) a 1-hour class on cardiovascular nutrition. The intent of the program was to increase medical student self-efficacy through role modeling and enhanced knowledge. The researchers framed the intervention using Social Learning Theory and Bandura’s TSE. Physicians
and dietitians served as role models. The cases which were discussed in the intervention class encouraged the students to synthesize didactic information and patients from clinical rotations with computer-generated clients. Through the computer-generated cases, the students made patient care decisions, selected treatment options, and answered multiple-choice questions. To satisfactorily finish the ambulatory care rotation, the students completed a patient assessment and plan from the computer-generated program. This research ran for ten months for a total number of ten research dyads.

For their research, Carson et al., (2002) sought to determine if there was a change in student self-efficacy in the area of cardiovascular nutrition knowledge and patient care because of the nutrition intervention classes. All study participants completed a questionnaire before and after the ambulatory rotation that identified student knowledge, attitude, self-efficacy, and demographics. The survey administration occurred on the first and last days of the student rotation. Carson et al., (2002) found significant increases in knowledge and self-efficacy in the experimental group of students. When compared to the control group using paired \( t \) tests, the researchers found a significant knowledge increase for the experimental group, but not for the control group. The increased self-efficacy for the two groups was notable: the experimental group increased in perceived self-efficacy by 36% and the control group increased 16%. This study is of particular note in regards to student self-efficacy and nutrition care practice. Researchers found that only the students with high self-efficacy addressed nutrition with patients, data that was confirmed by student self-report as well as chart audits. Carson et al. felt the correlation of higher self-efficacy with patient nutrition education occurred because of increased nutrition knowledge, role modeling, and opportunities to apply the knowledge in a clinic.
setting. These findings support TSE mastery, vicarious and social persuasion sources of self-efficacy, as well as validate the experimental approach used to enhance student self-efficacy and improve patient care in the area of cardiovascular nutrition education.

**Wilson’s Impact of an International Experience Model**

Angene Wilson explored the impact of an international experience on several different groups of people, including high school and college students, teachers, and returned Peace Corps volunteers. From her research, she designed the Impact of an International Experience Model (IIEM) to depict the meaning of an international experience for individuals. Articles and a book, *The Meaning of International Experience for Schools* (1993a) by Wilson document components of this model (1982, 1985, 1986, 1993b, 1994, 1998). Wilson’s focus is on the meaning of international and cross-cultural experiences for educators, students in education, and the uses or value of these experiences in classroom settings. The necessity for cross-cultural experiential learning for teachers is justified because:

1) Teaching itself is a cross-cultural encounter.

2) Cross-cultural experience aids self-development

3) Cross-culturally effective persons have characteristics desirable for effective teachers.

4) Cross-cultural experience leads to global perspectives necessary for global education to happen in schools (Wilson, 1982, p.186).

The same justifications support the necessity for cross-cultural, preferably international, experiences for healthcare professional students to improve their ability to provide appropriate, effective health care and promotion. The research on an IHM
discussed here focused on the meaning of an international experience on the personal and professional lives of healthcare professional students. Wilson’s IIEM provided the framework for this research. A diagram of this model is found in Figure 1.
Figure 1. Wilson’s Impact of an International Experience model (Wilson, A. with permission).
Wilson’s IIEM is comprised of two categories, each with two components. One category is that of “Gaining a Global Perspective”, which includes two components: substantive knowledge and perceptual understanding. The second category, “Developing Self and Relationships”, includes two components: personal growth and interpersonal connections.

**Gaining a Global Perspective: Substantive knowledge**

Within the Global Perspective category, substantive knowledge is factual information that adds to an individual’s intellectual development. Learning that may occur for healthcare professional students while on an international experience could include such substantive, or specific knowledge as learning medical terminology in a new language, gaining knowledge about the culture, health beliefs, and health system in another country, or learning about diseases not typically seen in the US. For a healthcare professional student, substantive knowledge gained from an international experience could improve their effectiveness as a health professional, educator, and care giver by offering new opportunities and practical application for health education, didactic teaching, technical skills, and theory.

**Gaining a Global Perspective: Perceptual understanding**

Perceptual understanding, the second component of the Global Perspective category, is the integration of facts and broadened perspectives that develop critical thinking skills. For a healthcare professional student, this could increase the ability to look at a broader, more in-depth picture of a problem. Research with nursing students who had an international experience supports the perceptual understanding component of
Wilson’s model (Frisch, 1990; Haloburdo & Thompson, 1998; Zorn, Ponick & Peck, 1995). The development of perceptual understanding enhances one’s ability to see others as individuals, increases open-mindedness, and reduces stereotyping. Development of perceptual understanding in healthcare professional students through an IHM experience broadens understanding of the impact of a client’s environment, beliefs, and control over behavior on that individual’s health. This learning could then enhance the healthcare professional student’s ability to individualize health care and augment health promotion skills.

**Development of Self and Relationships: Personal growth**

The second category, “Development of self and relationships” has two components: personal growth and interpersonal connections. Within the personal growth component, Wilson (1993a) acknowledges some overlap with substantive knowledge and perceptual understanding. This occurs because the individual confronts self and personal beliefs in the process of gaining a global perspective. In addition to verification of personal values, other examples of personal growth may include increased self-confidence, a changed personal attitude or outlook on life, and a greater appreciation for personal resources. Many of the changes and growth in personal development may also overlap with and facilitate interpersonal relationships.

**Development of self and relationships: Interpersonal connections**

The second component of “Development of self and relationships”, interpersonal connections, is the continuation and maturation of a relationship or communication with persons from another country or culture. This component also involves an improved ability to make interpersonal connections through increased flexibility, respect and
sensitivity for others, warmth and openness to cultural differences. Wilson does note an “overlap among categories in the model: interpersonal connections require the perceptual understanding of the global perspective” (1993a, p.26).

**Student international experiential learning**

Educators of healthcare professional students in disciplines such as medicine, nursing, and pharmacy have written about the current need and increasing importance of offering learning experiences to enhance cultural knowledge and sensitivity in healthcare professionals (Baker, 1997; Berger, 1998; Denboba et al., 1998; Doswell & Erlen, 1998; Geiger, 1996, 2001; Gostin, 1996; Langston, 2001; Laviola & Twomey, 2002; Loudon et al., 1999; Machado, 2001; Rafuse, 1994; Vance, 1999). A metanalysis by Loudon et al. (1999) searched literature available on medical school courses that covered cultural diversity, concluding that limited information was available, and recommending that multicultural education programs be a part of the core curriculum. Whereas there appears to be a consensus about the importance and need to incorporate multiculturalism in healthcare professionals’ education, how to provide optimal cultural learning experiences is unknown.

A search for published articles related to this research uncovered data about international experiential learning for students in education and nursing. No articles described the impact or learning by students in non-nursing health professions from international experiences. No published research literature described the impact of an IHM on participating students. Exploring the literature for international experiences
regardless of the student’s discipline, there appears to be agreement on the value for those who participate, as the following authors and researchers show.

**International experiences for Education students**

A literature search yielded a recent study that explored the international experiences of education students. Willard-Holt (2001) studied the impact of a one-week teaching experience on 22 elementary education student teachers. The experience was in a bilingual school in Mexico. This research triangulated data from field notes, researcher observations, student journals, and informal interviews. A 10-item, open response questionnaire administered before and 4 months after the Mexican experience provided additional qualitative data. Follow-up interviews performed one-year post-trip explored the lasting impact of the Mexican experience on the participating students.

From Willard-Holt’s (2001) study, several positive impacts were noted. Participating elementary education student teachers recognized the importance of a multicultural education. They noted the importance of preserving, accepting, and encouraging cultural and social differences in their own classroom students. Participants said they recognized broader perspectives because of their international experience, and intended to share these viewpoints with their own students on return to the US. Following the international experience, teaching characteristics changed: the participating students felt better prepared to work with their own students who were from another country or culture. They felt an increased sensitivity to the special needs of others, especially noting the need to promote understanding through clear communication with minority students. Overall, they felt that personal flexibility, patience and professionalism had grown because of the experience in Mexico.
Positive personal changes also occurred in the students who participated in Willard-Holt’s study (2001). These students noted an enhanced appreciation of U.S. resources and mentioned the general lack of gratitude by most U.S. citizens for the many assets of their country. The international participants noted more tolerance for others and felt their self-confidence was improved. Two possible negative personal changes were noted: overconfidence in one returning student teacher, and the lack of ability to identify possible classroom uses of Mexican experiences by another participant.

Overall, Willard-Holt’s (2001) research supported all four components of Wilson’s IIEM. The majority of participating students integrated the content learned about Mexico into their future teaching. This supported the participant’s growth in substantive knowledge of another culture. Participants demonstrated growth in perceptual knowledge by dispelling the stereotypical preconceptions of another country or culture, and by applying this knowledge. The participant’s reports of enhanced self-confidence and improved skills in empathy, tolerance, flexibility, and patience supports personal growth, the third aspect of Wilson’s IIEM. The U.S. students who continued communicating with the Mexican students demonstrated the final aspect of Wilson’s model, interpersonal connections.

**International experiences for Nursing students**

Nine published articles provided information about international experiences for nursing students. The international experiences described were components of nursing courses. The location of experiences ranged from developed countries (England, Northern Ireland, and Finland) to developing countries (Nicaragua, Dominican Republic, Barbados, Mexico, Jamaica, and Ghana West Africa). Two schools offered international
nursing student exchange programs (Duffy, Harju, Huittinen & Trayner, 1999; Frisch, 1990). All but one of the nine articles described included clinical experiences, with a variety of level of student involvement in working with patients. Some participating students worked in hospitals, clinics, or community settings with local or home faculty supervision, while other students had observation experiences.

The methodology to determine the impact of international experiences on participating nursing students varied widely. Researchers used quantitative measures such as the Measurement of Epistemological Reflection to explore cognitive development (Frisch, 1990; Zorn, Ponick & Peck, 1995). Students’ perceptions were explored through written reflections, course evaluations, and follow-up surveys by Hadwiger and Hadwiger (1999), Rosenkoetter et al. (1995), and Bond and Jones (1994) respectively. Authors of four studies explored the impact of an international experience using a variety of qualitative methods, including grounded theory (Haloburdo & Thompson, 1998), interviews (Kollar & Ailinger, 2002), and phenomenological methods (Holstege, 2000; Pross, 2000). Finally, triangulation using the Cultural Self-Efficacy Scale (CSES) and the combination of field notes, participant observation and student journals was the mixed-method utilized by St. Clair and McKenry (1999). Regardless of the methodology used, findings were similar.

In two different studies, the Measurement of Epistemological Reflection measured changes in cognitive development in students who had participated in an international experience with non-participating students in the same nursing program. Frisch’s (1990) study used the Measurement of Epistemological Reflection survey in a class of senior nursing students. Twenty-three participants completed the survey twice in
one semester, initially during week two, next during week 15. In the interim, six of the students in this cohort participated in an international experience in Mexico. Frisch found that the students with the Mexican experience were 3.5 times more likely to show statistically significant cognitive development.

Zorn et al., (1995) used methodology and sampling similar to Frisch’s (1990) with a group of senior nursing students who participated in an international experience in England. Out of a class of 95 senior nursing students, eight participated in the semester abroad program. These eight students and 20 randomly selected classmates completed the Measurement of Epistemological Reflection at two different times during the same semester. In this study, the international experience participants were 3.125 times more likely to have statistically significant cognitive development as measured by the MER. It is interesting to note the cognitive development between international participant and non-participant students, a finding that supports the substantive knowledge component in Wilson’s model and potentially reflect the influence of a mastery experience on student self-efficacy. These quantitative studies, however, do not reflect the students’ thoughts or feelings regarding how or why this occurred.

Bond and Jones (1994), Hadwiger and Hadwiger (1999), Rosenkoetter et al., (1995) used students’ reflections, course evaluations, and follow-up surveys to explore the impact of an international experience on course participants. Nineteen nursing students participated in Bond and Jones’ research. These students were from first (n=10) and second year (n=9) levels of an undergraduate nursing program. During the first two weeks of the course, all participants received advance information about Mexican culture, cultural variables, Mexican-Americans in the U.S. and assigned readings. Each student
identified an area of interest and selected a course project. The cultural immersion component of this course occurred in Mexico during weeks three and four. During these two immersion weeks, the participating students had tours of Mexican hospitals, but did not provide hands-on care. The course faculty felt strongly that the students focus should be on learning the Mexican culture, and chose not to add nursing care responsibilities. The final week of the course allowed for student presentation of projects and course evaluations. Evaluations conducted on completion of the course were repeated one-year later. Overall, the participating students were positive about their experiences. These students felt they had gained empathy and respect for others. The students’ reflections revealed enhanced insights into personal beliefs and values, learning about self and appreciating things that are more essential. These findings support Wilson’s IIEM categories of personal growth and interpersonal connections.

Hadwiger and Hadwiger (1999) described a course designed for a transcultural experience in the Philippines. Eight senior nursing students from a mid-western U.S. baccalaureate program traveled to the Philippines for this course. These students received advance preparation by orientation classes covering Philippine culture, travel and safety. In spite of this preparation, some students experienced culture shock, noting noise, smog, high heat and humidity. During four weeks in the Philippines, the students participated in a variety of experiences, including: clinical work, community health experiences in a leprosarium and on home visits, acute and critical care rotations. On return to the U.S., participating students noted an increased acceptance of people from another culture, the realization of feeling foreign and in a minority, the benefit of learning about culture from a hands-on experience, and an appreciation of necessities. These findings support
Wilson’s components of perceptual understanding, personal growth, and interpersonal connections as well as the value of the Philippine trip as a mastery experience that could influence the students’ cultural self-efficacy.

Rosenkoetter et al., (1993) described a collaborative academic project between universities in North Carolina and Barbados. The focus for the developed nursing courses was to learn the culture and health care system in Barbados. Faculty developing the course identified the need for students to expand their critical thinking skills while acquiring skills and learning how to care for people from other cultures. The length of time the students spent in Barbados was approximately four weeks. Student evaluations of their experiences were positive; they strongly recommended continuing the program. Students comments included: “This has been one of the best, if not the best experience of my life. “It’s been an experience of a lifetime I will never forget because of the people and the country in general. My whole outlook on nursing has changed, as well as my outlook on life” (Rosenkoetter et al., 1995, p. 532). These comments support the impact of an international experience on personal and perceptual components of a student’s growth as well as its potential value to enhance self-efficacy.

Researchers of two published qualitative studies explored students’ thoughts and feelings about an international experience (Haloburdo & Thompson, 1998; Kollar & Ailinger, 2002). Haloburdo and Thompson (1998) used grounded theory methods to compare international learning experiences of 14 undergraduate nursing students who went to developed versus developing countries. Haloburdo and Thompson found more similar than dissimilar experiences between the groups. Both groups of students noted personal and professional growth as well as the importance of recording or processing
their experiences. The students reported feeling they had gained an increased sensitivity to culture, reduced their stereotyping of others, were not as judgmental, had reduced ethnocentrism and increased self-confidence from the international experience. The students who went to a developing country added another dimension to this: the “reconnection with caring as the essence of nursing” (p. 19). The researchers felt this reconnection stemmed from providing care in a developing country, where empathy, connecting with clients, and using nursing interventions were more readily available methods than typical tools of western technology. Without modern U.S. technology, the students learned to use “self” to provide care.

Haloburdo and Thompson (1998) noted that participating students gained knowledge about the influences of social and political factors on health care from the international experience. This learning provided empirical knowledge regarding population-based health problems and offered comparison between the U.S. and other country’s health systems. The researchers found that an international experience supported the value of experiential learning to enhance didactic teaching, thus supporting the belief in a mastery experience and physiological states as sources for self-efficacy. Further, this would support the value of an international experience to gain substantive knowledge and perceptual understanding.

Kollar and Ailinger (2002) explored the long-term impact of an international experience on graduate nurses by interviewing 12 nursing alumni about their student experiences working for two weeks in a developing country. Undergraduate and graduate nursing students participated on an international nursing experience in Nicaragua, an opportunity offered on a yearly basis through their nursing program. Students provided
hands-on care in a barrio community setting over a two-week course. Graduate nurse practitioner students worked in clinics as well as with undergraduate students in the barrio. Advanced practice nursing students also worked in the barrio, but added local hospital experiences too. In the six years the Nicaraguan experience was offered, students commented on the experience as “a remarkable experience for them both personally and professionally” (p. 29). Interviewees gave examples of how their Nicaraguan experience affected their personal and professional lives. In this research, Wilson’s IIEM provided guidance for organizing the data from the interviews.

Kollar and Ailinger (2002) found support for Wilson's IIEM as well as evidence of the long lasting effects of an international experience on these participants, particularly noting increased self-confidence and autonomy. In the category of substantive knowledge, the interviewed graduates reported: 1) a broader understanding the needs of clients from another culture, 2) a changed perception of public health patients, and 3) increased cultural awareness and comfort with international patients. In the category of perceptual understanding, study participants recalled applying classroom concepts more readily because of the Nicaraguan experiences, and feeling enhanced by the knowledge of Spanish language, medical terminology and Hispanic culture. In the category of personal growth, the interviewees noted career changes because of the experience, some to work more directly with Hispanics, poor, or in a health department. The fourth category in Wilson’s IIEM, interpersonal connections was supported by 1) appreciating U.S. resources, 2) increased respect for health professionals in developing countries, especially in relation to the quality of care provided with few resources, 3) awareness of the differences between countries, and 4) appreciating and loving life as it is.
One master’s thesis and one doctoral dissertation used qualitative methods to explore the impact of international experiences in nursing (Holstege, 2000; Pross, 2000). The thesis by Holstege used phenomenological methodology to explore the lived experiences of students who provided health care in Nicaragua three months after the October 1998 hurricane. This type of experience most closely approximates the IHM experience in the research reported here. Four graduate nursing students participated in this research. The researcher was also a participant on the mission trip to Nicaragua. This unpublished thesis researched the impact of an international health mission on participating students.

Holstege (2000) uncovered four focal meanings associated with the Nicaraguan mission experience, presented as the following sequential stages: 1) culture shock, 2) adjustments, 3) lessons learned, and 4) memories. The focal meaning ‘culture shock’ included themes such as the roles within the Nicaraguan families, male dominance, surreal living conditions and the impact of the environment, economy and government on health care and health needs. The themes in this focal meaning are similar to Wilson’s category “Gaining a Global Perspective” (1993). The second focal meaning, “adjustments” included themes such as feeling unprepared for the trip, living an emotional rollercoaster, and adapting to new living conditions and group dynamics. The third focal meaning uncovered titled “lessons learned”, included the themes of personal stamina, gratitude, and provision of medical treatments with limited resources. The second and third focal meanings have themes that support findings by Haloburdo and Thompson (1998) regarding personal and professional growth and the influence of mastery experiences and physiological states on self-efficacy. Holstege’s findings also
support Wilson’s IIEM category of personal growth. The fourth and final focal meaning, “memories”, included the themes titled friendships, generosity and long-term effects. The themes in this last focal meaning offer support to Wilson’s IIEM category “Developing Self and Relationships”, as well as Willard-Holt’s (2001) study showing personal growth from the international experience.

Baccalaureate nursing students’ international education experiences provided the basis for a doctoral dissertation by Pross (2000). The research participants’ length of stay, nursing experiences, and travel destinations were varied. The participants’ nursing responsibilities on the sojourns ranged from no nursing experiences to observation to hands-on care. Not all experiences were related to nursing courses. Pross used mail surveys with open-ended questions (n=16) and interviews (n=11) to collect data for this qualitative, phenomenological study. Four essential themes emerged from the students’ experiences: 1) preparing, 2) adjusting, 3) caring, and 4) transforming.

The theme “preparing” began before the students left their home country. The students shared feelings of excitement and wanting adventure. School responsibilities, finances, and friends influenced the students’ planning. Students voiced concerns about “matching personal values and beliefs with experiences” (Pross, 2000, p.113). Participants in this research prepared for their international experience by studying the language and culture of the destination country. For some participants, advance preparation facilitated adjustments during the international experience. In contrast, two students did not have adequate preparation time; these two attributed their frustration and difficulties with adjustments in the destination country to inadequate preparation. This lack of preparation time more closely corresponds to a volunteer experience on an
international mission than to a service or experiential learning where participants receive advance information and knowledge.

Pross’ (2000) second theme, “adjusting” began when the excitement of the destination country and culture diminished. Shock, coping and appreciation were the labels for the essential structures of this theme. Shock was the descriptor for the students’ images of extreme poverty and the associated living conditions. Although students tried to prepare for the environment of a developing country, viewing photos did not prepare them for the vast poverty they witnessed. Students’ coping “was also a part of adjusting described as reassuring self of inner strength” (p.120). This inner strength could correspond with increased confidence noted by other researchers (Haloburdo & Thompson, 1998; Kollar & Ailinger, 2002), as well as increased self-efficacy. For some, coping meant not sitting with U.S. peers who were unable to accept the host country environment, as those students were “embarrassing”. The third experiential structure of “adjusting” labeled “appreciation” resulted from the participant’s adaptation to the destination country and culture following comparison of “self, country, and culture” (p.122) to the destination country. This appreciation for U.S. resources is consistent with findings of Willard-Holt’s (2001) study with education students, and Hadwiger and Hadwiger’s (1999) study with nursing students.

The third theme ‘caring’ involved awakening enhanced feelings of caring for and relating to others on a human level. Here, caring was non-judgmental, requiring nothing in return (Pross, 2000). These findings support the personal and interpersonal changes noted in Wilson’s IIEM category “Developing Self and Relationships” The theme of caring is consistent with the findings by Haloburdo and Thompson (1998), and St. Clair
and McKenry (1999), and could potentially support physiological states such as emotions as influences on self-efficacy.

Culture, value and ethics influenced the participants’ perceptions of the international experience, but in turn, the experience challenged the students to re-appraise themselves and their worldviews. The students spoke about the strength of the human spirit in the people who lived in poverty. Observations of the vastness of poverty initiated change in the students. Pross’ (2000) fourth theme, “transformation” is consistent with the personal growth discussed by Willard-Holt (2001), Haloburdo and Thompson (1998), Holstege (2000), and Rosenkoetter et al., (1995). This theme also supports Wilson’s IIEM category of personal growth while overlapping with gains in perceptual understanding and development of a global perspective.

St. Clair and McKenry’s (1999) research used triangulation methodology to explore the relationship between an international experience, cultural competence and cultural self-efficacy in nursing students. The qualitative methods of data collection used included student journals written daily during their international experience, participant observations, and field notes. The Cultural Self-Efficacy Scale (CSES) was administered to quantitatively measure the cultural self-efficacy of students at three intervals during this study; first at the beginning of the senior year prior to the international experience, next at the beginning of the spring semester, and finally just before graduation. Senior nursing students who participated in the international experience and non-international participants completed the CSES.

The results of St. Clair and McKenry’s (1999) triangulation study support the previously discussed research, providing a more complete picture of the relationship
between cultural competence and cultural self-efficacy in nursing students who had an international experience. The quantitative CSES scores improved significantly for all students in this study. It is notable that there were significantly higher scores among students who participated in the international nursing experience. Qualitative data supported students’ increased CSES scores, supporting the influence of a mastery experience on cultural self-efficacy. Students wrote about the impact of the experience on their beliefs, perspectives, and values. The experience increased the student’s knowledge of self and sensitivity for minorities helped them to recognize their ethnocentrism, prejudices, and assumptions. Students’ journal entries also showed growth in professional skills, improvement in collegial relationships and interdisciplinary teamwork. This finding supported the researcher’s use of triangulation to support and expand on the quantitative results from the same study.

St. Clair and McKenry (1999) concluded that the international experience “made the difference in the students’ ability to sustain the transformational process in their practice long after their return from foreign countries” (p.233). Past students who participated in this international program continued to contact faculty mentors, reporting that their experiences in a foreign country continued to make them “better listeners, more patient, more giving, more flexible, and overall better nurses” (p.234).

**Methodological triangulation as a research method**

Literature on research methodology has had a longstanding discussion on the use of both qualitative and quantitative methods within one study. These discussions stem from the disparate philosophies behind the use of each method. Recent authors have
offered several arguments pertinent to this debate (Erzberger & Prein, 1997; Morse, 1991; Sale, Lohfeld & Brazil, 2002; Shih, 1998; Sim & Sharp, 1998; Thurmond, 2001). These arguments will help clarify the rationale for the use of methodological triangulation in this study.

Quantitative methods stem from positivism (Sale et al., 2002). The goal of quantitative methods is to reduce the understanding of a phenomenon to measurable data where relationships between variables can be analyzed and explained. Quantitative methods may be used to explain hypotheses that were generated from qualitative studies (Erzberger & Prein, 1997).

Conversely, qualitative methods stem from interpretivism; the goal is to gain understanding of the meanings and processes (Sale et al., 2002). Qualitative methods such as interviews uncover the personal meaning or interpretation of an experience. Small samples of participants provide data for in-depth exploration into the understanding of a particular phenomenon.

Methodological triangulation has two forms, 1) within-method and 2) between-method (Sim & Sharp, 1998). Within-method triangulation uses two or more techniques to collect data. Either qualitative or quantitative methods are used, but not both in the same study. Between-method triangulation also uses two or more approaches to collect data; however, at least one qualitative and one quantitative technique are used in the same study (Sim & Sharp, 1998). The use of between-method triangulation offers challenges as well as benefits.

One challenge that should be considered before beginning any study is that of establishing an appropriate method to answer the research question(s). Quantitative
methods may help answer questions generated from qualitative research. An example would be the development of a questionnaire or survey based on data from interviews or a focus group mailed to a second sample of research participants, a method known as sequential triangulation (Morse, 1991). The data generated from the survey could provide an objective measure, offering a type of weight or strength of an aspect of a phenomenon under study. “When a single research method is inadequate, triangulation is used to ensure that the most comprehensive approach is taken to solve a research problem” (Morse, 1991, p.120).

Methodological triangulation may serve to construct a more complete picture by contributing different views or dimensions of reality (Erzberger & Prein, 1997; Shih, 1998). Complementarity, a benefit offered by mixed-methods research, offers a multidimensional image of reality. Complementarity is not an “empirical relationship” but a merging of “empirical findings together with the help of theoretical assumptions that were developed before the start of the investigation” (Erzberger & Prein, 1997, p. 144-145). An example could be the use of a theory-based survey and an interview of participants in the same sample, a technique called simultaneous triangulation (Morse, 1991). Should these empirical findings not complement each other, a divergent view may surface. These opposing findings could then offer new direction for future study, and challenge previous hypotheses.

McKenna and Rizzo (1999) used triangulation to study the impact of service learning on participating students’ personal, academic, and civic development. This research was conducted over three semesters with students enrolled in 17 university courses from six different disciplines. Each participating student could opt to select a
service-learning project as one of several course assignment choices. During the course, the students who chose the service learning option wrote journals about the service work experiences, and completed questionnaires at the end of the course semester. These questionnaires explored the students’ academic perceptions, the personal impact of the service experience, and attitudes toward pre-service learning expectations compared to post-experience perceptions. McKenna and Rizzo’s study used a variety of methods, including a survey with objective items, five-point Likert-type responses, and open-ended questions that required sharing specific service work experiences. Qualitative data from journals and responses to open ended questions and quantitative data from objective item and Likert-type responses provided the methodological triangulation for this research.

Results of McKenna and Rizzo’s (1999) methodological triangulation research provided a broad view of the students’ perceptions of the impact of their service learning experiences. Qualitative data provided a measure of how a service-learning experience influenced the students’ academic motivation and understanding of course concepts. Regardless of the service learning placement site, there were no significant differences between student experience location and either motivation in the course or understanding course concepts. Qualitative data provided by journal entries illustrated how the students integrated service experiences with course concepts. Some of these journal entries included subjective thoughts and feelings, data that were not revealed by the objective measures in quantitative methods.

McKenna and Rizzo (1999) found an unanticipated impact of service work for participating students: learning about self. Both qualitative and quantitative methods noted this effect. In questionnaires, students rated their expected and actual learning
about others and self. Most students had initial expectations to learn more about others than about self. Although this was correct, the students also rated their actual learning about themselves as higher than initially anticipated. Student journal entries provided additional, more specific qualitative data that supported the quantitative findings. Students wrote about learning about personal strengths, weaknesses, and adaptability with challenging situations and heterogeneous groups.

McKenna and Rizzo (1999) found complementarity between qualitative and quantitative methods to study the civic impact of the service learning on participating students. Close to 30% of the students volunteered beyond their required 20 hours. The students who perceived a greater contribution at their service location were more likely to intend to perform community service in the future. Qualitative data from journals highlighted the students’ increased awareness of community need for and importance of volunteers.

The between-method, sequential methodological triangulation research by McKenna and Rizzo (1999) discussed above and the study preparing culturally competent practitioners by St. Clair and McKenry (1999) discussed earlier emphasizes the potential strengths of a combined approach. In addition, Willard-Holt’s (2001) research using within method sequential triangulation demonstrated the use of multiple types of qualitative data to reinforce the understanding of an international experience for student teachers. For this research, methodological triangulation was used to explore the impact of an international healthcare mission on participating healthcare professional students. The quantitative component used a questionnaire to quantify student perceptions of personal, professional, and cultural learning and growth. Interviews of
several IHM volunteer students were conducted to gain a more complete understanding of the meaning of their international experience.

Summary

Culture influences health and health care, facts that are recognized by healthcare professionals, academicians and Healthy People planners. Healthy People planners set goals to reduce health disparity in special populations, those in ethnic and racial minorities. To meet these directives, healthcare professionals must increasingly be prepared to recognize many factors that influence health behaviors and to develop cultural sensitivity.

A review of literature revealed some research into the impact of international academic nursing experiences, but none by non-nursing health professional disciplines. This research is timely and needed for the following reasons: 1) to understand the impact of an IHM on healthcare professional students, and 2) to consider the value of an international experience for participating students on the practice of their health discipline in a changing demographic patient population and work environment. Wilson’s IIEM was presented as the appropriate framework for this inquiry, with Bandura’s TSE as the theory to explore the student’s perception of the personal and professional impact of an IHM on self-efficacy. Between-method triangulation was the research technique used to optimize understanding the potentially multi-dimensional aspects of the students’ perceptions of the IHM experience.
Chapter 3

METHODOLOGY

This chapter describes the methods used to conduct the study, including 1) between methods triangulation, 2) qualitative method of inquiry, 3) quantitative method of inquiry, 3) pre-testing of the quantitative instrument, 4) subject selection and protection, 5) data collection procedures and 6) data analysis. The mechanism used to develop survey questions is presented and findings from the pilot study of the PIHMQ instrument discussed.

Study Design

Between-methods triangulation

Methodological triangulation offers the best approach to provide a comprehensive answer to the present research question: What is the impact of a healthcare professional student’s participation on an international health care mission? Using a between-methods approach to the inquiry, qualitative data allow for understanding the experience of an IHM from a healthcare professional student’s perspective, while quantitative data provide measurable results to explore the type and strength of perceived changes. Either form of data could confirm previous findings about the impact of an international experience with education and nursing students by other researchers.
It has been argued that methodological triangulation, or mixed-method studies are inherently contradictory as the model for each position is different (Sandelowski, 2000). For this reason, research which uses both a qualitative and quantitative research tradition may not be considered a true combination of methods, but instead an “explicit framing of inquiry” (Sandelowski, 2000, p247). The framing of this research was done using data from qualitative interviews to understand the experience and quantitative questionnaire responses to potentially verify the qualitative information, previous research on international experiences, and to measure the student’s perceived level of change on different aspects of the IHM experience. Together, these methods enhanced the understanding of these healthcare professional students’ experiences.

Hermeneutic or interpretive phenomenology was the particular type of qualitative research used in this research. In interpretive phenomenology, the researcher becomes the instrument for data collection through interviews. Heidegger’s philosophy for hermeneutic phenomenology was appropriate for this type study, as the researcher’s experiences from many IHMs must be recognized for their potential influence on her interpretation of the student’s meanings. For the quantitative component of this research, Wilson’s IIEM was used to frame the quantitative data collection instrument, a self-completed questionnaire. Bandura’s TSE guided questionnaire development to elicit data on perceived changes in participant capabilities and self-efficacy that may have occurred for the healthcare professional student related to mission experiences. Each of these components of this mixed, between-method within-subject research will be discussed further.
Phenomenology is both a qualitative method and methodology. As a method of qualitative research (Creswell, 2003; Speziale & Carpenter, 2003), it is characterized as having descriptive and interpretive components (Van der Zalm & Bergum, 2000). “Phenomenology accepts experience as it exists in the individual’s consciousness” (Morse & Field, 1995, p.22), and so provides the description of the events. Interpretive components of phenomenology arise from the researcher who “identifies the ‘essence’ of human experiences concerning a phenomenon, as described by participants in a study” (Creswell, 2003, p.15). Interview data provided insight into the students’ IHM experiences through the participant’s description of significant events and the perceived impact of those events on the interviewed student.

The philosophy that directs the type of phenomenology used should also guide the method for researcher data collection and analysis. Interpretative or hermeneutic phenomenology that is rooted in Heidegger’s philosophy has the emphasis on understanding the phenomena of interest while recognizing the experiences the researcher brings to the study. A Heideggerian philosophy stresses that “experiences can only be understood in terms of one’s background… and the social context of the experience” (Draucker, 1999, p.361). In Heideggerian hermeneutical phenomenology, the researcher’s presuppositions are not bracketed out to suspend, but to recognize, as the researcher’s background aids understanding the phenomenon studied (Draucker, 1999). Ideally, a researcher should self-disclose information in order to increase awareness of any possible subjectivity that could potentially taint data. For this reason, the following self-disclosure is provided.
Researcher disclosure

As a Registered Nurse for 31 years and an advanced practice nurse for eight years, I have worked in a variety of hospital and academic settings in the US. Academic settings have included the following: 1) teaching in a 3-year, hospital-based diploma nursing program; 2) teaching in a department of nursing at a 4-year baccalaureate Catholic college; 3) teaching in a school of nursing at a 4-year state school that offered a baccalaureate (BSN), RN to BSN completion program, and graduate programs in nursing leading to an MSN. These teaching experiences included classroom and clinical instruction. In these academic positions, I did not have nursing students in a course with a clinical component on an IHM. Hospital settings included adult acute care (coronary care, orthopedics, emergency center, surgical and medical units), as well as general transitional and rehabilitation units. Currently I work as a staff nurse in a large urban hospital.

Regardless of the U.S. setting, I worked with health care team members who were prepared to provide safe care in a timely fashion in a clean environment where working equipment was readily available. All patients who presented to a hospital received appropriate health care treatment regardless of their ability to pay for hospital or human resources, a component of the U.S. health care system required by law. I have experienced frustration caring for some individuals who want their preventable health problems “cured” with medication or surgery while they continued to make life-style choices that had negative health consequences. To add to the frustration of caring for these same individuals, they complained about any delays in treatment or out-of-pocket expenses they incurred.
Experiences as a volunteer and/or director on missions to developing countries over the past eight years offer stark contrast to practice in the US. In developing countries, patients waited for hours in line to receive free IHM care because they were unable to pay for the treatment supplies needed for care from the community hospital or clinic. In Peru, poor clients who needed emergency treatment could not receive care if they were unable to pay for supplies prior to their use. For example, a Peruvian with a laceration but insufficient funds for complete treatment would have to decide between being sutured, receiving a local anesthetic while being sutured, or receiving an antibiotic to prevent a wound infection. In other developing countries, the scenario was similar. Because of the extreme poverty in Central and South American countries, patients who were seen on IHMs had extensive scarring and advanced disease states related to their inability to get care. It was not unusual to operate on adults to repair cleft lip deformities, a condition normally treated in the US during infancy.

Working conditions at participating IHM hospitals were basic and relatively safe for workers and patients alike, but inconsistent maintenance and supply problems added frequent challenges to providing care. A working bathroom, running water, and consistent electrical power were not taken for granted. In mountain villages, hospitals did not exist. Clinics were rare and sparsely staffed and supplied. Healthcare, when available, required lengthy, rigorous travel.

Coursework in health education exposed me to theories of health behavior, information about international health problems and programs, and the impact of environment on health. All these experiences expanded my understanding of health and healthcare in other countries beyond most healthcare professionals without similar
experiences. Experiences such as observing the devastating impact of minimal infrastructure and health care resources in developing countries, lack of sanitation and safe water, food insecurity and lack of knowledge or other means to promote health no doubt influenced my perceptions of the U.S. health system.

Experiences in developing countries and coursework have influenced how I provide care. I feel I am more receptive to trying to understand how an individual’s lifestyle, beliefs, environment, financial and educational resources might influence his or her health. I am more acutely aware of the influence of environment and cultural beliefs on health than before IHM experiences. I have learned to appreciate the growing cultural diversity among U.S. healthcare professionals. I am a strong patient advocate, yet also advocate personal responsibility and cost effective health promotion. While these presuppositions are recognized, they should not impede the interview or objective analysis of qualitative data in this research.

**Instrument Development**

*Qualitative component*

Phenomenological research asks “the question of what something is ‘really’ like. What is the nature of this lived experience?” (van Manen, 1990, p.42). The following interview questions were utilized to elicit each participant’s perceptions of the nature of the mission experiences without leading, or biasing the interviewee’s thoughts.

1. What was the experience of an international health mission, or medical mission like for you?

2. What do you feel you bring back from your mission experiences?
3. Is there any particular happening from or related to the mission trip that was particularity meaningful for you? Will you please share the experience, as well as why and how it affected you?

**Quantitative component**

An ex-post facto self-evaluation questionnaire was designed to elicit the students’ perceptions of the IHM experiences. This survey is titled the Perceptions of an International Healthcare Mission Questionnaire (PIHMQ). This survey consists of 65 survey questions with a response range of zero to five, 13 demographic questions, and two write-in, short answer questions. The complete survey instrument may be found in Appendix A. The outcome variables measured in the questionnaire are the students’ perceptions of mastery experiences, cognitive and affective processes that could influence professional and cultural self-efficacy, and the four categories of Wilson’s model, which are substantive knowledge, perceptual understanding, personal growth, and interpersonal connections.

The Perceptions of an International Healthcare Mission Questionnaire (PIHMQ) was designed using Wilson’s IIEM as a framework while incorporating components of Bandura’s TSE such as mastery experiences and processes influencing self-efficacy. The survey questions utilized the qualitative themes found in previous research on student international experiences, using these themes much like data from a focus group. The survey explored Wilson’s four categories and experiences potentially influencing self-efficacy of healthcare professional students while on an IHM. Using a Likert-type response scale allowed the participants to rate their perceptions of the mission experiences and the possible impact on the participant’s self-efficacy and growth.
**Wilson’s IIEM Operationalized**

The four components of Wilson’s IIEM, Substantive Knowledge, Perceptual Understanding, Personal Growth and Interpersonal Connections, were used as outcome variables resulting from an IHM. The findings from previously cited research prompted development of questions in each of Wilson’s four categories. The questions were also designed to explore the experiences within Wilson’s categories in a manner appropriate for a healthcare professional student on an IHM. For example, in the Substantive Knowledge category, Willard-Holt (2001), Haloburdo and Thompson (1998), Pross (2000), St. Clair and McKenry (1999) found themes of “learning about another culture or country”. Question 1a asked, “From participating on the IHM, how much new knowledge did you learn about a different country?” Participant responses range from 1 (none) to 5 (tremendous). Each of the four categories of the IIEM and findings from previous research are similarly adapted for use in the questionnaire. The categories and supporting themes to operationalize the category item are found in Table 1.
Table 1
Themes from previous international research that support Wilson’s IIEEM

<table>
<thead>
<tr>
<th>IIEEM Category</th>
<th>Supporting themes</th>
<th>Researcher(s)</th>
<th>Question(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Substantive Knowledge</td>
<td>learn about another culture or country</td>
<td>Willard-Holt, Haloburdo &amp; Thompson; St. Clair &amp; McKenry</td>
<td>1a-e</td>
</tr>
<tr>
<td></td>
<td>enhanced cognitive development</td>
<td>Frisch; Zorn, Ponick &amp; Peck</td>
<td>2 a, b, d, f-k</td>
</tr>
<tr>
<td>Perceptual Understanding</td>
<td>appreciation for U.S. resources</td>
<td>Willard-Holt; Haloburdo &amp; Thompson; Holstege; Hadwiger &amp; Hadwiger</td>
<td>3a, br, c, dr, e, f</td>
</tr>
<tr>
<td></td>
<td>increased professionalism</td>
<td>Willard-Holt</td>
<td>5a-g</td>
</tr>
<tr>
<td></td>
<td>broadened perspectives</td>
<td>Willard-Holt; St. Clair &amp; McKenry</td>
<td>2c, e, l, 6a-g</td>
</tr>
<tr>
<td></td>
<td>dispel stereotypical preconceptions</td>
<td>Willard-Holt; Haloburdo &amp; Thompson</td>
<td>6 h</td>
</tr>
<tr>
<td>Personal Growth</td>
<td>increased sensitivity/empathy</td>
<td>Willard-Holt; Bond &amp; Jones; Hadwiger &amp; Hadwiger; Rosenkoetter, Reynolds, Cummings &amp; Zakutney; Haloburdo &amp; Thompson; St. Clair &amp; McKenry</td>
<td>7a-c, 8d</td>
</tr>
<tr>
<td></td>
<td>increased patience/tolerance</td>
<td>Willard-Holt; St. Clair &amp; McKenry</td>
<td>7d-e</td>
</tr>
<tr>
<td></td>
<td>personal flexibility</td>
<td>Willard-Holt; St. Clair &amp; McKenry; Holstege</td>
<td>7f</td>
</tr>
<tr>
<td></td>
<td>improved self-confidence</td>
<td>Willard-Holt; Haloburdo &amp; Thompson; Kollar &amp; Ailinger; Pross</td>
<td>4a-f</td>
</tr>
<tr>
<td></td>
<td>enhanced insight into personal beliefs and values; learning about self</td>
<td>Bond &amp; Jones; Hadwiger &amp; Hadwiger; Rosenkoetter, Reynolds, Cummings &amp; Zakutney; Pross; St. Clair &amp; McKenry</td>
<td>8a, b</td>
</tr>
<tr>
<td></td>
<td>re-connecting with “caring” in professional practice</td>
<td>Haloburdo &amp; Thompson; Pross</td>
<td>8c, d</td>
</tr>
<tr>
<td>Interpersonal Connections</td>
<td>better prepared to work with others</td>
<td>Willard-Holt; St. Clair &amp; McKenry</td>
<td>5h-k, 6i</td>
</tr>
<tr>
<td></td>
<td>continued/maintained communication with persons from another culture/country</td>
<td>Willard-Holt</td>
<td></td>
</tr>
<tr>
<td></td>
<td>gained respect for others</td>
<td>Bond &amp; Jones; Hadwiger &amp; Hadwiger; Rosenkoetter, Reynolds, Cummings &amp; Zakutney</td>
<td>8e-j</td>
</tr>
</tbody>
</table>
Bandura’s TSE operationalized

Bandura’s TSE also served as a foundation for item development on the questionnaire. Likert-type responses were used to facilitate responses and data analysis. Table 2 itemizes the questions regarding mastery experiences in the context of a healthcare professional and cultural sensitivity.

<table>
<thead>
<tr>
<th>TSE Component</th>
<th>Context</th>
<th>Questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mastery experiences</td>
<td>Professional practice</td>
<td></td>
</tr>
<tr>
<td></td>
<td>patient assessment abilities</td>
<td>5 a, b</td>
</tr>
<tr>
<td></td>
<td>planning care abilities</td>
<td>5 c</td>
</tr>
<tr>
<td></td>
<td>care implementation abilities</td>
<td>5 d, e</td>
</tr>
<tr>
<td></td>
<td>interpersonal skills</td>
<td>4 a,b,e</td>
</tr>
<tr>
<td>Cultural encounters</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>work with other culture people</td>
<td>4 c, d, f; 5h-k</td>
</tr>
</tbody>
</table>

Table 2

Questionnaire items exploring student perceptions of IHM Mastery experiences
Bandura recognized that self-efficacy can be regulated through cognitive,
motivational, affective, and selection processes. Two of these processes are found within
the questionnaire in items that elicit information about categories of the IIEM. Table 3
itemizes the questions in the categories of the IIEM where there is overlap between
Wilson’s model and Bandura’s cognitive and affective sources of influence on self-
efficacy.

Pre-testing the PIHMQ

Establishing Validity

The PIHMQ was the quantitative instrument used to elicit data on the impact of
the mission experiences on participating healthcare professional students. The
questionnaire was reviewed for content validity by a panel of healthcare professionals
experienced in IHM. The panel was comprised of seven experts: four physicians, one
nurse, and two pharmacists with over 40 total IHM experiences.

Following the review of the questionnaire by the expert panel for content validity,
recommendations for editorial changes were reviewed, accepted, and changes made in
the questionnaire. These changes were primarily editorial, altering wording of question
stems or distracters for improved clarity. One question grouping was changed to more
clearly elicit data on perceived changes in specific professional skills that may be related
to IHM experiences.

Dr. Angene Wilson, author of the IIEM, evaluated the PIHMQ for construct
validity for its measure of the four categories of her model. Dr. Wilson’s
recommendations were reviewed, then discussed via email correspondence. Three items
were added to the questionnaire to elicit information on the participant’s recognition of
Table 3

Questionnaire items of potential processes influencing Self-efficacy.

<table>
<thead>
<tr>
<th>Source of influence</th>
<th>Context of influence</th>
<th>Question(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cognitive processes</td>
<td>knowledge of country</td>
<td>1a</td>
</tr>
<tr>
<td></td>
<td>knowledge of new health system</td>
<td>1b</td>
</tr>
<tr>
<td></td>
<td>knowledge of different culture</td>
<td>1c, 6a</td>
</tr>
<tr>
<td></td>
<td>knowledge of health beliefs</td>
<td>1d</td>
</tr>
<tr>
<td></td>
<td>knowledge of healthcare professional in new country</td>
<td>1e</td>
</tr>
<tr>
<td></td>
<td>patient information</td>
<td>2a</td>
</tr>
<tr>
<td></td>
<td>patient environment</td>
<td>2b</td>
</tr>
<tr>
<td></td>
<td>patient economic status</td>
<td>2c</td>
</tr>
<tr>
<td></td>
<td>patient support system</td>
<td>2d</td>
</tr>
<tr>
<td></td>
<td>patient alternative resources</td>
<td>2e</td>
</tr>
<tr>
<td></td>
<td>using learned assessment skills</td>
<td>2f</td>
</tr>
<tr>
<td></td>
<td>new uses for learned skills</td>
<td>2g</td>
</tr>
<tr>
<td></td>
<td>other disciplines’ role on team</td>
<td>2h</td>
</tr>
<tr>
<td></td>
<td>personal role on healthcare team</td>
<td>2i</td>
</tr>
<tr>
<td></td>
<td>unusual diseases</td>
<td>2j</td>
</tr>
<tr>
<td></td>
<td>learning alternative treatments</td>
<td>2k</td>
</tr>
<tr>
<td></td>
<td>considering alternatives</td>
<td>2l</td>
</tr>
<tr>
<td></td>
<td>influences on health</td>
<td>6c-g</td>
</tr>
<tr>
<td>Affective processes</td>
<td>empathy</td>
<td>7a</td>
</tr>
<tr>
<td></td>
<td>sensitivity re: different culture</td>
<td>7b</td>
</tr>
<tr>
<td></td>
<td>sensitive re: different country</td>
<td>7c</td>
</tr>
<tr>
<td></td>
<td>patience with non-US citizens</td>
<td>7d</td>
</tr>
<tr>
<td></td>
<td>tolerance to other beliefs</td>
<td>7e</td>
</tr>
<tr>
<td></td>
<td>adaptability in different situations</td>
<td>7f</td>
</tr>
<tr>
<td></td>
<td>learn about self</td>
<td>8a,b</td>
</tr>
<tr>
<td></td>
<td>connect with “caring”</td>
<td>8c</td>
</tr>
<tr>
<td></td>
<td>gain respect</td>
<td>8e-j</td>
</tr>
</tbody>
</table>
the need to act as a cultural mediator, or an individual who would intervene to assist people from another culture, or to help people from different cultures understand one another. Dr. Wilson confirmed that the questionnaire has construct validity for the Impact of an International Experience model (Personal communication, A. Wilson, April 27, 2003). Dr. Timothy Jordan evaluated the construct validity of the PIHMQ for its measures of self-efficacy and overall construction.

Next, the PIHMQ was piloted with former student mission volunteers. The purpose of the pilot study was to test the internal consistency of the items on the survey and explore the stability-reliability of the questionnaire.

**Demographics of the Pilot Sample**

The PIHMQ was piloted using volunteers who worked on a mission with the researcher while they were healthcare professional students, some of whom were former students in courses taught by the researcher. The pilot study participants were asked to complete the PIHMQ twice, at an approximate 7-10 day interval. Because of student scheduling and mailing, not all responses were received within this time period. Of the 14 students who were available to complete the test-retest, one retest was unsuccessfully returned by email and was not able to be recovered, resulting in 13 test-retest pilot study participants.

The demographics of the pilot participants are found in Table 4. Nearly 93% of these mission participants completed their IHM over a year prior to completing the PIHMQ test-retest. Of the nursing participants, all worked in nursing at the time of the pilot study. All former medical students were in residency programs in a variety of specialties and locations in the US at the time of their participation.
<table>
<thead>
<tr>
<th>Variable</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Healthcare discipline</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nursing Graduate</td>
<td>3</td>
<td>23.1</td>
</tr>
<tr>
<td>Nursing Undergraduate</td>
<td>5</td>
<td>38.5</td>
</tr>
<tr>
<td>Medicine</td>
<td>5</td>
<td>38.5</td>
</tr>
<tr>
<td>Age range</td>
<td></td>
<td></td>
</tr>
<tr>
<td>20-25</td>
<td>6</td>
<td>46.2</td>
</tr>
<tr>
<td>26-30</td>
<td>4</td>
<td>30.8</td>
</tr>
<tr>
<td>46-50</td>
<td>1</td>
<td>7.7</td>
</tr>
<tr>
<td>&gt;50</td>
<td>2</td>
<td>15.4</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>2</td>
<td>15.4</td>
</tr>
<tr>
<td>Female</td>
<td>11</td>
<td>84.6</td>
</tr>
<tr>
<td>Ethnic Group</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Asian</td>
<td>2</td>
<td>15.4</td>
</tr>
<tr>
<td>White</td>
<td>11</td>
<td>84.5</td>
</tr>
<tr>
<td>First generation immigrant</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>1</td>
<td>7.7</td>
</tr>
<tr>
<td>No</td>
<td>12</td>
<td>92.3</td>
</tr>
<tr>
<td>Religious affiliation</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Catholic</td>
<td>2</td>
<td>15.4</td>
</tr>
<tr>
<td>Protestant</td>
<td>9</td>
<td>75.0</td>
</tr>
<tr>
<td>Other</td>
<td>1</td>
<td>7.7</td>
</tr>
<tr>
<td>Missing data</td>
<td>1</td>
<td>7.7</td>
</tr>
<tr>
<td>Languages spoken fluently</td>
<td></td>
<td></td>
</tr>
<tr>
<td>English only</td>
<td>10</td>
<td>76.9</td>
</tr>
<tr>
<td>Spanish and English</td>
<td>3</td>
<td>23.1</td>
</tr>
<tr>
<td>International travel prior to IHM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>11</td>
<td>84.6</td>
</tr>
<tr>
<td>No</td>
<td>2</td>
<td>15.4</td>
</tr>
<tr>
<td>Number of IHMs</td>
<td></td>
<td></td>
</tr>
<tr>
<td>One</td>
<td>9</td>
<td>62.9</td>
</tr>
<tr>
<td>Two</td>
<td>3</td>
<td>23.1</td>
</tr>
<tr>
<td>Three</td>
<td>1</td>
<td>7.7</td>
</tr>
<tr>
<td>Time since last IHM</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10-12 months ago</td>
<td>1</td>
<td>7.7</td>
</tr>
<tr>
<td>&gt; 12 months ago</td>
<td>12</td>
<td>92.3</td>
</tr>
</tbody>
</table>

*N= 13.
Testing for Reliability

A Cronbach’s alpha was the statistical test used to evaluate internal consistency. A Cronbach’s alpha is a numerical coefficient of consistency or reliability. The higher the alpha coefficient, the more reliable the scale. The lower level of 0.70 is considered acceptable for grouped items evaluated as a scale (www2.chass.ncsu/garson/pa765/standard.htm, downloaded 11/21/03). This statistical test was done on the pilot (n = 13) and dissertation (n = 32) samples.

A Cronbach’s alpha was done on each category of Wilson’s model to estimate internal consistency of the items within the subscales titled Substantive Knowledge, Perceptual Understanding, Personal Growth (re-named Growing as an Individual), and Interpersonal Connections. This test for internal consistency resulted in scores ranging from 0.7923 to 0.9287 for the pilot sample, and 0.8589 to 0.9478 for the dissertation sample. Using 0.70 as the lowest acceptable Cronbach’s alpha for the scales on the PIHMQ, all subscales testing the categories of Wilson’s IIE categories would be considered internally consistent or reliable.

A Cronbach’s alpha was also done on three scales exploring factors that influence self-efficacy: 1) mastery experiences, 2) cognitive processes, and 3) affective processes. The range of Cronbach’s alphas for these three scales was .8974 to .9287 on the pilot sample and .9137 to .9646 on the dissertation research sample. Again using 0.70 as the lowest acceptable Cronbach’s alpha, all subscales for influences on self-efficacy as measured on the PIHMQ would be considered internally consistent or reliable. The complete results of the testing for the internal consistency of each subscale of the PIHMQ will follow discussion of testing for reliability stability.
It should be noted that Cronbach’s alphas should be considered a rough estimate of the internal consistency reliability for some of these subscales. This is because the anchor labels for the combined items in the Personal Growth and Interpersonal Consistency subscales differ slightly, and the anchors for the items in question grouping number three have notably different meanings. This is also true for the Affective subscale of questions regarding influences on Self-Efficacy. This concern was drawn to the attention of two statistical experts, who both agreed that the resulting Cronbach’s alpha results should be considered rough but useable estimates for the present study.

To test the stability reliability of the PIHMQ, a Spearman rho correlation coefficient was computed on each question. Spearman’s rho was the statistical test of choice since the item responses were at an ordinal level. Questions 3b and 3d were reverse scored in order to enable all positive statistical findings, and thereby to facilitate statistical analysis of the data. Munro and Page (1993) gave the following categories for the strength of the relationship between items: 0.00-0.25 little; 0.26-0.49 low; 0.50-0.69 moderate; 0.70-0.89 high, and 0.90-1.00 very high.

A Spearman’s rho was conducted on each item of the PIHMQ to explore the stability reliability of the questions. The range of Spearman’s rho for the subscales on the pilot sample was .6489 to .7292. The results of the complete testing for internal consistency and reliability stability are found on Table 5.
Table 5
Reliability Analysis of Survey Instrument Subscales

<table>
<thead>
<tr>
<th>Subscale</th>
<th>Questions</th>
<th>Internal Consistency</th>
<th>Test-Retest Stability</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Pilot n=13, Research n = 32</td>
<td>Coefficient</td>
</tr>
<tr>
<td>Substantive Knowledge</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>New country/culture</td>
<td>1a-e</td>
<td>.7984</td>
<td>.8166</td>
</tr>
<tr>
<td>Enhanced cognitive development</td>
<td>2a,b,d,f-k</td>
<td>.8468</td>
<td>.8074</td>
</tr>
<tr>
<td>Subscale</td>
<td></td>
<td>.8092</td>
<td>.8589</td>
</tr>
<tr>
<td>Perceptual Understanding</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Appreciation US resources</td>
<td>3a,br,c,dr,e,f</td>
<td>.7923</td>
<td>.8340</td>
</tr>
<tr>
<td>Professional behavior</td>
<td>5a-g</td>
<td>.9259</td>
<td>.8641</td>
</tr>
<tr>
<td>Broadened perspectives</td>
<td>2c,e,l;6a-h</td>
<td>.8542</td>
<td>.8553</td>
</tr>
<tr>
<td>Subscale</td>
<td></td>
<td>.8858</td>
<td>.8650</td>
</tr>
<tr>
<td>Personal Growth/ Growing as an Individual</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Increased sensitivity/empathy</td>
<td>7a-c</td>
<td>.9176</td>
<td>.9303</td>
</tr>
<tr>
<td>Increased patience/tolerance</td>
<td>7d,e</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Personal flexibility</td>
<td>7f</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Improved self-confidence</td>
<td>4a-f</td>
<td>.7814</td>
<td>.8585</td>
</tr>
<tr>
<td>Insight into beliefs</td>
<td>8a,b</td>
<td></td>
<td></td>
</tr>
<tr>
<td>“Connecting” in practice</td>
<td>8c,d</td>
<td>.8434</td>
<td>.8234</td>
</tr>
<tr>
<td>Subscale</td>
<td></td>
<td>.7923</td>
<td>.9478</td>
</tr>
<tr>
<td>Interpersonal Connections</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Working with others</td>
<td>5h-k, 6I</td>
<td>.7186</td>
<td>.7622</td>
</tr>
<tr>
<td>Gain respect for others</td>
<td>8e-j</td>
<td>.8984</td>
<td>.9267</td>
</tr>
<tr>
<td>Subscale</td>
<td></td>
<td>.8967</td>
<td>.9250</td>
</tr>
<tr>
<td>Mastery experiences</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Professional practice</td>
<td>5a-e, 4a,b,e</td>
<td>.9128</td>
<td>.8368</td>
</tr>
<tr>
<td>Cultural encounters</td>
<td>4c,d,f, 5 h-k</td>
<td>.8022</td>
<td>.9009</td>
</tr>
<tr>
<td>Subscale</td>
<td></td>
<td>.9159</td>
<td>.9137</td>
</tr>
<tr>
<td>Cognitive processes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subscale</td>
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<td>.9150</td>
</tr>
<tr>
<td>Affective processes</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Subscale</td>
<td>7a-f, 8a-c, e-j</td>
<td>.9287</td>
<td>.9646</td>
</tr>
</tbody>
</table>
Subjects

Human Subjects Review

Prior to data collection, the investigator received approval from Human Subjects Research Committee at the University of Toledo. The letter of approval may be found in Appendix B. There were no risks to participation in this study. Students were not under any coercion to participate in the research. Participants were free to stop their participation in the research project at any time without penalty. Neither the students interviewed nor the students who completed the questionnaires had names included in the data. Although the interviewed students received a follow-up contact with the researcher for the purpose of reviewing and validating the transcription of the interview, the identifying paperwork associating the interviewed student with the transcription was coded to ensure confidentiality. In addition, the contact information was secured in a locked cabinet in the researcher’s office, unavailable to anyone other than the researcher.

Subject selection

Purposive sampling was used to elicit participants for this research. Purposive sampling is also referred to by the terms purposeful, judgmental, or criterion-based selection (Maxwell, 1996; Polit & Hungler, 1999; Speziale & Carpenter, 2003). By any of these terms, purposive sampling serves to deliberately select informants who can provide information based on first-hand experience of the phenomenon being studied. All study participants experienced an international healthcare mission, and as such, form the sample for within-subject statistical evaluations.

Students from regional, mid-western multidisciplinary schools of health professionals were initially asked to participate in this research. These students were of
particular interest for several reasons. First, they have a variety of choices for
international health missions because of a wealth of local mission groups. The previously
identified local mission groups operate missions independently but collaborate to support
each other’s need for equipment, supplies and professional expertise through the Toledo
Area Mission Groups (TAMG). Through the TAMG consortium, a schedule of
upcoming mission opportunities is circulated to promote interest and openings for
healthcare professional student participation. Healthcare professionals and students
interested in IHM opportunities may elect to contact the local mission group organizer to
volunteer, thus, students and healthcare professionals form a multidisciplinary mission
team from a variety of unrelated sources. When insufficient numbers of survey research
participants could be obtained from the local area, additional study volunteers were
solicited through the local mission groups that had chapters in other areas in the US.
From these sources, sufficient additional research participants were found who met the
inclusion criteria. A total of 32 students participated in this research.

Although faculty members of local healthcare professional schools were notified
of TAMG mission opportunities, there were no formal or contractual connections
between school administrators, mission organizers, TAMG, and volunteering students.
Through informal connections, the students volunteering for the IHM experiences usually
take personal or vacation time to pursue the mission service independent of their
academic responsibilities. Because of this informal association, these missions were not
academically directed, thus, were neither experiential nor service learning. The mission
participants personally selected the mission group with which to work, the country of
IHM destination, length and schedule of time volunteered and personally defined their
mission goals. The research participants were student volunteers for an IHM and as such are a self-selected subset of healthcare professional students.

A third reason for requesting participants through the variety of mission groups was the adequacy of a new source of data information. As mentioned previously, several different healthcare professional schools are located in a small geographic area; therefore, there are varieties of healthcare professional discipline students available as potential research participants. Previous research on international experiences explored the impact on education and nursing students in an academic setting. No published research was found that studied the impact of an international experience on students in other health profession disciplines. One study investigated the impact of an international health mission with nursing student participants. This source of information, an unpublished master’s thesis, yielded data from four participants on the impact of non-academic participation on an IHM.

A fourth reason to request volunteers from the mission groups was the rich source of students with IHM experience. Appropriateness of participants for qualitative research is a principle of sampling discussed by Creswell (1998), Maxwell (1996), Morse and Field (1995), and Speziale and Carpenter (2003). In purposive sampling, desired participants have lived the experience under study. The opposite, random selection of participants, is not an effective method to gather qualitative data about a specific event, as informants may not have experience with the topic under scrutiny. Morse and Field (1995) note that in qualitative research, random selection creates a potential source for invalidity. Experienced mission participants were solicited in this research to elicit personal thoughts, feelings, and reflections about their IHM experiences. The criteria for
the purposive sampling here were intended to maximize the use of informants with personal experiences on an IHM that have not been previously influenced by academic pre-experience preparation or post-experience reflection.

To find a sufficient number of participants, volunteers were solicited from area healthcare professional schools and Toledo Area Mission Groups as well as from other US chapters of mission groups. For example, student mission volunteers from the New York/New Jersey and Southern California chapters of the Peruvian-American Medical Society who worked on missions with Toledo PAMS volunteers were notified of the research via email to all student PAMS mission participants on the Ayacucho and Abancay, Peru missions.

**Inclusion criteria**

Participants in this research:

1. Volunteered for an international health mission.
2. Participated on an international health mission.
3. Spoke, read and wrote English

**Exclusion criteria**

1. Worked on a mission with the researcher
2. Received academic preparation or reflection specifically for the mission experience.
3. Participated on an IHM as a healthcare professional course or academic requirement.
Sample size

Between method triangulation poses challenges to determining adequate sample size. This type of triangulation uses both qualitative and quantitative research methods, and thus challenges the determination of a sufficient sample size, or “n”. Certainly, data obtained must be of sufficient quantity and quality to ensure accurate interpretation of the findings. Qualitative research generally uses a small numbers of participants. Whereas some researchers say there are no specific rules for the number of participants in qualitative studies (Polit & Hungler, 1999, Wiersma, 2000), others indicate that predetermining the number needed is not possible (Speziale & Carpenter, 2003).

Guidelines for quantitative studies usually use a larger “n” than qualitative studies. In quantitative studies, estimates of sample size include considerations such as a power analysis, availability of representative participants, time, desired effect size, and the number of variables in the questionnaire. In a mixed qualitative-quantitative study, Speziale and Carpenter (2003) note the importance of meeting the appropriate method-related standards to determine an adequate sample size of appropriate participants. In consideration of the above-mentioned guidelines to determine a sufficient sample size, the following determinations were made.

For the qualitative component of this research, an n of eight to ten was desired. This number range was determined after considering the feasibility and time constraints of one researcher for data collection and analysis, and was consistent with Polit and Hungler (1999), who note that the sample size in phenomenological studies is generally fewer than ten. In qualitative research, sampling should elicit data that are pertinent to the purpose and rationale of the study (Polit & Hungler, 1999). In this research,
purposeful sampling was used. Potential representative informants from a list of local group IHM volunteers were asked to participate in an interview. Interviews of sufficient volunteers meeting the inclusion criteria occurred until the data was saturated, i.e., no new themes surfaced. Saturation occurred after six interviews, but two additional interviews were done with students from the same discipline. After eight interviews were completed, an opportunity arose to interview a student from a different healthcare discipline. That interview was also conducted, but when no new themes surfaced, the data collection from interviews were considered complete.

For the quantitative component of this research, an n of 30 was optimal, and a minimum of 20 desired. Obtaining this number followed consideration of the homogeneity of the sample population: all are healthcare professional students who volunteered for an IHM as an independent, personal experience not related to academic requirements of their healthcare professional school. Small samples are possible when, 1) the population is homogeneous in relation to the variables under study, and 2) when independent and dependent variables relate strongly (Polit & Hungler, 1999).

Larger sample sizes are a consideration in a study with many independent variables. Polit and Hungler (1999) recommend 20 to 30 participants for each independent variable, an unlikely number to attain with such a specialized target sample in this research. This research was focused on one primary independent variable: participation on an IHM. If larger numbers of participants were possible, additional independent variables such as past history of mission participation, age, and the number of past missions could also be considered. Other variables with the potential to impact the perception of a mission could be explored, such as gender, ethnicity, religious affiliation,
previous travel experiences, and knowledge and use of foreign languages. These variables were collected as demographic information. Certainly, the known population of students with IHM experience in the target healthcare professional student group was insufficient to sustain an n large enough for all the potential variables just noted.

Data Collection Procedures

Qualitative component

Initially, volunteers were recruited from local healthcare professional schools, healthcare professional student organizations, and Toledo Area Mission Groups (TAMG). Notices requesting research informants were placed on school bulletin boards and announcements were made in student organization offices and meetings, through organization group emailing, and at TAMG meetings. Students were informed of the purpose of the research and their voluntary participation was requested for the study. This information was provided in oral and written form, with time allowed for questions. The cover letters for the interview and questionnaire participants that describe the study, mechanisms for participant protection, risks and benefits are found in Appendices C and D.

The first research volunteers who met the inclusion criteria were contacted by phone or email to select a meeting data, time and location for an audiotaped interview. The face-to-face, taped interview offered the benefits of hearing vocal inflections and observing non-verbal cues to the participant’s emotions. These benefits offer potentially rich data that can further validate the spoken words. Additionally, questions may be asked to clarify information shared.
Nine research volunteers were interviewed twice and then asked to complete the PIHMQ using days, times and locations that were mutually agreeable for the participant and the researcher. Van Manen (1990) noted two phases of a phenomenological interview. Here, the first phase gathered data to search for the meaning of the IHM experience as told by a healthcare professional student. The second phase reflected on the meaning with the participants (van Manen, 1990). These two phases required two interviews with each research volunteer. The second contact occurred after the audiotape of the first interview was transcribed, read, and re-read to absorb the essence of the experiences shared. The goal of the second interview was to allow the participant to review, confirm, clarify or enhance a written summary of the initial interview information and interpretation. With two exceptions, the second interview occurred a few weeks after the first interview, a time interval that allowed for additional reflection about the meaning of the mission experience for the student. The exceptions were delays in obtaining a second contact. One student moved out of the area and was unavailable for a face-to face second interview; the second exception involved the student leaving for a 2-month international mission. In these two circumstances, second interviews were conducted using email contacts and mail validation of the first interview. Through the processes used, all the interviewees became collaborators in the research project (van Manen, 1990). Only after the second interview did the research participant complete the questionnaire titled, Perceptions of an International Healthcare Mission (PIHMQ). Written responses to two of the survey questions provided additional qualitative data.

Interview questions in this mixed-method research carefully focused on the IHM phenomenon and did not lead the participant into any categories of Wilson’s IIEM or
Bandura’s TSE. For this reason, the students who volunteered to participate in this research completed both an initial and follow-up interview prior to completing the written questionnaire. This timing reduced the possibility of questionnaire influence on the interview participants’ responses. Interviewed participants were encouraged to explore and share the meaning of their experiences related to participation on an IHM. As the research participants did not have the IHM as either course-related experiential or service learning, no academically directed reflection occurred for these healthcare professional students. Under these conditions, the healthcare professional students’ reflections and perceptions were not externally influenced.

**Quantitative component**

Following completion of the qualitative interviews, additional students were recruited to complete the PIHMQ. An attempt was made to distribute the a research cover letter and PIHMQ to a gathering of potential participants at a medical student group meeting, but this only yielded two additional students who fit the inclusion criteria. Distributing the research cover letter at the student meeting did allow for further dissemination of information about the study to a larger group of students. Lists of past student mission participants were obtained from student mission organizations and local mission groups. Initially, qualifying students from the largest groups of potential volunteers were solicited, with additional groups polled when an insufficient number of participants were obtained from the local healthcare professional schools. Additional potential students were solicited from interviewed students and other chapters of local mission groups until participant resources were exhausted.
As a result of these methods to solicit research participants, the majority of PIHMQ participants received the cover letters and survey through the mail, completed the survey independently, and returned the survey by mail to the researcher. The PIHMQ took approximately 20 minutes for the student to complete. All questionnaire and demographic responses were confidential, and the participants were asked to not make any personally identifying marks on the paperwork. Completion of the questionnaires implied consent for participation in the research.

Analysis of Data

Qualitative component

Phenomenology is a process of understanding human experience that does not currently have one accepted approach for the method. For this research, van Manen’s (1990) six interacting activities of methodological interpretation was used to understand the phenomenon under study: 1) delving into the phenomenon of interest; (2) exploring lived experience instead of conceptualizing the experience; (3) pondering the vital themes characterizing the experience; (4) recounting the lived-experience of another through writing and re-writing; (5) preserving a strong focus on the phenomenon of study; and (6) balancing the narrow focus of the phenomenon with consideration of the whole.

Qualitative data analysis began with the interviews. As noted earlier in the six activities of van Manen’s method to understand the phenomenon of interest, the first step is to delve into the topic. This interactive process allowed not only for questioning from the interviewer, but from the interviewee. This enhanced the understanding of the questions asked as well as validated the responses in a collaborative gathering of the data.
surrounding the experience of an IHM. The search for meaning of the phenomenon of an IHM included a second contact with the interviewee for the purpose of a “member check”, when the researcher’s interpretation of the student’s experience was shared and validated with the interviewee. Data from all the interviews collectively described the impact of the experience of an IHM on participating students. Further reflection of the themes and meanings allowed for interpretation of the experience. The qualitative findings in this research enhanced the understanding of the essence of the IHM experience for the healthcare professional student, and, with the results from the quantitative data, filled a void in current research on this topic.

In the PIHMQ question 10N, written qualitative data were obtained as students were asked to identify two or three factors that influenced their decision to participate in the IHM. Not all students gave two or three reasons for their IHM participation. In addition, as these responses were received on the survey, there was no opportunity to ask for clarification of their answers. It is possible that some of the groups can be collapsed into another, i.e., wanting adventure and love of travel could be the same reason, especially travel to a developing country.

**Quantitative component**

Descriptive statistics were used to express the student’s perception of the impact of IHM experiences. The students’ responses on each PIHMQ item were reported for perceived mean change in each of the following categories of Wilson’s IIEM: Substantive Knowledge, Perceptual Understanding, Personal Growth, and Interpersonal Connections (Note Table 1). The students’ perceived mean change was also reported for each of the following aspects of Bandura’s TSE: Mastery experiences, Cognitive, and
Affective processes (Note Tables 2 and 3). Through gathering measurable statistics such as the perceived mean change for the categories of the IIEM and aspects of the TSE, the impact of the IHM on the participating students can be objectively described.

**Summary**

This chapter detailed the methodology and procedures used to obtain qualitative and quantitative data on the experiences of healthcare professional students who participated on an IHM. Qualitative data was gathered via audiotaped interviews using phenomenological methods and methodology guided by Heidegger’s philosophy. Qualitative data analysis explored the perceptions, descriptions, and meaning of healthcare professional students mission experiences collaboratively with the participating students through van Manen’s phenomenological method. The researcher’s past experiences were disclosed to highlight awareness of the past experiences she brings to her understanding of the phenomenon studied. The PIHMQ was evaluated as an appropriate instrument for the quantitative component of this triangulation research. Quantitative data from the PIHMQ were explored using descriptive procedures and Cronbach’s alpha.
Chapter 4

DISCOVERIES

The qualitative findings and quantitative results from this mixed-method study are presented in this chapter. Themes from the qualitative data, obtained from interviews and survey short responses are introduced, defined, and substantiated using passages from the interviews and written responses to question nine of the PIHMQ. The quantitative data obtained from the PIHMQ will provide measures of the type and strength of the changes as perceived by the student mission participants. The results of the dissertation research are presented in the following order: 1) demographic and background characteristics of the participants; 2) reasons cited for mission participation; 3) themes from the qualitative data, and 4) results of quantitative data obtained from the PIHMQ.

Demographic Characteristics of the Participants

Participating students were from schools throughout the US, ranging from the mid-Atlantic coast to California, and Michigan to Georgia. The majority of participants completing the PIHMQ were from Toledo, Ohio area schools, and all interviewed participants attended local healthcare professional schools. None of the participants were on the mission as part of their program coursework, and none received academic advance preparation for the IHM experience. Of these study volunteers, nine were interviewed, and all completed the PIHMQ. It is interesting to note that of the 32 participants, eight were first generation immigrants in the US. The participants were nearly evenly divided
for gender, and approximately one-third spoke Spanish as a second language.

Academically, the participants were from five different healthcare profession disciplines with the majority, approximately 78% from medicine. Nearly 60% of the participating students worked on one mission; only one student worked four or more missions. A minority of students worked on an IHM within one month of their study participation. The complete demographic frequencies of the 32 research participants are listed in Table 6.

**Reasons Cited for Mission Participation**

In the responses to question 10N, two reasons tied for the most frequently cited factor for mission participation. These were 1) the desire to help needy persons and 2) having hands-on experience in healthcare. Of the total responses, each of these two factors was cited 19 times. The next most frequently cited factor was an interest in learning about and experiencing another culture. Other responses were in clusters that were found six, five, and four times. The least cited reason, being used twice, was “resume builder.” The compiled results to question 10N are found in Table 7.

**Qualitative Themes**

Four themes emerged from the interviews: Substantive Knowledge, Perceptual Understanding; Growth as an Individual, and Interpersonal Connections. All themes involved learning new facts or skills that enhanced personal and professional growth in the student. For this reason, the overarching theme will be called “Evolving as a Globally Aware Person and Healthcare Professional. The four themes that emerged confirmed the four categories within Wilson’s Model, and offered further refinement into
<table>
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<tr>
<th>Variable</th>
<th>n</th>
<th>%</th>
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<td></td>
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<td>3.1</td>
</tr>
<tr>
<td>Medicine</td>
<td>25</td>
<td>78.1</td>
</tr>
<tr>
<td>Physician Assistant</td>
<td>1</td>
<td>3.1</td>
</tr>
<tr>
<td>Pharmacy Graduate</td>
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<td>3.1</td>
</tr>
<tr>
<td>Pharmacy Undergraduate</td>
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<td>12.5</td>
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</tr>
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<td>26-30</td>
<td>6</td>
<td>18.8</td>
</tr>
<tr>
<td>31-35</td>
<td>4</td>
<td>12.5</td>
</tr>
<tr>
<td>36-40</td>
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<td>3.1</td>
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<tr>
<td><strong>Gender</strong></td>
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<td>46.9</td>
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<tr>
<td>Female</td>
<td>17</td>
<td>53.1</td>
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<td>4</td>
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</tr>
<tr>
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<td>12.5</td>
</tr>
<tr>
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</tr>
<tr>
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<td>3.1</td>
</tr>
<tr>
<td><strong>First generation immigrant</strong></td>
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<td></td>
</tr>
<tr>
<td>Yes</td>
<td>8</td>
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</tr>
<tr>
<td>No</td>
<td>21</td>
<td>65.6</td>
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<tr>
<td>Jewish</td>
<td>1</td>
<td>3.1</td>
</tr>
<tr>
<td>Muslim</td>
<td>1</td>
<td>3.1</td>
</tr>
<tr>
<td>Protestant</td>
<td>4</td>
<td>12.5</td>
</tr>
<tr>
<td>Other</td>
<td>5</td>
<td>15.6</td>
</tr>
<tr>
<td>Missing data</td>
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<td>21.9</td>
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<tr>
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<td>Spanish and English</td>
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<td>25.0</td>
</tr>
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<td>6.3</td>
</tr>
<tr>
<td>Other(s) and English</td>
<td>2</td>
<td>6.3</td>
</tr>
<tr>
<td>English, Spanish &amp; Other</td>
<td>2</td>
<td>6.3</td>
</tr>
<tr>
<td><strong>International travel prior to IHM</strong></td>
<td>24</td>
<td>75.0</td>
</tr>
<tr>
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<td>24</td>
<td>75.0</td>
</tr>
<tr>
<td>No</td>
<td>8</td>
<td>25.0</td>
</tr>
<tr>
<td><strong>Number of IHM trips taken</strong></td>
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<td></td>
</tr>
<tr>
<td>1</td>
<td>19</td>
<td>59.4</td>
</tr>
<tr>
<td>2</td>
<td>9</td>
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<tr>
<td>3</td>
<td>3</td>
<td>9.4</td>
</tr>
<tr>
<td>4 or more</td>
<td>1</td>
<td>3.1</td>
</tr>
<tr>
<td><strong>Time since last IHM</strong></td>
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<td></td>
</tr>
<tr>
<td>Within 1 month</td>
<td>2</td>
<td>6.3</td>
</tr>
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<td>1-3 months ago</td>
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<td>4-6 months ago</td>
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<tr>
<td>&gt; 12 months ago</td>
<td>8</td>
<td>25.0</td>
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</table>

<p>| N = 32                         |    |    |</p>
<table>
<thead>
<tr>
<th>Reason given</th>
<th>Number of students writing this response</th>
</tr>
</thead>
<tbody>
<tr>
<td>Desire to help the needy</td>
<td>19</td>
</tr>
<tr>
<td>Hands-on experience, practical learning in a healthcare</td>
<td>19</td>
</tr>
<tr>
<td>Learn, experience another culture</td>
<td>11</td>
</tr>
<tr>
<td>Love of travel</td>
<td>6</td>
</tr>
<tr>
<td>Observe, experience a different healthcare system</td>
<td>5</td>
</tr>
<tr>
<td>Improve Spanish language skills</td>
<td>5</td>
</tr>
<tr>
<td>Adventure, wanted a “life-changing” experience</td>
<td>5</td>
</tr>
<tr>
<td>Explore mission work as possible future career focus</td>
<td>4</td>
</tr>
<tr>
<td>Significant person influence (Professor, friends, mentors)</td>
<td>4</td>
</tr>
<tr>
<td>Reasonable cost, scholarship assistance available</td>
<td>4</td>
</tr>
<tr>
<td>Opportunity</td>
<td>2</td>
</tr>
<tr>
<td>Resume builder</td>
<td>2</td>
</tr>
</tbody>
</table>

N = 32 respondents
personal and professional components. As noted in Wilson’s model of an international experience in Figure 1, people with international experiences gain a global perspective as well as develop as an individual. Each of these two components is further divided into two categories. “Gaining a Global Perspective” is developed through increased Substantive Knowledge and Perceptual Understanding. “Developing Self and Relationships” occurs through Personal Growth and Interpersonal Connections (Wilson, 1993). For this reason, Wilson’s categories will be used as theme headings with the exception of personal growth, which will be renamed “Growth as an Individual”. Because of this modification and the subdivisions within each theme, Wilson’s model was altered. The new model found in Figure 2 includes the additions and serves to clarify the substantive findings from this research.

As the international experience researched was decidedly different than Wilson’s, the interviews offered a unique opportunity to explore the students’ perceptions and the phenomenon of the mission experience without pre-determined boundaries. When the themes were uncovered, data were found which were similar to Wilson’s categories, yet with distinctly two types of experiences within each category. Further clarification of the emergent findings from the qualitative data is outlined in Table 8.

Qualitative data to support the four categories and modifications were obtained from two sources. The interviews provided verbal information. Question nine on the survey asked, “Could you describe how the experiences on the IHM(s) may have changed you?” The written response to this survey question provided confirming data for the interviewed students. Furthermore, the additional responses from the survey supported
Figure 2. Evolving as a Globally Aware Person and Healthcare Professional
Table 8

Outline of a priori and emergent findings within IHM qualitative data

Evolving as a Globally Aware Person and Healthcare Professional

I. Gaining a Global Perspective
   A. Substantive Knowledge
      1. *professional
         a. *skills
         b. *Different healthcare system
      2. personal
         a. people from another country
         b. different language
         c. different culture and country
   B. Perceptual Understanding
      1. * professional
         a. *availability of healthcare resources
         b. * healthcare system in another country
      2. personal: enhanced awareness of differences in countries

II Developing Self and Relationships
   A. *Growing as an Individual
      1. *professional growth
         a. *setting standards
         b. *feelings for patients
         c. * future career focus
         d. *adaptability
      2. personal growth
         a. * inner satisfaction
         b. * rising to a challenge
         c. * reinforcing career choice
         d. appreciation
         e. insights
   B. Interpersonal Connections
      1. *professional
         a. *collegiality
         b. * provider-patient “connections”
      2. personal relationships

* indicates emergent findings modifying Wilson’s IIEM
the themes identified. In the following presentation of the qualitative data, the parenthetical code cites the source of the quoted data.

**Substantive Knowledge**

Wilson’s Substantive Knowledge theme was used to describe the increased cognitive development and specific learning that occurs on an international experience (1993). In this research the IHM participants shared a variety of new knowledge that fell into professional and personal categories, a division that appropriately reflects the difference in experiences from an IHM as opposed to a less specific international experience explored in Wilson’s research. The personal component of the Substantive Knowledge theme includes information learned that enhanced knowledge of a second language and culture, as well as the people and environment of a different country. Both personal and professional divisions of Substantive Knowledge serve as a foundation from which to compare and contrast countries, people, economies, environment, and healthcare. The professional category will be described and explored first.

**Professional learning: skills**

Students related being more comfortable doing physical exams following mission experiences. Over the course of the mission, students felt a growing comfort level obtaining patient histories, performing physical examination aspects of the physician role, and organizing thought processes logically to arrive at a diagnosis.

In a more practical sense, I’m so much more prepared. I am so much more comfortable with patients. I am just starting my rotations now, and I know how to suture. I know how to do a complete physical. I mean, not just some actor, which is what we have here. I definitely feel comfortable; some of the exams actually
test some of your ability…I think that I have actually excelled because of these experiences (IHM2).

Other students focused on clinical skills, saying, “I improved my medical skills and flexibility/resourcefulness” (PIHMQ28). And another noted, “I was able to learn so many clinical skills that I normally wouldn’t until 3rd year, in a non-threatening setting with amazingly supportive Honduran doctors” (PIHMQ18).

Study participants relayed feelings of enhanced confidence with incorporating the history and physical exam findings and presenting the information to the attending physician, noting this was a big step towards learning medicine (IHM1, PIHMQ20).

As a second year medical student, I can do a physical exam very well. So that’s definitely a bonus. I’ve learned to start to integrate some of the stuff we learned in school and apply clinical knowledge to it. We have little preceptorship days during our second year; even during those I felt very confident (IHM1).

I felt much more comfortable about [being in the role of a doctor]. I felt like the thoughts were getting a little bit more in a logical order. I was able to start putting diagnoses together so I could ask them questions to set them apart more. Where before, I probably wouldn’t be able to do any of that. So I’m at the beginning stages of that and at least that everything started to come together a little bit more. I learned how a physician thinks a little bit more (IHM6).

I feel I became really better in upper respiratory and lower respiratory infections. I feel quite comfortable [with several different disease states.] I think it built a lot of confidence in us as medical students. Being able to approach a patient, talk to a patient on my own, come up with a working diagnosis, come up with a treatment
plan. Treat the patient efficiently, and appropriately. Starting off, you’re really quite nervous. But by the end of it [the mission] you get the hang of it and you just feel very sure of yourself. It was a great boost of confidence as well as experience (IHM5).

Due to the large volume of patients, students were able to gain experience through repetition of learned and new skills as well as exposure to a variety of health disorders. Students found the practice valuable for gaining confidence doing common procedures and learning skills for use in the US (IHM7, PIHMQ20). One student in particular noted that between the volume of mission patients, limited resources, and few healthcare professionals, the opportunities for students to provide service were enhanced. Another noted, “My skills got better by doing repetitive work: blood pressure, diagnosis. I think I got to close on more operations over there in a week than I did in three months of surgery block here” (IHM8). Other examples of comments supporting this theme follow below.

We treated a lot of children so we were looking at a lot of ears. And I think listening to the lungs and the heart and looking in the ears and looking in the mouth and it felt better. It just came more naturally as the week went on (IHM4).

Physical diagnosis skills. You get nothing as a first year medical student. I had a stethoscope, blood pressure cuff. I heard my first heart murmur. I got to see kwashiorkor, protein malnutrition…otitis media. I used an otoscope. I got to see a red reflex. I saw it. At least I know what it looks like diseased and I know what it looks like healthy. So, if I see it, I know (IHM3).

I feel comfortable looking in ears and listening to breath sounds and things that…… just basic physical stuff I wouldn’t normally have had the experience to
do, like a gynecologic exam, [or a ] rectal exam. I’ve done all this stuff, and so, there’s nothing to be afraid of for your third year. I’ve actually done it before so it’s not as big of a deal. I can see how some of my classmates would be afraid to talk to patients. It helps me to be a little bit more comfortable” (IHM6).

Students spoke about feeling more comfortable as a member of the mission healthcare team, and making decisions based on their incorporation of clinical findings with their new knowledge of environmental health hazards.

I think I gained some skills with diagnosis and trouble shooting because [on a mission] you’re over in a country that doesn’t have purified water, you’re going to see a lot more infections or other parasites that you don’t see so much here. On the island of Mardukade there’s toxicity due to arsenic over the region of Santa Cruse. You don’t see arsenic toxicity here, at least not much with the huge skin manifestations that you get. So I think I brought that experience of just being able to do and be a part [of a healthcare team] (IHM8).

You’re put in a position where you’re given the opportunity to actually use those skills and knowledge that you’ve been taught in classes. The practice of asking the same types of questions and formulating the order that you want to ask does carry over and getting that practice in any setting is good and will make you a better history and physical taker (IHM7).

**Professional learning: A different healthcare system**

Students learned first hand about accessibility of care and availability of technology in other countries. One student noted, “I became acutely aware of the immediate health care needs of people from poorer countries. Things were worse than I
thought” (PIHMQ2). While another student shared personal thoughts and observations, saying, “Our system of medicine here in America differs from what’s available in other countries. When we go down to a lot of these mission places, they don’t necessarily have medical care very constantly” (IHM7).

I think something that happened on this most recent trip that kind of astounded me was we didn’t realize just how infrequently or how difficult it is for some of these people to get medical care. And we’re always astounded by these long lines of people who are waiting by the time we get there at 6:30 in the morning. Well, some of these people walk six hours just to get to the clinic. And they’re not just walking by themselves. And these aren’t necessarily all healthy 20-year olds, but these are people who are grandmas, grandpas, people who have five or six kids walking along with them. And you just imagine a big group of family walking six hours, all through the night to be there at 6:30 in the morning. And you really get taken back a little bit (IHM7).

Healthcare professional students learned why healthcare professionals in another country developed and utilized what are considered “basic” clinical, examination, and diagnostic skills in the US. These clinical skills are enhanced in a developing country because of the absence or cost of testing. Students appreciated these skills, and some endeavored to improve their clinical abilities for future patients.

It’s a bonus to see how other people, especially other physicians in other countries deal with their patients. Especially when they might not have the same tools. They might not have the same medications, yet they still treat their patients very well. And sometimes surprisingly a lot better than we might. They are very good
about picking [up on] the diseases that are very specific to their country and they are excellent infectious disease doctors because they have so much infectious disease. So you learn so much from them (IHM1).

I think that people that did go on the mission do become more proficient at using their hands-on techniques and they kind of stay with that a little bit. And every now and then you learn a couple tricks of the trade. Some fast, easy. The easy ways of diagnosing an illness, or checking for something, or ruling something out (IHM5).

**Personal learning: People from another country**

The mission offered the unique experience of meeting and talking to people from another country in ways not available to most tourists, or travelers to an international resort area. One student wrote on the questionnaire, “[I] realize that the Honduran people are incredibly giving, friendly, and have an amazing outlook on life despite their situation” (PIHMQ18). Interviewed participants shared the following feelings that support this theme.

I think it was a very eye-opening experience. Especially for people who haven’t been out of the country before and experienced the Hispanic culture. I think it’s very eye opening because the Hispanic people in general are very open and they’re very friendly. They’re very welcoming and they appreciate the help that we’re bringing (IHM7).

They were more grateful. They’re happy with their lives even if they didn’t have anything. They have nothing compared with what we have, yet they’re very content with everything. I mean besides the major differences in their culture, the
language and their country and the climate and the big things by terms of just the people. They live in an environment that would be absolute poverty here. They were very happy and satisfied with what they had (IHM 4).

Knowledge, number one. You always learn something: medicine, of course, and knowledge about culture, knowledge about people. I always make new friends, new contacts. I learned so much. I’ve seen a different culture. Every time I go there, the people are so overwhelmingly nice to you. They’re so hospitable …they throw fiestas and get-togethers for you, and you just feel like they are giving you so much (IHM1).

**Personal learning: Different Language**

Student mission volunteers spoke of learning a new language, speaking in a second language they knew, and learning new words, especially medical terminology in another language (IHM2, IHM5, IHM9, PIHMQ7).

Working triage and trying to learn Spanish at the same time. I don’t know Spanish so just learning a different language and trying to communicate with these people and try to understand what’s wrong with them, what they need help with. I also worked pharmacy and then that was interesting because I also had to speak Spanish and tell these people how to take their pills. I was critiqued by little kids on how to correctly pronounce their Spanish words. So that was interesting (IHM9).

**Personal learning: Culture and country**

Students relayed learning about a different country and culture. As with learning about the people because of the unique experiences available on a mission, students were
exposed to more remote parts of developing countries. The mission locations thus offered
the opportunity for students to see and experience remote villages and parts of the
country where residents do not cater to tourists or foreigners (IHM9, PIHMQ7).

Even though I say Hispanic people and Hispanic culture, it does vary from
country to country a little bit. Going on my mission and being a translator as well,
you are in different countries, and things mean different things in different places.
So I learn more about it (IHM7).

It was eye-opening and it was just incredible to see all the poverty and how many
needs these people had and how they lack just the basic essentials of life like
clean water and clean clothes. It was just an eye-opening experience to see how
much they needed help so badly. These people are dirt poor in their villages
(IHM9).

Another student noted the environment from a different viewpoint, saying,
Because their schools were all with their churches, at least down in Lataee, the
church and the school was all one compound, very beautiful looking when you
went down the road to the ocean. They harvested the plantain and the bananas and
mangoes or coconuts and lived. They had a lot of fresh fruit. That’s what they ate.
And a lot of fish because this was their fishing time. We went down to the San
Ricardo area, a rural fishing town and that character was very nice. You still saw
the poverty. They live more in huts as opposed to shantytown, but literally huts
with thatched roofs, bamboo or some sort of framing like that. Or, tin roof and
siding, corrugated siding. There were a lot of people that lived like that (IHM8).
Perceptual Understanding

Participants felt that the mission experiences offered opportunities to become more adaptable and have a greater understanding, both of which made them more “well-rounded”. These expressions of a “bigger picture” are also divided into professional and personal. The different viewpoints and insights within this theme are grouped below.

Professional: Availability of Healthcare Resources

Students recognized that the lack of available or affordable diagnostic testing encouraged the physicians in another country to have strong clinical examination skills as well as a solid knowledge of infectious disease and appropriate treatments. This realization also emphasized the differences between the resources available within each healthcare system, a step beyond simply learning and perfecting physical assessment skills.

I don’t know [if it’s] better, but I think they [physicians in developing countries] are forced to understand certain concepts as far as medicine goes, better in order to treat their patients with their limited resources. We have our PDRs and our little pocket PCs. If we don’t know, for example, what bacteria goes with what antibiotic, we just look it up. Or if we don’t have that antibiotic, we look in our PDR for substitutions. Whereas some of the physicians there have to really understand the way antibiotics work, and when we get a gram negative versus a gram positive. I’m not sure there’s not plenty of physicians that know that here, but I just think sometimes they have to know that more (IHM1).

Physical exam was really important over there. So that kind of teaches you how to carefully look or listen, hear or feel. And it also will kind of solidify a disease and
the criteria a disease usually presents itself with. I think I became much better at
listening to a heart, listening to the lungs. I think became a lot better with my
microbiology and infections and pharmacology. We had to learn how to do
without [tests], and that means learn the disease really well (IHM5).

Students relayed a realization of the great differences in healthcare availability
because of the remote areas without infrastructure enabling access to basic care services
(PIHMQ5, IHM9, PIHMQ17).

It was just amazing how many patients you would see in a day. Because at that
point I had followed somebody half a day, [seeing] five patients here, 10 patients
there. And [on a mission] you’re going to see a couple hundred in a day. You’ll
see a couple thousand in the course of week or maybe a little more. So the
numbers were a lot bigger. And...a lot of the technology isn’t there. You’re not
going to order x-rays or CT scans. Occasionally people did have an x-ray that
they got from a doctor 100 miles away and bring it with them. So you saw a lot.
You had to rely a lot on your physical exam skills and a stethoscope again,
listening to the different subtleties of the abdominal sounds (IHM8).

Other comments further supported the students’ reflections on the differences
between healthcare systems. Additionally, the students noted how health problems were
related to aspects of a country’s economy and environment. “People would walk all the
way from their villages five hours away to see us for their medical problems. It was
incredible really” (IHM9). “I learned that there are other communities that need medical
care. I realize that technology in medicine is not available in other countries”
(PIHMQ17). “[The mission] changed my view of quality of US life, [especially how]
general hygiene and economic privilege contributes greatly to disease in human populations” (PIHMQ20).

IHMs have completely changed my view of what a ‘need’ is. People in 3rd world countries have needs. They need clean water, they need food, and they need shelter. These are real needs, and often these needs aren’t met. In the US we often whine that we don’t have the latest diagnostic equipment, the ability to prescribe the latest designer drug, but let’s fact it, our healthcare system completely provides our needs. We live in opulence, and our healthcare is opulent (IHM3).

Professional: Healthcare system in another country

Students spoke about comparing US medical care and the US healthcare system to that experienced in a developing country. Their words expressed their critical comparisons of each healthcare system as well as their understanding of the “why” behind the differences.

I think I got to learn more about their system of medical care, which is very different from ours. For instance, they re-use their gloves. We had to make do with what we had, and people needed to be seen. We really learned how to improvise. But that’s what we had to do with all of these missions. But even more so with the Philippine mission because they just lack equipment. They lack a lot of things and just the way that they do things is so different. For instance, when they are doing their surgeries, it’s really hard to maintain a sterile environment because you’ve got a hundred other people in the room with you. So we just gave everyone in the room antibiotics prophylactily. Things like that (IHM2).
Mission experiences offered opportunities to see another healthcare system first-hand. An IHM also provided opportunities to adapt the care given under less than ideal conditions.

The physical diagnosis that we had to do there is not backed up by a bunch of hospital tests. You just can’t send things off to the lab. You can’t just go get an x-ray when you want it. Things like that take time and so you have to do things more by outpatient, percussion, auscultation and things that you have with you in the field. One mission doctor was so good at that. He’s neat to watch him work and what he can find just with the limited instruments that he has. And knowing that, it almost makes some of the stuff that we do in America seem superfluous. Because he can diagnose and is sure of this diagnosis without having to send those eight billion-dollar tests out that raise the health care costs. I’m not saying that it’s wrong. I’m not saying that it isn’t vital, but it’s pretty neat what you can do without and I think that will help me in my practice. I mean, not ordering as many tests that aren’t necessary as we are doing now in my inexperienced view of the world (IHM3).

My IHM to Guatemala changed the way I view public health as the very foundation of the treatment of infectious disease. I de-wormed hundreds of children stricken with parasites only to have them return to the same unsanitary conditions that caused them to be infected in the first place (PIHMQ23).

I went to the hospital one day with the surgeon that went with us, because they were doing laparoscopic surgeries there for the first time. And I guess just how
different the hospitals are for the US. How their sanitary conditions aren’t quite like US hospital operating rooms. Just how quickly these people seem to recover. That’s, yes, pretty incredible. Everything around us is so sterile. We have so many antibacterial things and they just don’t have all that (IHM9).

Some students expressed their appreciation for US healthcare resources, while also recognizing that many individuals, even healthcare professionals in the US were not aware of or grateful for what was available to them (IHM4, IHM8, PIHMQ4). One student wrote from the perspective of several mission trips, “I have been on several IHMs and they made me realize how good our healthcare system is…even for the poor/uninsured” (PIHMQ 32). Other examples supporting this theme follow.

My experiences have shown me how fortunate we are in the US. As a medical student, it gives me perspective so that what most people consider ‘hopeless’ or unfair in medicine appears to be adequate in comparison with other cultures/countries with no access to healthcare at all (PIHMQ30).

I think I got a little bit more understanding of how healthcare system works and doesn’t work in various environments by being able to compare it to another country. By being able to compare that country on a medical mission. Any by being able to see in back here (IHM8).

**Personal: Enhanced awareness of differences in countries**

Student mission participants expressed an increased awareness of the vast resources available in the US. With this new recognition, they also became alert to their previous lack of appreciation for these resources, and the general lack of gratitude held by many U.S. citizens and patients. One student summarized by saying, “Poverty, no matter how bad you think it is in the
US, with welfare, Cherry Street [a local homeless shelter], with whatever programs there are, it’s not as bad as what it could be” (IHM3).

Compared to the third world countries, [US] Americans have a lot. Sometimes we don’t appreciate it. But I think it comes down to a matter of perspective. And for them, when they don’t have a lot, it’s really amazing. There are lots of people in the US who don’t have medical training. So sometimes you get patients who don’t really understand what you’re telling them. But down there, they really have a lack of education especially in some of the more rural areas. And just simple things like, ‘drink more water and make sure it’s clean.’ It’s something really basic and you would think anybody should know and they just don’t. They can’t even understand why you’re telling them to do that or the importance of it. I think it does kind of give you more appreciation for what we do have (IHM7).

Students relayed feelings of “shock”, being “amazed”, or finding the IHM an “eye-opening experience”. Many of these emotions are expanded below in the students’ words.

It was a shock because you hear people may be poor in other parts of the country, our country, and other parts of the world. And you get an imagination of what’s poor. If you compare it to some of our ghettos, I would probably say they’re a step below that. And we still have some housing requirements, for instance, running water, even in our poorer cities and locations. And they don’t have that in most of their locations (IHM8).

You’re overwhelmed by it. And they come to you and they show their gratitude as well. I mean, I’m not sure how to explain it, but you just get overwhelmed by that sort of feeling. And when we complain, going into the doctor’s office and waiting
20-30 minutes, or going to the waiting room in an extreme case and waiting two hours. These people, they weren’t sitting there and waiting two hours. They’re walking through the night, with no flashlights, no headlights, just by whatever happened to be in the sky in terms of the moon and the stars. They’re walking for six hours with their whole entire family and they may have babies who can’t even walk on their own. I don’t really know how to explain it. You get more of an appreciation about what their lives are like compared to what ours are like I guess (IHM7).

Healthcare professional students spoke about the IHM experiences as an opportunity to broaden their experiences and horizons. Several recommended that “everyone” should have a mission experience.

Really, it’s an eye-opening sort of experience that I think everybody should have the opportunity to do. As long as you go into it with an open mind and you understand that it is a different world that you’re going to. You need to respect that. If you do, it can be a very enlightening experience that you can take a lot away from and bring back something here that you can help your patients out with as well. (…) Again I think any time people broaden their experiences and their horizons, whether it’s going outside the country or going outside of the state or their particular city or wherever, and they experience more things. I think they bring back somebody who’s a little bit more well rounded and able to adapt to situations and understand and be a little bit more sensitive to people’s situations. I think that’s the great benefit of doing these missions trips. Because you go on these mission trips and not only do you have to adjust to a new environment, you
have to adjust to a new system, to a new culture, a group of people, and those experiences end up making you a much more well-rounded person (IHM7).

A friend of mine, said that mission work is addictive, simply because once you go there, you realize that you’ve just seen one little tiny corner. And you realize that if you dedicated your entire life to it, you wouldn’t even be able to correct a tenth of what’s wrong in that one area. And it’s all over the world. We’re so blessed here in the US, that to have the financial resources that we have and to not use them to benefit those who are most in need is – it’s one of the biggest travesties that the US does is not reach out. And not just the government. Not just the state, but every individual (IHM3).

Student mission participants relayed thoughts and feelings of having a better understanding or greater perspective of the world, and how the US differed from other countries.

I think I bring back a more true perspective of what the world’s like, a greater understanding of the human condition. Like what the average person of the world endures every day. Or, have a little bit more insight as to just the world as a whole, like the way it works (IHM6).

I was pretty amazed at the disparity with the wealth and the poverty. I guess it’s like [that] in a lot of places. The wealthy are very wealthy and the poor are incredibly poor. Probably the only thing I could describe the poor as, is if you’re going to look at older America, really 20th century history, things like shanty towns, things like that. The difference being here we may still have a little bit of
that [shanty town areas], but it’s pretty remote. Whereas over there, it’s a much larger percentage of the population, I’m going to guess 30% to 70% (IHM8).

One student’s views of the US initially changed from a previous trip to England and Wales, but gained yet a greater perspective of the US from his trip to a developing country, saying:

I first realized that we don’t have it all that bad when I went over to England and I saw they had tiny little houses. They had tiny little cars. And they’re just happy little people. Everything in America is just big. I mean, it’s just huge. That just made me look at the US as ‘Oh my gosh, we’re like royalty compared to the rest of the world.’ We really are. I mean, they just don’t have town homes. They don’t have what I’m living in right now—they just don’t have things like this. They have mud dung huts. They have thatched roofs. They cook with charcoal, wood and dung. It’s flabbergasting. I’ve seen it. I know it’s there and I know it’s real, but I still find myself having a hard time remembering it and accepting it (IHM3).

Another student wrote more than a few words in reply to the survey question that asked how the mission experience had changed him, relayed the following information:

An entire paper could be written in response to this question. Mostly, MORE AWARE, which is broad enough to include awareness about a different country, culture, society, healthcare in that country, and access to it, a different government, sanitation, pharmaceutical drugs and easy access to medications without a script, the lack of education among many, which is similar to our own country, and reasons we feel the need to better educate our patients about their medications and their proper usage, etc. (PIHMQ22).
The rich resources available in the US were also noted, as substantiated below by students who shared their comparison of their personal situations to those in developing countries.

What’s the material possessions I either have or don’t have? Partly it’s because you looked at it like, ‘wow, we have so much more’. I know I have a meal today and I don’t know if all these villagers know that or not. And yet, they’re still giving us of their food and helping out so much. That was really an impact (IHM8).

How has it changed? How did it impact me? Wow! It’s definitely something that needed to happen in my life because my life has been so sheltered. I mean, I don’t even know that I was sheltered up until this point. But, growing up in America, I always had three square meals a day. I always had multi-vitamins. I always had regular doctor check-ups, glasses, and braces. I mean, just things that everybody in America thinks, ‘OK, well if you need those things, go get them….’ Going to a country where they don’t even have sanitation…. They don’t have running water. They don’t have (pause) I mean, you hear about it on the news. You see hungry children on the channel before you flip it over to the news station, but it’s not real until you’re there. It really isn’t. (IHM3).

For some students, there was a religious component to their understanding of the differences between the resources in the US and host country. Here is one example.

The IHM experience changed my outlook on how the conditions of 3rd world countries. I feel extremely blessed to have been born in the US. Because I have been so blessed, I feel it is my duty as a Christian to help those who are less
fortunate than myself. I would like to attend the next Spring Break trip to Honduras to continue helping those people. There is so much to be done. Going to Honduras has also made me realize how dependent Americans are on material items (PIHMQ10).

Growing as an Individual

Mission participants shared how their individual beliefs and values changed as a result of their experiences. These individual realizations reflected an affective component that influenced both professional and personal growth. Mission participants recognized several different aspects of individual professional growth, including setting personal standards for their healthcare practice and future career goals, adaptability, as well as recognizing bias and respecting patients.

Professional growth: Setting standards

Students spoke about feeling the need to set new standards for their professional practice because of the new information learned and incorporated from mission experiences.

My first real experience with patients was on the mission. I didn’t have any disgruntled patients. I just had nothing but smiles and handshakes and thank-yous. …Then when you come back over here, I think I tried to live up to that standard. To just provide the best care to get that thank you, to earn the same handshake and smile. And you know people are people all over the world. The patient sees that you care or sees that you’re interested and they open up to you and they just become very receptive. And it just makes for a much better
experience. It gave me a standard to uphold, and in doing so, I’m just much more satisfied with the results (IHM5).

“Just trying to be more patient with people. Patient with myself. Open to new things, because you have to. There are so many different people out there, you have to be open to everybody in the healthcare profession” (IHM9).

I always find myself reaching for a physical diagnosis book and looking for additional signs and the different symptoms that may present with almost of slowly begins to feel more and more like a medical history if you will. I’m kind of relying on a more hands-on approach, and I think that it’s safe to say [that] once you get a better feel for the human body and how it presents in time of illness. Also [there is] a sense of pride that goes along with it. I’m not trying to be arrogant, but I didn’t need the x-ray machine to tell me that, or I didn’t need the MRI to confirm it (IHM5).

**Professional growth: Feelings for patients**

Mission participants found that their professional growth extended beyond their personal comfort with patient contact to feeling a connection with their patients, as exemplified in the following brief quotes, and longer responses below. “I learned a little bit more about the depth of empathy I have for my patients” (PIHMQ11). “It changed me in allowing me to see and live in a different culture. I gained a greater appreciation and understanding of where my patients are coming from” (PIHMQ25).

I think the other thing is that it has given me more of a cultural appreciation or appreciation for culture and the need to respect where certain people are coming from when they come to the hospital or come for medical treatment (IHM7).
One student felt the experience had resulted in becoming less tolerant of some U.S. patients, wrote, “I am less tolerant of U.S. patients, especially Medicaid patients, who are ungrateful of the care they are able to obtain here in the US” (PIHMQ28).

**Professional growth: Future career focus**

The healthcare professional students found that the mission experiences offered a chance to explore ideas and options within their chosen healthcare profession. For some, this meant clarifying where they would practice, the type of practice or specialty, or even if additional education would be needed beyond their present program. One student learned about an area of healthcare of interest, saying, “The Peru mission introduced me to surgical first assistants and I pursued that now in my career/specialty” (PIHMQ28). Other students’ comments that further support this theme follow below.

I found out that I probably wouldn’t want to live [in a developing country] fulltime as a doctor for my whole life. I’m glad I had the opportunity to go on a medical mission and stay there for five weeks. I wouldn’t want to live there. So I learned that about myself through the medical mission. So it helped me to define some of what I’d want to do in my future (IHM6).

While assessing the patients with the doctor or with the medical students, it was kind of fun to be able to prescribe drugs and try to figure out what’s wrong with these people. It was just another thing that lead me to think that maybe I should go onto further school and be a nurse practitioner (IHM9).

My motivation to practice medicine and participate in IHMs is to help ‘minority’ and underserved populations. My training/education has been mostly in a multicultural setting with many immigrants/non-citizens. Therefore, while I may
not have changed/improved my skills or interest or feelings in this direction, I feel that IHMs definitely reinforce my personal beliefs and inspire me to rededicate myself to these ends, especially in the US (PIHMQ13).

I think it made me realize the kind of medicine that I want to practice, because the people that I met there were just so grateful that we were there; whether or not that we were able to really help them. So I think that it reminded me of the kind of medicine that I really want to do. Which is not necessarily on the profit side.

Helping people who are really in need of help (IHM2).

Further, this later respondent gave the following reply to Question 10 in the PIHMQ: “My views on what I need to do as a healthcare provider have changed greatly. I need to go to where there is a real need” (PIHMQ2).

For some students, the international mission experiences helped them to realize how they would like to continue mission work as a component of their future work as a healthcare professional.

I would do it again because what I’m hoping to go into is ophthalmology right now. And long-term, I don't know where I'd want to practice. Just spending some time outside of this country would be a great experience. I think it would be very worthwhile to be able to go to another country if I am an ophthalmologist and actually take care of [what are] common problems here that don’t get treated there and affect people’s vision. I can see that in the future. …For me [the mission] was an opportunity to get a feel for if that’s something I’d like to do in the future with my own career. So it kind of broadened my horizons about everything, I think” (IHM4).
Two students wrote questionnaire responses that support this theme. “The mission confirmed my desire to incorporate international health missions in my career as a physician and reminded me of the real reason I wanted to become a doctor: to help those in need” (PIHMQ18). “I want to participate in further IHMs” (PIHMQ20).

**Professional growth: Adaptability**

Some students shared a newfound or newly developed adaptability or flexibility in different situations, as exemplified in the following questionnaire responses. “The mission helps contribute to problem-solving skills especially in healthcare. A mission will increase your adaptability in many situations” (PIHMQ26). Other students’ written responses included, “I’ve learned to improvise” (PIHMQ2), and noted an “increased ability to handle adverse and unforeseen circumstances while working in a collegiate atmosphere” (PIHMQ7).

**Personal growth: Inner satisfaction**

The IHM participants spoke about the inner satisfaction gained from going on a mission, providing care for strangers in another country. They spoke or wrote about the personal benefits, which were held within as a fulfillment, or individual gratification.

Yes, I think people should do it. Can you afford to go on a mission as a student? No. But we’re going to take out an earth-shattering amount of debt anyhow to get through medical school. So I think it is worth making the efforts to go on [a mission] because you learn so much as a person. You get to meet and work with people from a different country. You get a little bit of exposure to a different culture if not more. I think the greatest experience is to meet different people and you all have the same goal and that’s helping people ... I don’t know how to
describe it, but it’s just a self-fulfilled atmosphere. You go to bed somewhere between 10:00 and midnight. You get up between 5:00 and 6:00 in the morning. You don’t need an alarm clock. You don’t feel tired and you work all day. And you do it again (IHM8).

Other students also relayed the feeling of being able to work long hours, wanting to see and aid more people for the sheer pleasure gained from helping others, as noted below.

I just wish that I could do more and see more patients, or have more drugs to give them, or do more surgeries, or that the sun didn’t come down at eight o’clock so I could have more light to work with. I’ve learned so much from the patients that I saw. They just let me examine them. And they were just so grateful for everything that I’ve done, however little that is. So then I think just the hands-on learning and just being able to work with people from a different culture… I gained a lot from that (IHM2).

In my preliminary years of medical school [I] was not exposed to patients from other cultures. Also, patients as impoverished as those I encountered abroad are not like the ones I’ve been exposed to at school. I gained a greater capacity to empathize and found that my experiences with patients and coworkers [who are] different from myself was tremendously rewarding (PIHMQ29).

The whole thing. It just went by in a blur because we never stopped from morning until night until the last couple of days where we just relaxed and after glowed. It’s the most rewarding thing you can possibly do with the opulent life you’re living (IHM3).
Participating students relayed the feeling of enlightenment and accomplishment, as noted in the following quotes. “If you’re an open sort of person and you’re willing to accept the different things that you see that may not fit into your everyday culture, I think it’s a very enlightening experience” (IHM7).

[I] can’t wait to go on another mission. This was better than any vacation I had ever been on. I have found that I would much rather work hard and feel like I accomplished something compared to just laying around on some beach doing nothing somewhere (PIHMQ9).

One participant’s story reinforced his realization of the patient’s appreciation of a doctor, how important a healthcare professional can be, and yet how humbling and satisfying the role can be. He told a story about a family that walked about seven hours to get to the village where the mission clinic was set up.

We would start around 8 o’clock in the morning when the sun comes up and we had breakfast and started working. They left around one or two o’clock in the morning to come see us. And they walked through rugged terrain up and down mountains, carrying their stuff with them with a family of about five or six I think. That made me realize how important our role, our presence was over there and that’s just humbling, and very, very satisfying. [It was] really well worth it. You really get to go out and help a lot of people that are just so appreciative of you being there. They’re just really happy to see you and welcome you with just such great hospitality. It was a lot of fun. It was very self-satisfying, very rewarding, very gratifying. It was a great experience, I encourage everybody to go
out and try it. One week that will change your mind about everything, I guarantee (IHM5).

**Personal growth: Rising to a challenge**

The category of personal growth extended to the participants’ learning about their ability to rise to challenges previously unknown. Several spoke about how they adapted to new living and working conditions and how the experiences changed them.

It’s hard to be on a medical mission ... you’re living in such a primitive way of life. It makes it so difficult for people. But I think that in the end, we all get the same experience: a really great experience regardless of the things, because we all had to work hard. We all had to get five hours of sleep and eat the same foods and possibly suffer some parasitic infections or something like that. But I think we all got the same experience; that this is still a great experience and that people that I talked to would do it all over again (IHM2).

There’d be anywhere from three to five or six hundred waiting to be treated. Pharmacy would always be backed up because we’re trying to get people medications. What you’re trying to provide is the best amount of care that you possibly can without taking away from a potential resource for other patients, whether that is time or whether that’s pharmaceutical medications (IHM5).

Maybe is was just everything that I was doing at the time, in terms of actually interviewing patients, talking to them and then seeing how many patients there were. There was a line of a hundred… I don’t even know how many patients just a lot of patients waiting to go into the clinic. It was just very overwhelming. The new experience. The completely different country. It was overwhelming: just the
whole experience, just everything, seeing the people. It was overwhelming, even though I thought I was prepared for what I might see, in the end I wasn’t (IHM4).

Later in the interview, this later student (IHM4) commented, “It was just that first day or two when I was just kind of getting the feel for what I was doing and seeing all these patients come through. That was probably the overwhelming part initially” (IHM4).

Another student relayed feelings about the process of adapting to other working conditions or methods, saying, “I had to learn how to adapt to the way that they did things. It made me feel uncomfortable in the beginning, but, it’s their system and I had to learn how to work with that” (IHM2).

**Personal growth: Reinforcing career choice**

Some students shared how the mission experiences reinforced their decision to become a healthcare professional, saying that the missions allowed them to stay focused. Especially for students in the first and second years of medical school when there is little patient contact, the mission helped to keep alive the spirit of why they wanted to become physicians.

It reinforced my decision to want to become a physician in the way that I think I realize that through my becoming a physician I could do a lot of good. I think it was that realization that medicine, helping others, is a great tool to enable to you help others. It’s a vehicle as others may have put it. You can literally reach out a touch people’s lives. [The mission] put it [medicine] into perspective, how challenging and how prestigious a field it is to get into. And how important it is. You are helping people in ways nobody else can help them and they absolutely
love you for it. It was a big eye opener, the gravity, and the importance the field is that I’m getting into (IHM3).

I think for a lot of us being stuck in books—sometimes you may lose sight of the human aspect of medicine and what you actually went into it for. And I think going on a mission reminds you that this is part of the reason that you got into it so that you could help people. It I hadn’t gone on the mission, I think I wouldn’t get that opportunity to actually see my work benefit patients for quite a long time. (…) You get back to is the very basics of medicine, that you’re there to help the patient. You try your best. We do keep basic records, but nothing as extensive as we might here. It’s a lot more liberating, because you actually get back to what you got into medicine for. You can do what you came to do as opposed to spending hours on paperwork” (IHM7).

Just feeling fired up. Wanting to learn more. I just finished my second year of medical school and sometimes sitting in the classroom all day long and sitting in front of a book all night long just makes you forget about the reasons you wanted to join medicine. You lose your enthusiasm for medicine and learning some of the book stuff. Learning and applying. Sometimes it’s just easy to disregard some of the book stuff just because you’re sick of studying. After you see its clinical relevance or you see a patient who has something like that, you become very interested because you want to help the patient, obviously” (IHM1).

Written responses on the questionnaire further validate the subtheme of reinforcing career choice, as noted in the following quotes. The mission “made me sure medicine was for me. [I] know that I need to do another IHM (PIHMQ27). “My views
on what I need to do as a healthcare provider have changed greatly. I need to go to where there is a real need” (PIHMQ3). An interviewed student (IHM7) quoted above also wrote on the questionnaire that the mission experience “re-emphasized the important qualities of the medical profession” (PIHMQ7).

**Personal growth: Appreciation**

Mission participants shared feelings of personal growth such as an increased awareness or perspective of the world, gratitude for what each had, and realization of the unnecessary importance placed on material wealth in the US (IHM6, IHM1, IHM2, IHM7, PIHMQ16). In addition, some recognized the importance of faith and gaining strength through putting personal problems into perspective. The following three individual quotes exemplify this personal subtheme of appreciation. “I am more grateful (participant underlined) for everything I have here: My opportunities for schooling, clean water, hot water, and definitely healthcare!” (PIHMQ12). “I was also able to see how people in a 3rd world country live on a daily basis, and am able to better appreciate the life I live in America” (PIHMQ18). “In the states we’re worried about going bald and losing weight and things like that when there are other people out there that have real worries” (IHM2).

Even a student who was born in a developing country felt that the IHM brought a renewed perspective on living conditions in the US compared to another country, as the following two quotations demonstrate.

I was born in another country, so I realize a little bit about the difference in cultures, the differences in perceiving certain things, the differences in standards of living. However, living here, you tend to forget and you tend to under-
appreciate what you have. Every time I come back I start appreciating everything, simple McDonald’s food, just driving in the car on nice paved highways. It’s just something that we take for granted. (...) I am taken a back a little bit by their living conditions. For the most part, I think, in the rural areas, whole families live in one-room houses that are probably no bigger than a one-bedroom apartment here. They really don’t have any walls. Their bathroom tends to be an outhouse in the back or a hole that they dug. And their house tends to be a building made of cement blocks with a metal sheet sort of roof (IHM1).

**Personal growth: Insights**

Students expressed a variety of personal insights learned from IHM experiences. Some felt that personal growth and a better understanding were a great benefit from their mission experiences, realizing that material wealth didn’t equate happiness, recognizing the value of a simple life and putting problems into perspective. The first example shared below was written in response to the survey question asking how the mission experiences might have changed the participant. [Note: The exact meaning behind “I almost killed…” could not be clarified as this was written on an anonymous questionnaire. It is thought that the student intended a figurative meaning of “killed” rather than literal.]

I was scared out of my mind the first two weeks I was there. I almost killed two people and didn’t speak very good Spanish. I didn’t know how to do anything. Because of this fear, I began to hate the patients. One night around 2AM, all these awful feelings came to a head, and I re-evaluated why I was in Honduras and how I was going to get through the next two weeks in my month down there. If I viewed the patients as a source of misery, catalyzing chances for me to screw up, I
would never be a good medical student, let alone doctor. I decided I would have to change my attitude toward my ignorance. Rather than beating myself up for not knowing enough, I realized that in medicine, there will always be situations in which I am ignorant. I’m never again going to be the know-it-all whiz kid I was in high school. Finally, I actively decided I had to start treating this trip as a once-in-a-life-time learning experience. And while I still made mistakes, I was more diligent about not making them, and more able to handle their consequences. I returned to [medical school] a 500% better student and human being. I got a lot of perspective. I grew up (PIHMQ19).

And it breaks your heart when you see people that are walking for miles from their home town just to see you. And to realize that you will be there one day of their entire year. It will change you forever. It really will (IHM3).

A few students gained insight into the causes of happiness, as the following example demonstrates. “Insight into the fact that money does not equal happiness. The people of the Dominican Republic, through much poorer than those of the US, seemed to have a wealth of happiness” (PIHMQ24). The additional examples below further support this subtheme.

I think the personal changes would be what’s important to me. I guess just how I view things, maybe like a broader aspect of what’s out there. I don’t think I took things for granted before I went down, but after you’ve come back, it would be very difficult to. Hopefully I think the personal thing is growth as a person; a better understanding of the world. You see pictures of different peoples and cultures and what it’s like, but until you go there, you wouldn’t know. I just got a
better understanding of kind of everything I think. Of culture, of the world, of what poverty really is; what it takes to live in poverty. What it really takes to be happy with what you have. How lucky you are to be where you are. What we have is a lot. It’s a lot! (….) The things you own aren’t what makes you happy. They (the people in the developing country) didn’t have anything and they were very happy with it. And I think that’s something that’s coming back here; I see it lacking in our culture: the happiness without the things we have (IHM4).

For other students, the mission experiences offered opportunities for growth in their faith, as their quotations indicate here and below. “Just to have trust in God. I was afraid for my life some of the times. Just to rely on God for all things I would say” (IHM9).

I learned a lot about faith. I felt like some of the villages we went to people came in and they just felt like they had a lot of faith. Like they would be saying “god bless you” and smiling. I really felt like that was a great witness about how to deal with the human condition and different things that would get us upset, or life in general. That these people showed us how we could deal with it in a simple way, like they are dealing with their problems in a model way that was good. It was something that I could learn to deal with some of my problems, not to get worried about things. I felt like I shouldn’t be crying about my problems. There [are] people in this world who have much bigger problems than I do. There is nothing that I can be complaining about, and so that gave me a strength (IHM6).
Interpersonal Connections

Students noted interpersonal connections on several levels: between peers, students from other countries and disciplines, healthcare professionals, mission team members, families and patients. As noted in the following quotations, many vocalized thoughts and feelings that have overlap between personal and professional categories.

Professional: “Collegiality”

The unified focus and volume of work performed by a cohesive multidisciplinary team impacted the interviewed students. They commented on the collegial atmosphere, each person’s or discipline’s contribution, and a positive learning environment, saying. “It’s made me more aware of the importance of working in more of a collegial atmosphere where you’re discussing with everybody, and how much everybody has to contribute” (IHM7). In addition, the mission team’s focus was unified entirely on providing care for the patients. This collegial atmosphere offered opportunities for sharing and learning from other same-discipline as well as from other-discipline healthcare professionals.

It’s liberating, because you actually get back to what you got into medicine for. You can do what you came to do as opposed to spending hours on paperwork. Everybody is just there with the simple goal of assisting the patient (IHM7).

I think it’s nice because we get to put our medical skills into practice and we also get to work with a lot of different fields. Not only do we get to work with other physicians, but we also get to work with nurses, PAs, and other students, and even some civilian people who volunteer with us and come to help out. What it teaches you is that everybody has a value. And you don’t really isolate PAs as they’re
assisting physicians, or nurses as assisting physicians. Everybody is just there
with the simple goal of assisting the patient. Ant in that sense it’s a little bit
different than it might be in the States, but even in the States if you go to some
place that has a very collegiate sort of multidisciplinary atmosphere, everybody
that comes to the table is almost considered an equal (IHM7).

Students noted that on a mission, they were given more responsibilities. Students
collaborated to share experiences and skills. Also, mission student volunteers felt they
were a more intricate part of the healthcare team. When one student considered what he
might have missed by not going on a mission, said:

Some opportunities for the experience taking histories and physicals in terms of
the medical aspect [would be lost], but I think mainly what I would have been
missing was working in that collegial atmosphere and becoming more culturally
sensitive and learning about that culture. And I think those are sort of intangibles
and not necessarily considered of great value all the time in the medical field, but
I think they are things that have an important value and even if you don’t apply it
to the medical field, even in your personal life they have a lot of value (IHM7).

Some students spoke about their experiences with healthcare professionals in a
way that sounded like a student speaking about a mentor, or a favorite teacher. They
spoke about open communications, a lighthearted atmosphere, working with healthcare
professionals who loved their roles, all of which could contribute to a positive learning
environment.

I think the environment for communication is a lot more open. On the missions,
everything you do is part of the team. You’re helping. And you get to see some of
those same doctors in a much more lighthearted atmosphere. I like working with other physicians more on a mission environment than any environment we worked here back home. It’s a friendlier environment. You all know you’re on the same goal. They’re there to teach you. They know that you’re here because you really want to be here (IHM8).

During the medical missions they set me up with a good group of people, a good group of connections of physicians … people who are interested in medical missions. So you have a commonality with people who are physicians and they inspire me to do well and I can see how they make an impact in people’s lives. And I can bounce ideas off them. And I really like that: the fact that I have physician friends who have the same sort of interests as me. I feel like it would be a good experience for a lot of other medical students to have that sort of medical experience. It’s also good because in medical school I just feel like there’s a lot of physicians that don’t like what they’re doing. And they’re not going to be great teachers. They’re not going to inspire you to take care of other people. They’re just going to work because they have to. I think an experience like [a mission] helps you to at least get involved [and] know that you can practice medicine in a way focused on the patient and really with that kind of an altruistic type of view (IHM6).

Even students’ written questionnaire responses supported this subtheme as noted in the following quotes. “Working with people who love their jobs, love to teach, and love to help was inspiring to me as a medical student still early in his training”
“[I] gained a lot of respect for those who regularly go on missions” (PIHMQ21).

**Professional: Provider-patient “connections”**

Although students interact with patients in the US, for many it was with a patient actor or in a hospital setting where many feel lost somewhere in the chain of command. Students spoke about being more independent on a mission, something that added to their understanding of the connection between a provider and a patient, or provider-patient relationship.

I was able to see patients on my own. Well, had a little guidance from the upper classmen and from physicians with us, but for the most part, I was able to see patients on my own. I had to ask questions here and there, but other than that, I learned independence in terms of seeing my patients (IHM2).

[On a mission] you just jump [in]. You get your hands dirty. You jump right in. You take care of as many people as you possibly can. You develop this hunger almost for treating more people. A lot of that was the feeling that started to come in. Then you realize your patient-doctor relationship. Then you start shaking hands with your patient. You smile with them and you laugh with them. Fortunately we didn’t have any sad cases where you had to cry with them. So it really gave me a taste of what it is that I can expect and that felt good. I realize the strong connection a doctor and patient can have. I’d never seen or felt anything like that before (IHM7).

Some students realized the importance of good communication skills, and developing a relationship with each patient to enhance the patient-provider relationship,
as the following examples demonstrate. “It emphasized the importance of doctor-patient relationships. It convinced me that medicine is a special and magnanimous profession” (PIHMQ5). “I learned how to relate with patients” (IHM3).

I also learned the essence of being a good doctor: listening. The challenge of developing a patient-doctor type relationship with people of a different language and belief system has prepared me for most interpersonal skills important for a career in medicine (PIHMQ30).

One interviewed student shared his growing pessimism about developing relationships with patients, a concern felt because of malpractice fears and lack of trust by both patients and providers.

You know all the social stigma that you hear from the media or by word of mouth about malpractice or whatnot…it started to make me a little bit pessimistic about medicine. People just don’t realize how hard it is to provide care, how difficult it is to make the diagnosis. Doctors don’t realize how hard it is to be sick and how frustrating it is to be completely ignorant of something so intimate to you, or some disease. I want to say a word like mistrust between the two. To me, it felt like there is a big gap between taking the care from the healthcare providers and delivering it to those that needed it. And it just seemed like medicine was just becoming a trade like anything else. But then when you have meetings about the missions, when you see other people from other missions come and share their stories and when you look at the different groups that go out to different regions of the world and help and look at the results that they can provide. Still the need is incredible and you see all these people who are so willing to travel so far, do so
much. It just really fixed the idea of humanity in medicine, raised the importance of medicine as a profession. It made me look a little bit closer at the patients. There’s a lot of hope and exchange and contact that goes along between both the doctor and the patient that I just wasn’t noticing at first. And when I realized how wonderful medicine really is, and how happy people are to be both the healthcare providers as well as the patients receiving care, it just made me feel better about the profession I’m getting into (IHM5).

Another student who spoke about the connection between patients and providers, shared the following example.

Even though I couldn’t speak the language, as you’re holding somebody’s hand or you’re checking their pulse, or you’re looking into their eyes, you can connect. There’s a lot of connecting to do. You know, the parents were there and they could really tell I cared. And the other students on the staff cared. And when [the patient] woke up, she could kind of tell. So that was great. I mean, they loved it. And we loved it. You worked hard, but it didn’t seem like effort. That was the amazing part (IHM8).

The connections between patients and providers extended beyond trust. The students shared feelings about appreciating a culture different from their own, respecting other people and types of healthcare, and giving of themselves.

[On a mission] I just feel like you go and give what you have. This is what I have. How can I help you? You give of yourself. I really feel like there’s all these restrictions on the way you practice medicine here in the US. You can’t do this
because my insurance doesn’t let me. It’s just like you can’t give what you have fully a lot of times” (IHM6).

And I think the other thing is that it has given me more of a cultural appreciation or appreciation for culture and the need to respect where certain people are coming from when they come to the hospital for medical treatment” (IHM7).

I think it changed me most by giving me a little perspective on how culture, tradition and family influence a person’s ideas about health and medicine. I think sometimes it’s easy to dismiss someone’s misbelief as ignorance without understanding what all has gone into shaping that belief. Hopefully as I face patient’s beliefs in the future I can approach them with an understanding of the possible cultural basis behind them and sensitivity in approaching patient education (PIHMQ 31).

**Personal: Relationships**

Interpersonal relationships and “connecting” with others extended to other mission volunteers from the US as well as to participants from other countries. Students spoke about relating to and learning about students from other countries and cultures, and gaining respect for the other person’s responsibilities. One spoke about being touched by others, meaning patients who helped her learn as well as other healthcare professionals with similar values about humanity.

I have a better appreciation for the foreign medical students and what they often go through. Because my conception before was like, Oh, they’re rich in their country and now they got sent over here to do their graduate school studies. And that is not always the case though. In the Philippines, a lot of what they do is to
send the firstborn through school. The firstborn stops and gets a job until you get the rest of their brothers and sisters through undergrad. Then they would go back and pursue their medical degree. And then that may involve training over there still and coming over here. So a lot of difference as far as bring that with people skills. You get slower to make a judgement where people come from (IHM8).

My experience on the PAMS Ayacucho mission taught me a great deal about what basic healthcare and compassion means to people. Because of the situation we were placed in, I think I observed this to a much greater extent than I would have in the USA (PHIMQ21).

I was also very touched by the people here in general. I mean the people in our group. They didn’t have to do what they did. They didn’t have to spend the money that they did to get themselves to these countries or raise the funds for the drugs or the equipment or anything like that. But they still did it and that was very touching to me, and it kind of reiterated the fact that there are people out there in our communities that have the same goals that I do, and that was very encouraging for me (IHM2).

To briefly summarize, the students spoke positively about the mission experiences. These qualitative findings indicate support for the four categories of Wilson’s model. Further, as all interviewees were students in a healthcare discipline, a professional subtheme emerged within each of Wilson’s categories. This finding serves to enhance the understanding of the impact of an international experience for these healthcare professional students. Qualitative written responses on the questionnaire offered further support for the interview data.
Quantitative Results

Findings by Quantitative Research question and subscale

As discussed previously, the Cronbach’s alpha test for internal consistency and Spearman’s rho test for reliability stability of the survey instrument yielded acceptable levels of reliability. The PIHMQ research data was used next to consider the students’ perceived level of change in each item and subscale to answer the quantitative research questions. The results of the survey are presented and discussed below:

Research question I A: Will respondents report a perceived change in the following areas after participating on an IHM:

Substantive Knowledge of

1. A different country or culture
2. Professional cognitive development

The students’ perceptions of change indicated that those who participated in an IHM believed that their knowledge improved in both personal and professional areas. For this scale, the lowest mean perception of change was 3.2187 on the item asking about gathering information about the patient’s support system. The highest item mean response was 4.4063 on a question regarding learning about atypical diseases. For the Substantive Knowledge subscale, the students’ mean perception of change was 3.7627.

The data explored to answer this research question indicated that participating students did perceive a change in their substantive knowledge of a different country or culture and in their professional cognitive development. The complete set of descriptive statistics explored to answer this research question is found in Table 9.
Table 9

Students’ Perceived Change Following IHM Participation:

<table>
<thead>
<tr>
<th>Substantive Knowledge Subscale</th>
<th>Mean Score</th>
<th>Standard Deviation</th>
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</thead>
<tbody>
<tr>
<td>Q1A Substantive Knowledge: Different country</td>
<td>4.1250</td>
<td>.7513</td>
</tr>
<tr>
<td>Q1B Substantive Knowledge: Different healthcare system</td>
<td>4.1875</td>
<td>.7803</td>
</tr>
<tr>
<td>Q1C Substantive Knowledge: Different culture</td>
<td>4.1250</td>
<td>.7513</td>
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<tr>
<td>Q1D Substantive Knowledge: Health beliefs</td>
<td>3.6250</td>
<td>.8707</td>
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<tr>
<td>Q1E Substantive Knowledge: Other country healthcare professionals</td>
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<td>1.1570</td>
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<tr>
<td>Q2A Substantive Knowledge: Patient health history information</td>
<td>3.4375</td>
<td>.9817</td>
</tr>
<tr>
<td>Q2B Substantive Knowledge: Data re: patient environment</td>
<td>3.5000</td>
<td>.8799</td>
</tr>
<tr>
<td>Q2D Substantive Knowledge: Patient’s support system</td>
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<td>1.0075</td>
</tr>
<tr>
<td>Q2F Substantive Knowledge: Using learned physical exam skills</td>
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<tr>
<td>Q2G Substantive Knowledge: “new” uses for physical exam skills</td>
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<td>Q2H Substantive Knowledge: strengths of other healthcare disciplines</td>
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</tr>
<tr>
<td>Q2I Substantive Knowledge: Learning student’s healthcare discipline role</td>
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<td>.9087</td>
</tr>
<tr>
<td>Q2J Substantive Knowledge: Learning about atypical diseases (for US)</td>
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</tr>
<tr>
<td>Q2K Substantive Knowledge: Learning atypical treatments (compared to US)</td>
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<td>1.1622</td>
</tr>
</tbody>
</table>

Perceived mean change for Subscale: 3.7627

N = 32
Research Question I B: Will respondents report a perceived change in the following areas after participating on an IHM:

Perceptual Understanding

1. Appreciation for US healthcare resources
2. Professional behavior/thinking skills
3. Broadened perspectives

There was a change in Perceptual Understanding as rated by the students who participated on an IHM. The research participants perceived level of change ranged from an outlying low of 2.2188 to a high of 4.7500. For the Perceptual Understanding subscale, students perceived an average level of change at 3.6652.

The data explored to answer this research question indicated that the participating students did perceive a change in their Perceptual Understanding, specifically in the areas of 1) appreciation for US healthcare resources, 2) professional behavior/thinking skills and 3) broadened perspectives. The complete data explored to answer this research question are found in Table 10.

Research Question I C: Will respondents report a perceived change in the following areas after participating on an IHM:

Personal Growth/ Growing as an Individual

1. Change in personal characteristics
2. Change in self-confidence
3. Changed insight
4. “Connecting” in professional practice
<table>
<thead>
<tr>
<th>Question</th>
<th>Mean Score</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q2C Perceptual Understanding: patient's economic status</td>
<td>4.0000</td>
<td>1.1072</td>
</tr>
<tr>
<td>Q2E Perceptual Understanding: considering other available resources</td>
<td>3.6562</td>
<td>1.1248</td>
</tr>
<tr>
<td>Q2L Perceptual Understanding: considering alternative treatments</td>
<td>3.0313</td>
<td>1.2568</td>
</tr>
<tr>
<td>Q6A Broadened Perspectives: culture awareness different country</td>
<td>4.4688</td>
<td>.6713</td>
</tr>
<tr>
<td>Q6B Broadened Perspectives: Different type of healthcare on health</td>
<td>4.0000</td>
<td>1.0160</td>
</tr>
<tr>
<td>Q6C Broadened Perspectives: Influence of culture on health</td>
<td>4.0937</td>
<td>.8561</td>
</tr>
<tr>
<td>Q6D Broadened Perspectives: Influence of environment on health</td>
<td>4.6562</td>
<td>0.5463</td>
</tr>
<tr>
<td>Q6E Broadened Perspectives: Influence of beliefs on health</td>
<td>3.9063</td>
<td>1.1739</td>
</tr>
<tr>
<td>Q6F Broadened Perspectives: Influence of economic status on health</td>
<td>4.7500</td>
<td>.5680</td>
</tr>
<tr>
<td>Q6G Broadened Perspectives: Influence of support systems on health</td>
<td>3.9062</td>
<td>1.2791</td>
</tr>
<tr>
<td>Q6H Broadened Perspectives: Pre-conceptions of people from other country</td>
<td>3.4688</td>
<td>1.2439</td>
</tr>
<tr>
<td>Q3BR Perceptual Understanding: US healthcare quality</td>
<td>4.0625</td>
<td>.8776</td>
</tr>
<tr>
<td>Q3DR Perceptual Understanding: US indigent healthcare</td>
<td>3.5313</td>
<td>1.0155</td>
</tr>
<tr>
<td>Q3A Perceptual Understanding: view of US healthcare availability</td>
<td>4.0938</td>
<td>.8561</td>
</tr>
<tr>
<td>Q3C Perceptual Understanding: positive opinion of US healthcare services for non-US persons</td>
<td>4.0000</td>
<td>.9837</td>
</tr>
<tr>
<td>Q3E Perceptual Understanding: positive opinion US healthcare for non-US culture persons</td>
<td>3.3750</td>
<td>.9755</td>
</tr>
<tr>
<td>Q3F Perceptual Understanding: belief in quality healthcare</td>
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<td>1.2115</td>
</tr>
<tr>
<td>Q5A Assess patient health problems</td>
<td>3.5625</td>
<td>.8007</td>
</tr>
<tr>
<td>Q5B Assess patient needs</td>
<td>3.5625</td>
<td>1.0758</td>
</tr>
<tr>
<td>Q5C Plan patient treatment(s)</td>
<td>3.4375</td>
<td>1.2165</td>
</tr>
<tr>
<td>Q5D Provide patient education</td>
<td>3.6250</td>
<td>1.2636</td>
</tr>
<tr>
<td>Q5E Provide patient treatment(s)</td>
<td>3.4375</td>
<td>1.1897</td>
</tr>
<tr>
<td>Q5F Evaluate plan of care</td>
<td>3.4687</td>
<td>1.2948</td>
</tr>
<tr>
<td>Q5G Evaluate results of patient education</td>
<td>2.2188</td>
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<tr>
<td>Perceived mean change for subscale</td>
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<td></td>
</tr>
</tbody>
</table>

N = 32
The Personal Growth Scale was re-named Growing as an Individual to avoid confusion between personal changes within each scale and individual growth, which includes personal and professional components. The lowest item response mean perception of change was 3.4375 and highest response mean was 4.3125, with both indicating notable growth as an individual.

The data explored to answer this research question indicated that the participating students did perceive a change in the Growing as an Individual category, specifically in the areas of 1) personal characteristics, 2) self-confidence, 3) insight, and 4) “connecting” in professional practice. The data explored to answer this research question are found in Table 11.

**Research Question I D:** Will respondents report a perceived change in the following areas after participating on an IHM:

Interpersonal Connections

1. Working with others
2. Gained respect for other culture people

The data explored to answer this research question indicated that participating students did perceive a change in their Interpersonal Connections scale, specifically in the areas of working with others and gaining respect for people from other cultures. The average perceived change for this subscale was 3.7216. The descriptive data used to answer this research question are found in Table 12.
Table 11

Students’ Perceived Change Following IHM Participation:

Personal Growth Subscale

<table>
<thead>
<tr>
<th></th>
<th>Mean Score</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q4B  Work on multidisciplinary team</td>
<td>3.8750</td>
<td>.8707</td>
</tr>
<tr>
<td>Q4C  Work on multicultural team</td>
<td>4.1250</td>
<td>.9070</td>
</tr>
<tr>
<td>Q4D  Work with other culture families</td>
<td>3.9375</td>
<td>.8776</td>
</tr>
<tr>
<td>Q4E  Work in healthcare profession</td>
<td>3.9375</td>
<td>1.0453</td>
</tr>
<tr>
<td>Q4F  Help others with other culture people</td>
<td>3.9687</td>
<td>1.0313</td>
</tr>
<tr>
<td>Q7A  Changed empathy on return</td>
<td>3.6875</td>
<td>1.1483</td>
</tr>
<tr>
<td>Q7B  Sensitivity to needs of other-culture people</td>
<td>3.7500</td>
<td>1.1072</td>
</tr>
<tr>
<td>Q7C  Sensitivity to needs of other-country people</td>
<td>3.8125</td>
<td>.9980</td>
</tr>
<tr>
<td>Q7D  Patience with non-US citizens</td>
<td>3.7500</td>
<td>1.2700</td>
</tr>
<tr>
<td>Q7E  Tolerance towards other beliefs</td>
<td>3.4375</td>
<td>1.3425</td>
</tr>
<tr>
<td>Q7F  Adaptability in different situations</td>
<td>4.3125</td>
<td>.9651</td>
</tr>
<tr>
<td>Q8A  Learn about self</td>
<td>4.0625</td>
<td>.8400</td>
</tr>
<tr>
<td>Q8B  Reflect on beliefs</td>
<td>3.9062</td>
<td>.9955</td>
</tr>
<tr>
<td>Q8C  Connect with emotions of caring/comforting</td>
<td>4.2500</td>
<td>.9158</td>
</tr>
<tr>
<td>Q8D  Recognize patients as unique individuals</td>
<td>3.5937</td>
<td>1.4110</td>
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</table>

Perceived mean change for subscale 3.8926

N = 32
<table>
<thead>
<tr>
<th>Question</th>
<th>Description</th>
<th>Mean Score</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q5H</td>
<td>Effectively work on multidisciplinary team</td>
<td>3.8437</td>
<td>1.0809</td>
</tr>
<tr>
<td>Q5I</td>
<td>Effectively work on multicultural team</td>
<td>3.8125</td>
<td>1.2032</td>
</tr>
<tr>
<td>Q5J</td>
<td>Work with other culture patients</td>
<td>3.9375</td>
<td>1.0140</td>
</tr>
<tr>
<td>Q5K</td>
<td>Help co-workers with other culture patients</td>
<td>3.6875</td>
<td>1.2811</td>
</tr>
<tr>
<td>Q6I</td>
<td>Need to mediate for other-culture individuals</td>
<td>3.3438</td>
<td>1.1531</td>
</tr>
<tr>
<td>Q8E</td>
<td>Gain respect for other team members</td>
<td>4.0938</td>
<td>.9625</td>
</tr>
<tr>
<td>Q8F</td>
<td>Gain respect for peers</td>
<td>3.5938</td>
<td>1.3164</td>
</tr>
<tr>
<td>Q8G</td>
<td>Gain respect for patients</td>
<td>3.7188</td>
<td>1.2243</td>
</tr>
<tr>
<td>Q8H</td>
<td>Gain respect for other-culture people</td>
<td>3.7500</td>
<td>1.2700</td>
</tr>
<tr>
<td>Q8I</td>
<td>Gain respect for other-religion people</td>
<td>3.3438</td>
<td>1.4053</td>
</tr>
<tr>
<td>Q8J</td>
<td>Gain respect for other-economic people</td>
<td>3.8125</td>
<td>1.2556</td>
</tr>
</tbody>
</table>

Perceived mean change for subscale 3.7216

N = 32
Research question II A: Will respondents report a perceived change in self-efficacy related to IHM experiences in the following areas:

Mastery experiences

1. As a healthcare professional student
2. With persons from another country/culture

Data for the professional mastery experiences as a student indicated a mean perceived change of 3.6840. In this subscale, the minimum item level of perceived change was 3.4375 and maximum level of perceived change was 3.9375. This data indicated that the research participants perceived a change in self-efficacy related to mastery experiences as a healthcare professional student. The complete descriptive statistics for the subscale professional mastery experiences are found in Table 13.

The results for the subscale for cultural mastery experiences indicated that the mean scores of students’ perceptions of changed positively, with an average for the subscale at 3.9115. The range for the perception of change was 3.6875 to 4.1250. Due to these findings, the answer to this research question indicated that the students perceived a positive change in cultural self-efficacy related to mastery experiences that occurred while on an IHM. The complete descriptive statistics for the PIHMQ subscale evaluating cultural mastery experiences is found in Table 14.
<table>
<thead>
<tr>
<th>Question</th>
<th>Description</th>
<th>Mean Score</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q5A</td>
<td>Assess patient health problems</td>
<td>3.5625</td>
<td>.8007</td>
</tr>
<tr>
<td>Q5B</td>
<td>Assess patient needs</td>
<td>3.5625</td>
<td>1.0758</td>
</tr>
<tr>
<td>Q5C</td>
<td>Plan patient treatment(s)</td>
<td>3.4375</td>
<td>1.2165</td>
</tr>
<tr>
<td>Q5D</td>
<td>Provide patient education</td>
<td>3.6250</td>
<td>1.2636</td>
</tr>
<tr>
<td>Q5E</td>
<td>Provide patient treatment(s)</td>
<td>3.4375</td>
<td>1.1897</td>
</tr>
<tr>
<td>Q5H</td>
<td>Effectively work on multidisciplinary team</td>
<td>3.8437</td>
<td>1.0809</td>
</tr>
<tr>
<td>Q4A</td>
<td>Working with patients</td>
<td>3.8750</td>
<td>.6599</td>
</tr>
<tr>
<td>Q4B</td>
<td>Work on multidisciplinary team</td>
<td>3.8750</td>
<td>.8707</td>
</tr>
<tr>
<td>Q4E</td>
<td>Work in healthcare profession</td>
<td>3.9375</td>
<td>1.0453</td>
</tr>
<tr>
<td>Perceived mean change for subscale</td>
<td>3.6840</td>
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</tbody>
</table>

N = 32
### Table 14

**Students’ Perceived Change Following IHM Participation:**

**Mastery Experiences: Cultural**

<table>
<thead>
<tr>
<th></th>
<th>Mean Score</th>
<th>Standard Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Q4C Work on multicultural team</td>
<td>4.1250</td>
<td>.9070</td>
</tr>
<tr>
<td>Q4D Work with other culture families</td>
<td>3.9375</td>
<td>.8776</td>
</tr>
<tr>
<td>Q4F Help others with other culture people</td>
<td>3.9687</td>
<td>1.0313</td>
</tr>
<tr>
<td>Q5I Effectively work on multicultural team</td>
<td>3.8125</td>
<td>1.2032</td>
</tr>
<tr>
<td>Q5J Work with other culture patients</td>
<td>3.9375</td>
<td>1.0140</td>
</tr>
<tr>
<td>Q5K Help co-workers with other culture patients</td>
<td>3.6875</td>
<td>1.2811</td>
</tr>
<tr>
<td>Mean perceived change</td>
<td>3.9115</td>
<td></td>
</tr>
</tbody>
</table>

N = 32
Research question II B: Will respondents report a perceived change in self-efficacy related to IHM experiences in the following area: Cognitive processes

The results for the subscale for cognitive processes had an average perceived change score of 3.8654. In this subscale, the lowest mean perception of change was 3.2187 and greatest perception of change was 4.7500. The data explored to answer this research question indicated that the participating students did perceive a change in cognitive processes which impacted self-efficacy related to mission experiences. The complete descriptive statistics for the self-efficacy cognitive processes subscale are found in Table 15.

Research question II C: Will respondents report a perceived change in self-efficacy related to IHM experiences in the following area: Affective processes

The data explored to answer this research question indicated that, on average, participants perceived a change at a level of 3.8188. In this subscale, the minimum perceived change was 3.3438 and maximum change was 4.3125. The complete descriptive statistics for the self-efficacy affective processes subscale are found in Table 16.
Table 15

Students’ Perceived Change Following IHM Participation:

Cognitive Processes

<table>
<thead>
<tr>
<th>Question</th>
<th>Substantive Knowledge</th>
<th>Mean Score</th>
<th>Standard Deviation</th>
</tr>
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<tr>
<td>Q1A</td>
<td>different country</td>
<td>4.1250</td>
<td>.7513</td>
</tr>
<tr>
<td>Q1B</td>
<td>different healthcare system</td>
<td>4.1875</td>
<td>.7803</td>
</tr>
<tr>
<td>Q1C</td>
<td>different culture</td>
<td>4.1250</td>
<td>.7513</td>
</tr>
<tr>
<td>Q1D</td>
<td>cultural health beliefs</td>
<td>3.6250</td>
<td>.8707</td>
</tr>
<tr>
<td>Q1E</td>
<td>other country healthcare professionals</td>
<td>3.6250</td>
<td>1.1570</td>
</tr>
<tr>
<td>Q2A</td>
<td>patient health history information</td>
<td>3.4375</td>
<td>.9817</td>
</tr>
<tr>
<td>Q2B</td>
<td>data re: patient environment</td>
<td>3.5000</td>
<td>.8799</td>
</tr>
<tr>
<td>Q2C</td>
<td>patient's economic status</td>
<td>4.0000</td>
<td>1.1072</td>
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<tr>
<td>Q2D</td>
<td>patient's support system</td>
<td>3.2187</td>
<td>1.0075</td>
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<tr>
<td>Q2E</td>
<td>considering other available resources</td>
<td>3.6562</td>
<td>1.1248</td>
</tr>
<tr>
<td>Q2F</td>
<td>using learned physical exam skills</td>
<td>4.0000</td>
<td>.9837</td>
</tr>
<tr>
<td>Q2G</td>
<td>&quot;new&quot; uses for physical exam skills</td>
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<td>1.1284</td>
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<td>Q2J</td>
<td>learning about atypical diseases</td>
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<td>.8370</td>
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<td>Q2K</td>
<td>learning atypical treatments</td>
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<td>1.1622</td>
</tr>
<tr>
<td>Q2L</td>
<td>considering alternative treatments</td>
<td>3.0313</td>
<td></td>
</tr>
<tr>
<td>Q6A</td>
<td>Culture awareness different country</td>
<td>4.4688</td>
<td>.6713</td>
</tr>
<tr>
<td>Q6C</td>
<td>Influence of culture on health</td>
<td>4.0937</td>
<td>.8561</td>
</tr>
<tr>
<td>Q6D</td>
<td>Influence of environment on health</td>
<td>4.6562</td>
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<td>Q6E</td>
<td>Influence of beliefs on health</td>
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<td>1.1739</td>
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<tr>
<td>Q6F</td>
<td>Influence of economic status on health</td>
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<td>.5680</td>
</tr>
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<td>Q6G</td>
<td>Influence of support systems on health</td>
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<td>1.2791</td>
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<tr>
<td>Mean perception of change for subscale</td>
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N = 32
<table>
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<th>Standard Deviation</th>
</tr>
</thead>
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<tr>
<td>Q7A</td>
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<td>1.1483</td>
</tr>
<tr>
<td>Q7B</td>
<td>Sensitivity to needs of other-culture people</td>
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<td>1.1072</td>
</tr>
<tr>
<td>Q7C</td>
<td>Sensitivity to needs of other-country people</td>
<td>3.8125</td>
<td>.9980</td>
</tr>
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<td>Q7D</td>
<td>Patience with non-US citizens</td>
<td>3.7500</td>
<td>1.2700</td>
</tr>
<tr>
<td>Q7E</td>
<td>Tolerance towards other beliefs</td>
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<td>1.3425</td>
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<td>Q7F</td>
<td>Adaptability in different situations</td>
<td>4.3125</td>
<td>.9651</td>
</tr>
<tr>
<td>Q8A</td>
<td>Learn about self</td>
<td>4.0625</td>
<td>.8400</td>
</tr>
<tr>
<td>Q8B</td>
<td>Reflect on beliefs</td>
<td>3.9062</td>
<td>.9955</td>
</tr>
<tr>
<td>Q8C</td>
<td>Connect with emotions of caring/comforting</td>
<td>4.2500</td>
<td>.9158</td>
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<td>Q8E</td>
<td>Gain respect for other team members</td>
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<td>.9625</td>
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<tr>
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<td>Gain respect for other-religion people</td>
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N = 32
Summary

The impact of an IHM on participating healthcare professional students was described in this chapter. The discovery of the IHM impact was made using qualitative and quantitative methods. A rich description of the impact was provided using interviewed students’ stories and descriptions of their experiences. Through extensive immersion in these transcripts, the meanings of the stories and experiences were found. Measurable results of the impact of the mission experiences were explored using a questionnaire. These results consistently indicated that the students perceived changes following the mission experiences. All research questions were answered in this chapter using the qualitative and quantitative data presented.
Chapter 5

SUMMARY, DISCUSSION, IMPLICATIONS
AND RECOMMENDATIONS

This concluding chapter is organized into the following sections: 1) Summary, 2) Triangulation of qualitative and quantitative data discoveries, 3) Implications of the discoveries, 4) Recommendations for future research, and 5) Conclusions.

Summary

This explorative, mixed-method study was conducted to determine the impact of an IHM on participating students. The research question was: What is the perceived impact of participation on an international healthcare mission on a healthcare professional student? Subquestions were: 1) What was/were especially meaningful experience(s) for the student related to the IHM? Why? 2) Did the students’ cultural sensitivity self-efficacy change because of his or her IHM experience? 3) Did the students’ experiences on an IHM change his or her professional practice self-efficacy? 4) Was the students’ perceived ability to explore health beliefs and behaviors of people from other cultures altered by the IHM experience?

Heidegger’s philosophy guided the researcher’s use of hermeneutic phenomenology and van Manen’s method guided data analysis in the qualitative component of the study. The quantitative data collection was completed via a survey.
The survey was developed using Wilson’s IIEM and Bandura’s TSE. The survey was piloted and found to be of sufficient validity and reliability for use in the quantitative component of this research.

The following research questions were developed for the quantitative method used in this study. These questions were developed in consideration of 1) the purpose of the study, 2) the methods utilized to explore the research questions, and 3) the model and theory which guided the inquiry. Students perceived a change in all component areas of the research questions.

The quantitative research questions are:

I. Will respondents report a perceived change in the following areas after participation on an IHM:

   A. Substantive Knowledge

   1. Of a different country or culture

   2. Of professional cognitive development

   B. Perceptual Understanding

   1. Appreciation of U.S. healthcare resources

   2. Professional behavior

   3. Broadened perspectives

   C. Personal Growth/Growing as an Individual

   1. Change in personal characteristics

   2. Change in self-confidence

   3. Changed personal insight

   4. “Connecting” in professional practice
D. Interpersonal Connections

1. Working with others
2. Gained respect for other culture people

II. Will respondents report a perceived change in self-efficacy in the following areas after participation in an IHM:

A. Mastery experiences
   1. Professional
   2. Cultural

B. Cognitive processes

C. Affective processes

**Triangulation of Qualitative and Quantitative Discoveries**

**Substantive Knowledge**

Qualitative findings from interviews pointed to changes in personal and professional knowledge. Interviewed students spoke about putting didactic learning into practice, experiences that helped to solidify knowledge. For example, techniques of a physical examination learned in a textbook or practice lab took on new importance and meaning once applied to individual patient situations. Research by Ault et al., (2002), Carson et al., (2002), and Mavis (2001) found that knowledge impacted self-confidence in the area of skill performance. Additionally, learning about and performing clinical skills that could take the place of a laboratory test, x-ray, or other expensive or unavailable technology provided valuable lessons for healthcare professional students.
The medical students spoke about learning how to put their thoughts in a logical order, putting diagnoses together, “thinking” like a doctor. The repetition of using new and previously learned but unpracticed skills, learning about and being exposed to diseases generally not seen in the US, and seeing advanced stages of diseases all improved the students’ knowledge base in a professional setting. Students learned first-hand about healthcare providers and the healthcare systems in a developing country. This knowledge provided the basis for appreciating the skills and resourcefulness of healthcare providers in a developing country. Both interviewed and surveyed students in this research believed that participating in an IHM helped to improve their knowledge and clinical confidence.

Students also reported that their personal knowledge about another country and culture were enhanced by the mission experiences. Students reported learning words in a previously unstudied language, or improving their ability to speak in a second language. Because of the remote mission locations, interviewed students spoke about the environment, minimal infrastructure, lack of safe water, and minimal sanitation. The remote locations and mission work also allowed students to interact with residents of the developing country on a one-on-one, personal level with individuals. Students reported that these experiences helped them to learn about the people and culture of the country through unique contacts.

Geiger (2001) stressed that developing cultural competence is an urgent responsibility for healthcare professionals. Culture influences an individual’s health and health behaviors (Denboba et al., 1998). Although other authors have written about different methods to develop cultural competence (Carrillo et al., 1999; Sommer, 2001;
Thomas, Walpin & Tuella, 2001; Azad et al., 2002), evaluation of the outcome of the different methods to know what works is lacking (Geiger, 2001). This research offers an evaluation of students’ perceptions of the outcome of the IHM experience on their cultural sensitivity. Their perceptions of increased cultural sensitivity may positively impact how they interact with non-US native patients, families and team members. The ability to offer culturally sensitive healthcare and patient education can enhance client understanding and compliance (Carillo, Green & Betancourt, 1999).

The quantitative results obtained from the PIHMQ support and confirm the qualitative findings. The mean score for the Substantive Knowledge subscale indicated that students perceived that participating on an IHM helped them to experience a “moderate” to “significant” improvement in substantive knowledge. In this grouping of questions, one item is of particular interest. This question (2J) asked if the participant’s thinking/cognitive skills improved regarding learning about diseases not typically found in the US. The students reported that the IHM helped them to experience a “significant” to “tremendous” level of improvement.

The lowest score on the Substantive Knowledge subscale was for a question which asked if the student’s thinking/cognitive skills improved regarding gathering information about the patient’s support system. The mean score for this question represents the students’ perception of a “moderate” to “significant” improvement due to the IHM experiences. It is possible that language barriers as well as time constraints with the volume of patients seen on a mission could have negatively influenced a student’s ability to gather information about the patient’s support system. Also, students in early stages of some professional programs may not have learned about the significance of
exploring available patient supports and would not consider this a part of their role as a healthcare professional.

**Perceptual Understanding**

Analysis of the qualitative and quantitative data indicated that students believed that participating on an IHM changed their perceptual understanding. Participants commented that the mission experiences offered opportunities to become more “well-rounded.” They voiced an improved understanding of why physicians in another country had strong clinical skills, why the state of an individual’s health in another country differed from in the US, and how healthcare systems and care availability were so different. Some noted their opinions of what a “need” was had changed. Others reported becoming aware of the differences in level of appreciation expressed by mission patients and US clients. Data that surfaced from the interviews also indicated that the students gained insight into the need for cohesive teamwork, information that was not asked on the questionnaire.

Perceptual understanding that surfaced from the interviews also offered insights that were not specifically obtained by the PIHMQ. Students compared resources, infrastructure, and material wealth in the US to those in the mission countries. Participants noted the mission experience was “eye-opening” as many had not been aware of the vast differences between the US and other countries. Interviewees mentioned gaining “respect” through this new awareness. Qualitative findings agreed with the quantitative results, while offering additional points to clarify understanding the phenomenon under scrutiny.
Quantitative results supported the qualitative findings in this category of Wilson’s model. The items in question three on this subscale are notable. These questions asked about the student’s views on U.S. healthcare resources (3A), healthcare quality (3BR), and healthcare availability (3C). Three items on this same block of questions asked about the student’s beliefs on US healthcare availability for indigent people (3DR), services for persons from another country (3E), and quality healthcare for people from another culture or country (3F). The responses for all items in question three, but especially the later three items could be influenced by how much clinical experience the student had in the US. If a student was in the early years of his or her healthcare educational program, it might not be possible to respond from a position of experience or knowing about U.S. healthcare services for people who were indigent, from another country, or another culture.

The question with the lowest mean item score on the Perceptual Understanding subscale asked if the student thought the IHM experiences changed his or her ability to evaluate the results of patient education. The mean score of the students’ perceptions of change fell between “minimal improvement” and “moderate improvement”. Several scenarios could explain this mean score: 1) it is possible that mission participants did not have the time or opportunity to do follow-up evaluation of any health teaching done, 2) were not in a healthcare discipline that stressed patient education, or 3) were hampered by lack of a working knowledge of the patient’s language for follow-up evaluation of the education done.
**Growing as an Individual**

Students’ responses to both the interview and survey revealed that they believed the IHM helped them grow as an individual. These findings are corroborated by other researchers who studied international experiences related to coursework (Haloburdo & Thompson, 1998; Holstege, 2000; Rosenkoetter et al., 1995; Willard-Holt, 2001).

Interviewed students shared how their individual beliefs and values were impacted by the mission experiences. Several commented that the mission experiences helped them to set new or higher standards for their professional conduct and practice. In particular, the students mentioned an enhanced awareness or appreciation for their patient’s background and culture. For some students, the mission experiences helped them to focus on their future career plans. Some students mentioned wanting to work with indigent people, continue mission or non-profit work, or specialize in a particular area of surgery or in an advance nursing practice role. These later findings support the results of other researchers, who noted that context-specific self-efficacy can influence career choices and goal setting (Appelbaum & Hare, 1996; Lorsbach & Jinks, 1999; Zimmerman, 2000).

The students’ scores on the subscale titled, “Growing as an Individual” supported a positive change, or impact on the mission participants. Students’ reported that participating in an IHM helped them to experience a “Moderate” to “Significant” improvement in personal growth. A question which queried about connecting with the emotions of caring for patients (8C) is of particular interest, as the interviewed students also spoke of “connecting” with the patients. This finding was also noted in the research by Haloburdo and Thompson (1998), Pross (2000) and St. Clair and McKenry (1999),
but, of these researchers, only Pross studied students after an international healthcare mission.

Other notable quantitative results are questions that asked about working on a multicultural team (4C) and asking about adaptability in different situations (7F). The mean scores for both items indicated that the students perceived more than a “Significant improvement” in the areas questioned. The different types of missions (hospital based versus day clinics in a remote area) and the student’s knowledge and comfort level could influence the students’ perception of how they improved. A student working with other culture healthcare professionals in a hospital would have more exposure and opportunities to base their response than a student whose work was in a remote day clinic with other U.S. mission volunteers. Also, a student in his or her final year of an educational program should have a larger knowledge base from which to make decisions on how to best adapt care under less than ideal circumstances, a factor to consider regarding the adaptability question.

Two other quantitative items had notable mean scores, 1) the question which asked the students about tolerance towards other beliefs (7E), and 2) the item which queried about recognizing patients as unique individuals (8D). Although students’ responses for both items supported their perceptions of improvement between “Moderate” to “Significant improvement”, the responses could indicate two different perceptions. First, the students may not have attributed the change to the mission experience. The other rationale could be that the students perceived their tolerance towards other beliefs and recognition of patients as individuals was high prior to the
mission experiences. In either case, the perceived change in perception could be altered from the evaluation intended.

**Interpersonal Connections**

The qualitative findings as well as the quantitative results indicated that students believed that participating on an IHM brought improvement in Interpersonal Connections. The students reported that participating on an IHM helped them to experience “Moderate” to “Significant” changes in Interpersonal Connections. The qualitative findings supported and enhanced the understanding of these changes.

The highest mean score in the Interpersonal Connections subscale was on the item which asked if students perceived a gain in respect for other healthcare team members (8E). The mean score for this item was slightly more than a “Significant” perceived gain in respect. This data was confirmed and further expanded upon in the qualitative interviews, as students commented about the unified mission team focus on patient care. Interviewees also spoke about the collegial atmosphere that offered sharing and learning opportunities. Students commented on the contributions from persons as well as other discipline healthcare professionals. Study participants noted that those on the missions truly loved their chosen role in healthcare and were exceptional professional role models. This finding supports that of Carson et al., (2002), who noted that medical students with a greater knowledge of cardiovascular nutrition through specific classes, clinical opportunities, and a positive role model for patient nutrition education had greater self-efficacy addressing patient nutrition education needs.

The question with the lowest mean score in the Interpersonal Connections scale indicated that students perceived a “Moderate” to “Significant” gain in their level of
respect for people of religions other than their own. These data were confirmed by some of the interviewed students, who spoke of the faith of the people in the developing country in spite of few resources or living in extreme poverty. However, it is possible that the type mission experienced by the student influenced his or her awareness of the religion on and in a culture. If a student worked in a remote village without a church versus in a city with many churches, or on a mission which was directed by a Catholic priest, the mission experience would be considerably different, thus impacting their response to this survey item.

Other qualitative data supported the results of the interpersonal connections on the survey in this research. Students spoke about recognizing the importance of interpersonal connections between care providers and patients. Within this category, students talked about the need for good communication skills, fixing “the idea of humanity” in healthcare, respecting other people, different types of healthcare, and working to understand other health beliefs.

**IHM influences on Self-Efficacy**

Interviewed students spoke of gaining self-confidence with personal and professional skills on a mission. They relayed stories of feeling more comfortable interacting with people: patients, family members, people from other cultures and other healthcare professionals. Working on a healthcare team that was focused on patient care, feeling a part of the team, becoming more adaptable, and being at ease in the learning situation all aided their self-confidence, or self-efficacy as a healthcare professional. Gaining self-confidence or self-efficacy was also explored using questions about different mission experiences under Wilson’s categories, but the questions were re-grouped to
explore the impact of a mission through mastery experiences, cognitive, and affective influences. For example, questions about Cognitive Influences on self-efficacy were also used as learning questions in the Substantive Knowledge scale. In a similar manner, questions about Affective Influences were also used in Individual or Interpersonal subscales. Each of the subscale survey components that can impact self-efficacy is further discussed below.

**Mastery experiences**

Mastery experience questions included opportunities on a mission to work as a healthcare professional as well as work with people from another culture. The students’ responses indicated that the mastery experiences available on the IHM resulted in a “Moderate” to “Significant” improvement in their self-efficacy as a healthcare professional.

In the professional subscale, the highest mean score indicated nearly a “significant” improvement in perceived self-confidence working specifically in the student’s healthcare profession (4E). This finding supports those of Ault et al., (2002), who noted that direct experiences with clinical skills increased confidence and self-efficacy for students in those skills. Additionally, Haloburdo and Thompson (1998) noted the positive impact of international experiential learning to enhance didactic teaching. It is also interesting to note the narrow range of mean scores on the items in this subscale. This indicates that overall mission experiences provide opportunities for meaningful gains in professional self-efficacy.

Opportunities for working with people from another culture were explored in another subgroup of Mastery experiences. The range of mean scores in this subgroup of
questions fell between a low of “moderate” to “significant” to greater than a significant improvement. The overall results for survey items to explore the impact of cultural experiences on an IHM substantiate that the students perceived meaningful gains in cultural self-efficacy. The quantitative results for this subgroup of Mastery experience survey items further confirms the qualitative findings of gained respect, “connecting” with and “caring” for others, and working to understand other culture health beliefs discussed previously under Interpersonal Connections. These triangulated discoveries support the findings by Pross (2000), who noted the positive impact of an international experience on student’s cultural competency and relating to others.

**Cognitive influences**

As noted earlier, some questions about cognitive influences on self-efficacy were also questions on the Substantive Knowledge subscale. Here, specific questions regarding learning that could influence self-efficacy as a culturally sensitive healthcare professional were isolated and statistically explored. The “Cognitive Processes” subscale mean was nearly a “Significant” perceived level of change.

The answers to the Cognitive Influence subscale survey questions partly answered the fourth research subquestion, “Was the student’s perceived ability to explore health beliefs and behaviors of people from other cultures altered by the IHM experience?” The perceived degrees of increased awareness can be important as cognitive influences on cultural sensitivity self-efficacy. Students who are more aware of the different cultures in a country might be more alert to the great possibility of the cultural differences and beliefs in individuals from, for example, Hispanic or Asian ethnic categories. Healthcare professionals with these experiences may be more sensitive to the wide range of cultures,
and therefore more alert to the need to ask clients about beliefs held about health, healthcare, and health treatments. Applebaum and Hare (1996) explored self-efficacy as a factor for goal setting, finding that self-efficacy is central to choices of and motivation for tasks. Applebaum and Hare concluded that self-efficacy beliefs were key to managing human resources. This finding can offer insight into the education of a healthcare professional as a human resource as well as recognition of the role of knowledge on patient self-efficacy in relation to disease prevention or control.

Interviewed students validated the Cognitive Influence subscale survey results, as they spoke of surprise in learning that there were differences in Hispanic people’s food likes and dislikes, and different cultures within one country, or between different Hispanic countries. Interviewees spoke of the “eye-opening” experience of seeing the extent of poverty in the host country. They talked about the resourcefulness of the people in the developing country, a finding that agrees with research by Kollar and Ailinger (2002).

Healthcare professionals who are more aware of the influence of a client’s environment and economic status on health should be better able to utilize appropriate health treatments and teaching approaches. Through a combination of increased cognitive learning, perceptual understanding, and enhanced interpersonal relationships gained from an international healthcare mission, a student should become more sensitive as a healthcare professional to the above mentioned influences on health, and thereby provide more suitable and individualized care. As clients recognize this, perhaps they will be more accepting of the healthcare resources available to them in the US, and so in part reduce the health disparities currently seen in this country. The qualitative and
quantitative discoveries in this research indicate that participating students’ cultural sensitivity self-efficacy was positively impacted by the mission experiences, and so answers another research subquestion.

**Affective influences**

Emotional factors can also influence self-efficacy. Interviewed students spoke about how IHM experiences resulted in changes in personal beliefs and values, adaptability or flexibility, increased respect for others, and initiated a re-exploration or prompted the realization of the caring connection between with patients and provider. Students’ responses on the “Affective Influences” subscale indicated that participating on an IHM prompted affective influences on their self-efficacy. For this subscale, the mean score was rated at nearly a “Significant amount”.

Two “Affective Influence” subscale items are of interest for their lower mean scores. Even though they were the lowest mean item ratings, the level of change was perceived between a “Moderate” and “Significant” improvement. One item queried about gains in respect for people from other religions, and the other item explored a change in tolerance towards individuals with beliefs that differed from the student. The responses to these items may have been lower because 1) students were not aware of the religious beliefs of clients they treated; 2) did not explore the religious beliefs of the individuals in the area of the mission region; 3) were not personally entrenched in a religion or had religious beliefs that sought to convert others; 4) had a high level of respect for other-religion and other-belief people before the IHM experience; or 5) did not perceive themselves as able to, or avoided talking to the residents regarding religious beliefs held in the host country.
Two affective subscale items scored between a “Significant” and “Tremendous” level of perceived improvement. One item asked the student to rate the degree the IHM participation changed their adaptability in different situations. In both the interviews for this study and previous research with students on international course experiences (Willard-Holt, 2001; Wilson, 1993a) adaptability was mentioned as a notable area of growth. Adaptability, or flexibility is an important component of providing appropriate and individualized care in healthcare professions. It is an especially important component of professional competence too, as each client and situation presents with unique situations requiring application of a sound knowledge base and critical thinking skills. Care providers who are more self-confident in their situational adaptability are more professionally self-efficacious. Students who worked on an IHM provided care under less than ideal situations, adapted the care and treatments as needed for the situation, and thus personally experienced unique situations. Through the interview and/or survey, these students reflected on their performance under the less than ideal mission situations. This type of learning, when provided with supervision could prove valuable for future healthcare professionals. Incorporating an IHM as experiential education for healthcare professional students offers a wide variety of emotionally engaging opportunities for students to expand their knowledge base in clinical settings. An IHM could provide educational opportunities to build affective upon cognitive learning while offering repetitive psychomotor skills, all of which could greatly enhance professional self-efficacy.

One item was specifically asked in the “Affective influence” subscale because of the “caring” factor found in research by Haloburdo and Thompson (1998) and Pross
This question asked the students about the degree that the IHM participation helped them to connect with the emotions of caring for and comforting individuals, the non-technological aspects of care. The mean score between “Significant” and “Tremendous” indicated that the students perceived a change following their mission experiences. This score is further validated by the interviewees’ comments about “connecting” with clients, recognizing the importance and potential strength of the patient-provider relationship, and speaking about wanting to make similar connections with clients in the US. It is possible that many students who volunteered to work on an IHM already had developed the skill of connecting with patients, thus creating a ceiling effect.

The affective influences noted in this research are interesting in light of the findings by Zimmerman (2000) and Lorsbach and Jinks (1999), who wrote that self-efficacy directly influences the learning environment, student choices for personal challenges, and the student’s choices for learning. Ault also noted that students with a higher sense of self-efficacy tended to choose tasks that were more challenging, expend a greater and more sustained effort to attain a goal, and had less anxiety and more problem solving skills than students with lower self-efficacy (2002). When the students were asked to write the reasons they went on an IHM, some of the reasons cited were the desire to help others, and hands-on, practical learning. Both these reasons for mission participation could be met in a challenging environment on an IHM, and further, meeting both these personal goals could enhance self-confidence and self-efficacy. It is also possible that students who choose to go on an IHM already have a higher sense of self-efficacy that is influencing their interest for mission participation.
Implications of the discoveries

Based on the triangulated discoveries in this study, both Wilson’s model and Bandura’s TSE were supported. The following suggestions were made for healthcare professional students, educators, and practitioners as a result of the discoveries made in this research.

Wilson’s IIEM

The data in this dissertation research supported and expanded upon Wilson’s model by exploring the impact of a focused international experience. Findings from previous research using qualitative methodology supported Wilson’s model, and of these studies, one used nursing participants (Kollar & Ailinger, 2002). The IHM research presented here also used qualitative methodology, but additionally designed a quantitative survey that was framed by Wilson’s four categories and made specific for healthcare professional students. This survey may be of use for other researchers considering using Wilson’s categories to design a questionnaire.

This research supported the educational value of an IHM on participating students to enhance their growth towards gaining a global perspective, growing as an individual, and developing relationships. Students were positively impacted, both personally and professionally from an IHM. These findings have implications for expanding the mission experiences available for healthcare professional students, and exploring ways to design experiential or service learning mission opportunities in discipline appropriate coursework. Additionally, multidisciplinary international mission coursework could provide opportunities for healthcare professional students to learn about the strengths of other healthcare disciplines and the value of united teamwork. Multidisciplinary,
multicultural teamwork also provides opportunities for growth in cultural sensitivity, a factor that can improve patient-provider relationships and so reduce health disparities among the growing segment of immigrants and naturalized U.S. citizens.

**Bandura’s TSE**

The qualitative and quantitative discoveries from this research support the positive impact of an IHM on perceived professional self-efficacy. Triangulated data supported the availability of mission opportunities for mastery experiences in clinical knowledge gains, repetition of technical skills, and enhanced confidence with patient-provider as well as student-practitioner interactions. Mastery experiences are considered the strongest predictor of self-efficacy (Bandura, 1997). The Affective and Cognitive influences on self-efficacy were further supported through this research, and so offer additional support for the TSE and other research (Anderson & Betz, 2001; Carson et al., 2002). As there was no published research exploring the impact of an IHM on the self-efficacy of participating healthcare professional students, this study offers yet a different view of mastery experiences, affective and cognitive processes on the professional self-efficacy of healthcare professional students. The implications of these findings clearly indicate the positive value of IHM experiences to enhance professional self-efficacy through mastery experiences, vicarious models as well as affective and cognitive influences.

**Practice of future healthcare professionals**

Considering the changing demographics in the US, future healthcare professionals must become more culturally sensitive to contribute to changes in healthcare delivery, health education, and so hopefully reduce health disparities. The triangulated discoveries
from this research demonstrated that students who participated in an IHM perceived a
greater understanding, knowledge, respect and sensitivity to people from other countries,
cultures, religions, and economic opportunities. The implications of these findings
indicate that the IHM experiences can: 1) enhance provider-patient interactions; 2)
enhance multicultural teamwork; 3) increase the healthcare professional’s knowledge or
understanding of factors impacting a client’s health status and reception of healthcare
services and education; and 4) offer opportunities for IHM-experienced healthcare
professionals to act as a cultural mediator.

Education of healthcare professional students

This research has highlighted the many positive impacts for students who
participate on an IHM. The education of all healthcare professional students should ideallly include coursework with an IHM experience. IHM course faculty should be
experienced as educators and practitioners as well as IHM volunteers. Students should receive preparation for the IHM in advance of the travel, be offered guidance and educational direction throughout the mission experience, and follow the trek with opportunities for discussion, sharing, clarification and reflection on mission experiences.
A thoughtfully designed service-learning program or course with the above noted faculty expertise and student preparation and guidance is highly recommended as a result of this research.

Recommendations for future research

Replication of this study is recommended to validate the findings. This could be done using the same between-methods triangulation, as a qualitative study, or as a
quantitative study using the survey designed. A study of other groups of healthcare professional students might yield similar results, in which case the data discovered here would be further validated and perhaps offer some ideas for generalizing the findings across direct care healthcare professionals. Re-interviewing and re-surveying the participants in one, two, and three years following their mission experiences might yield additional insights or perceptions on the longitudinal impact of an IHM. Re-interviewing participants after additional US clinical experiences as a student, and then after a designated time as a healthcare practitioner could also yield interesting data on the long-term impact of an IHM. A third recommendation for a replication study would be to explore the impact of an IHM on healthcare professional students who had the experience as a component of a course in their educational program, comparing those findings to those from this research.

Quantitative studies generally have a minimum of 30 participants per variable. This was not possible with the small number of participants who met the criteria. Should a larger number of healthcare professional students be available to take the PIHMQ, the strength of the resulting findings would be greater than the findings from this small sample.

Students residing in different parts of the US experience the culture of their home or school environment differently than those in the Midwest. Replicating this study with students who were predominantly from a part of the US with a different cultural and ethnic/racial mix than that found in the Midwest could yield different results.

Students in this research identified practicing healthcare professionals on an IHM as ones who loved their profession. Researching why these healthcare professionals go on
international healthcare missions and how they perceive their roles on the mission as well as in the US could provide additional insight into their roles as mentors for healthcare professional students. Further, these mentors would be valuable as vicarious models to positively influence students’ self-efficacy beliefs.

Some questions on the PIHMQ were too discipline or contextually specific to provide meaningful results. For example, questions asking students about the results of health education for patients would be reasonable for those students who routinely did patient health education as a part of their discipline’s role as well as for those students who had the opportunities to follow up on the results of the teaching. For medical students who worked on a mission in a surgical area, it is possible that those students were not yet indoctrinated in the value of patient education. Also, students too new to their professional role might not include this component yet, or might not have sufficient knowledge of what teaching was needed to be able to perform this role. For these reasons, questions such as this could include a rating of “Not applicable” or “Not performed.” If the PIHMQ was used in other research, questions with continued low internal consistency could be modified or dropped from the PIHMQ.

Another change needed in the PIHMQ relates to the response scales and descriptive anchors. The Cronbach’s alphas from this initial study using the PIHMQ indicated a reasonable level of internal consistency reliability for the subscales tested. However, for some subscales the Cronbach’s alphas should be considered rough estimates because the items combined from different subscales had slightly different meanings, or anchor headings for the same number responses. In particular, the anchors
in question grouping number three should be revised to more closely approximate the wording in the other questions.

It is likely that students who participate in an IHM have higher self-confidence than those who do not participate. Ault et al., (2002) recognized that students with a higher sense of self-efficacy tended to chose challenging tasks, expended a greater and more sustained effort to attain the goals they set, and also had less anxiety and more problem-solving skills than students with lower self-efficacy. If IHM students were surveyed about different aspects of their self-efficacy as a healthcare professional before and after an IHM, would there be a change in the mean scores? Also, it would be interesting to explore the differences in self-efficacy between students who participated with those who chose not to participate on an IHM.

Self-efficacy directs an individual’s thoughts, feelings, behavior and drive (Bandura, 1994). These factors could also influence why a student chose to volunteer on an IHM mission. Students were asked why they wanted to go on an IHM in survey question 10N. Two reasons tied for the top factors. The top reasons were a desire to help the needs of others and hands-on, practical learning in healthcare. Desire to help the needy indicates an affective component to the student’s desire for the experiences, while hands-on experiences indicates interest in gaining mastery experiences. On an IHM, these opportunities would be experienced in a challenging environment. Self-efficacy development is influenced through selection processes. As all the students who participated in the IHM were self-selected for the experiences, this further supports selection processes as a factor in Bandura’s TSE as well as work by Ault et al., (2002), Lorsbach and Jenks (1999) and Zimmerman (2001). Further exploration of why students
do or do not participate on an international healthcare mission could assist their educators to design meaningful educational experiences in appropriate environments to enhance individual growth.

**Conclusions**

An IHM positively impacts healthcare professional students as follows:

1. Healthcare professional students were positively impacted both personally and professionally by an IHM in categories of Substantive Knowledge, Perceptual Understanding, Growing as an Individual, and in their interpersonal relationships.

2. Healthcare professional students perceived positive changes in their professional self-efficacy through mission mastery experiences, affective and cognitive processes.

3. IHM participating healthcare professional students were positively impacted by their interactions with other mission team members who act as role models, mentors, and teachers.

4. Students’ cultural sensitivity self-efficacy was positively impacted because of the IHM experiences.

5. Wilson’s model was validated and expanded through this research.

6. Bandura’s TSE was validated through the qualitative and quantitative discoveries in this research.

7. The PIHMQ was designed and found to be a valid, reliable instrument to explore healthcare professional students’ perceptions of their IHM experiences using Wilson’s model and Bandura’s TSE as a framework for the questionnaire.
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Appendix A

Perceptions of an International Healthcare Mission Questionnaire
Perceptions of an International Healthcare Mission Questionnaire

**Directions:** Please circle the number that best corresponds to your reply to each question. There is no right or wrong answer. The question response reflects your *thoughts and feelings* about your experiences as a healthcare professional (HP) student on your International Healthcare Mission (IHM).

1. **From participating on the IHM, how much new knowledge did you learn about:**

<table>
<thead>
<tr>
<th>None</th>
<th>Minimal</th>
<th>Moderate</th>
<th>Significant</th>
<th>Tremendous</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

   a) a different country:  
   b) health care in another country  
   c) a different culture  
   d) health beliefs in another culture  
   e) healthcare professionals in another country
**Directions:** For the next series of questions, please rate the degree of change in your thinking/cognitive skills that you can attribute to your participation on the IHM.

2. **From participating on an IHM, how much did your thinking/cognitive skills improve in the areas listed below?**

<table>
<thead>
<tr>
<th></th>
<th>No change</th>
<th>Minimal</th>
<th>Moderate</th>
<th>Significant</th>
<th>Tremendous change</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) gathering patient health history information</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>b) collecting pertinent information about the patient’s environment</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>c) considering information about a patient’s economic status</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>d) gathering information about the patient’s support system</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>e) considering other resources available to the patient</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>f) ease of using previously learned physical assessment skills</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>g) “new” uses for learned physical assessment skills</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>h) learning about the strengths of other healthcare disciplines</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>i) learning your health discipline’s role on the healthcare team</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>j) learning about diseases not typically found in the U.S.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>k) learning about treatments not typically considered in the U.S.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>l) considering alternatives to traditional “Western” medical care</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
**Directions:** For the next series of questions, please rate how *much* you may have changed your ideas about the United States healthcare system after participating on an IHM.

3. **After participating in an IHM….**

<table>
<thead>
<tr>
<th>Question</th>
<th>Strongly disagree</th>
<th>Disagree</th>
<th>Not sure</th>
<th>Agree</th>
<th>Strongly agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) my view of the U.S. healthcare resources became more positive</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>b) my view of U.S. healthcare quality became more negative</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>c) my opinion of U.S. healthcare availability became more positive</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>d) my beliefs on healthcare availability for the indigent in the U.S. became more negative</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>e) my opinion of US healthcare services for persons from another country in the U.S. became more positive</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>f) I believe people from another culture or country receive quality health care in the U.S.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
**Directions:** For the next series of questions, please rate how your self-confidence may have changed after participating on an IHM.

4. **The IHM experience** changed my *confidence*....

<table>
<thead>
<tr>
<th></th>
<th>Decreased</th>
<th>No change</th>
<th>Minimal improvement</th>
<th>Moderate improvement</th>
<th>Significant improvement</th>
<th>Tremendous improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) working with patients</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>b) working on a multi-<em>disciplinary</em> health team</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>c) working on a multi-<em>cultural</em> healthcare team</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>d) working with families from cultures other than mine</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>e) working in my HP</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>f) helping others work with people from other cultures</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
**Directions:** For the next series of questions, please rate your beliefs about any changes in your abilities to perform various professional tasks after participating on an IHM.

5. The IHM experiences changed by ability to .........

<table>
<thead>
<tr>
<th></th>
<th>Decreased</th>
<th>No change</th>
<th>Minimal improvement</th>
<th>Moderate improvement</th>
<th>Significant improvement</th>
<th>Tremendous improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) assess patient health problems</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>b) assess patient needs</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>c) plan patient treatment(s)</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>d) provide patient education</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>e) provide patient treatments</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>f) evaluate plan of patient care/treatments</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>g) evaluate results of patient education</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>h) effectively work on a multidisciplinary team</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>i) effectively work on a multicultural team</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>j) work with patients/families from cultures other than my own</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>k) help co-workers understand the needs of patients or people from another cultures</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
**Directions:** The next series of questions asks you about how the IHM may have changed your attitudes. Please rate how much the IHM changed your attitudes in each of the areas listed below:

6. **To what degree did participating on an IHM increase my awareness of....**

<table>
<thead>
<tr>
<th>Area</th>
<th>No change</th>
<th>Minimal</th>
<th>Moderate</th>
<th>Significant</th>
<th>Tremendous</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) the culture of a different country</td>
<td>1  2  3  4  5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b) a different type of healthcare</td>
<td>1  2  3  4  5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c) the influence of culture on health</td>
<td>1  2  3  4  5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d) the influence of environment on health</td>
<td>1  2  3  4  5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e) the influence of individual beliefs on health</td>
<td>1  2  3  4  5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f) the influence of economic status on health</td>
<td>1  2  3  4  5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>g) the influence of support systems on health</td>
<td>1  2  3  4  5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>h) my pre-conceptions of individuals from another country</td>
<td>1  2  3  4  5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>i) the need to mediate for individuals of another culture in the U.S.</td>
<td>1  2  3  4  5</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Directions:** The next series of questions asks about how the IHM may have changed your feelings. Please rate how much the IHM changed your feelings in each of the areas listed below:

7. **To what degree did participation on an IHM change my ...**

<table>
<thead>
<tr>
<th></th>
<th>Decreased</th>
<th>No change</th>
<th>Minimal improvement</th>
<th>Moderate improvement</th>
<th>Significant improvement</th>
<th>Tremendous improvement</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) empathy towards others on return from the IHM</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>b) ability to be sensitive to the needs of those from a different culture</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>c) ability to be sensitive to the needs of those from a different country</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>d) ability to be patient with non-U.S. citizens</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>e) tolerance towards beliefs other than my own</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>f) adaptability in different situations</td>
<td>0</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
**Directions:** The next series of questions asks you about how the IHM may have been a “life changing” experience for you. Please rate how much you may have changed in each of the areas listed below.

8. **To what degree did participating in the IHM help me …..**

<table>
<thead>
<tr>
<th></th>
<th>No change</th>
<th>Minimal</th>
<th>Moderate</th>
<th>Significant</th>
<th>Tremendous</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) learn about myself?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>b) reflect on my beliefs?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>c) connect with the emotions of caring for and comforting individuals, or non-technological aspects of care</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>d) recognize patients as unique individuals?</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>e) gain respect for other healthcare team members</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>f) gain respect for my peers</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>g) gain respect for patients</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>h) gain respect for people from other cultures</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>i) gain respect for people from other religions</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>j) gain respect for people from other economic classes</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
9. Could you describe how the experiences on the IHM may have changed you? Feel free to use the back of this page if you need more room.

10. Participant Demographics

A. In which healthcare discipline are you a student?
   a. Nursing graduate
   b. Nursing undergraduate
   c. Medicine
   d. Physician assistant
   e. Pharmacy graduate
   f. Pharmacy undergraduate
   g. Health education graduate
   h. Health education undergraduate
   i. Dietetics
   j. Other _______________________

B. At the time of your **first mission experience**, how far along were you into your healthcare professional program?
   a. first year
   b. second year
   c. third year
   d. fourth year
   e. other _______________________

C. How many IHM have you participated in?
   a. One (skip to question E)
   b. Two
   c. Three
   d. Four or more
D. At the time of your most recent mission experience, how far along were you in your healthcare professional program?
   a. first year
   b. second year
   c. third year
   d. fourth year
   e. other___________________________

E. Which age range are you in?
   a. 20-25
   b. 26-30
   c. 31-35
   d. 36-40
   e. 41-45
   f. 45-50
   g. over 50

F. Are you:
   a. male
   b. female

G. Have you had any international travel prior to your IHM?
   a. yes
      a1. Where__________________ a2. Purpose__________________________
   b. no

H. How long ago did you participate on your last IHM?
   a. within the last month
   b. one to three months ago
   c. four to six months ago
   d. seven to nine months ago
   e. ten to twelve months ago
   f. over a year ago

I. What languages do you speak fluently? Circle as many that apply.
   a. English
   b. Spanish
   c. French
   d. Other(s)________________________________________
J. Which country hosted your most recent IHM?
   a. Peru
   b. Dominican Republic
   c. Philippines
   d. Guatemala
   e. Honduras
   f. Other___________________________________

K. With which group do you most closely identify?
   a. American Indian or Alaska Native
   b. Asian
   c. Black or African American
   d. Hispanic
   e. Native Hawaiian or Other Pacific Islander
   f. White

L. Are you a first generation immigrant in the U.S.? Yes___ No___ If yes, from which country do your parents originate?_____________________________

M. Do you affiliate with a religious denomination? If so, which one?
   a. Buddhist
   b. Catholic
   c. Hindu
   d. Jewish
   e. Muslim
   f. Protestant
   g. Other_________________

N. Please list 2 or 3 factors that influenced your decision to participate in the IHM.

Thank you very much for your participation in this research. All your responses will be carefully protected to ensure anonymity.
Martha Gallagher, PhD candidate, University of Toledo.
Appendix B

Human Subjects Letter of Approval
Human Subjects Research Committee

5-16-03

TO: Martha S. Gallagher

RE: Research Project# 203-097
The Impact of an International Healthcare Mission on Participating Healthcare Professional Students

The University of Toledo Human Subjects Research Review Committee has completed its review of your project utilizing human subjects.

Your project has been approved as submitted, and you are authorized to use human subjects in that project until 5-16-04. At the end of that time, if your project is not complete, you must submit a request for an extension and a progress report in order to continue the project beyond that date. When your project has been completed, please fill out and send me the enclosed Certificate of Compliance.

This approval for the use of human subjects is contingent upon your following the research plan presented in your submitted proposal. You are not permitted to undertake any actions involving human subjects which are not a specific part of that proposal. If it becomes necessary to make changes, you may use those modifications only after you submit them for review and inclusion in your project file. Without such review, this authorization is void and you are not permitted to use human subjects in your research.

If any untoward incidents or unanticipated adverse reactions should develop in the course of your research on human subjects, you must suspend the project temporarily and notify me immediately.

Thank you very much for your cooperation. If you have any questions, please feel free to contact me at 419-530-1918.

Gerald P. Sherman, Chair

cc: Office of Research HSRC File
Dr. Debra Boardley
Appendix C

Informed Consent: Questionnaire Only Participants
Informed Consent: Questionnaire Only Participants

Investigator: Martha S. Gallagher, M.S.N., R.N.

The investigator is affiliated with the University of Toledo College of Health and Human Services as a Ph.D. candidate.

Purpose

You are invited to participate in a research project being done for the completion of my doctoral dissertation in Health Education titled “The Impact of an International Healthcare Mission on Participating Healthcare Professional Students”. The purpose of this study is to gain an understanding of how healthcare professional students are personally and professionally impacted by their voluntary participation on an international healthcare mission. To participate, you will only need to fill out the attached questionnaire. There will be complete privacy of the information you supply, because your name will never be associated with the project. You are free to choose to participate or not participate, and you may stop your participation at any time. Whether you participate or not will have no detrimental effect on your relationship with the University of Toledo or any affiliated institution of healthcare mission group. By completing this questionnaire, you are giving your consent to participate in the project and your are certifying that you are over 18 years old.

Benefits

Although you may not receive any direct, personal benefits from participation in this research, your cooperation will enhance understanding the effects of a healthcare professional student’ mission experiences. Through this understanding, efforts can be made to strengthen the mission experiences and possibly support additional mission opportunities for future healthcare professional students.

Thank you for your investment of time to aid understanding the impact of your mission experiences.
Appendix D

Informed Consent: Interview and Questionnaire Participants
Informed Consent: Interview and Questionnaire Participants

Investigator: Martha S. Gallagher, M.S.N., R.N.

The investigator is affiliated with the University of Toledo College of Health and Human Services as a Ph.D. candidate.

Purpose

You are invited to participate in a research project being done for the completion of my doctoral dissertation in Health Education titled “The Impact of an International Healthcare Mission on Participating Healthcare Professional Students”. The purpose of this study is to gain an understanding of how healthcare professional students are personally and professionally impacted by their voluntary participation on an international healthcare mission (IHM). If you choose to participate in this research, your involvement will require approximately one to one and a half hours of your time. We will meet at a mutually agreeable location for a private, audiotaped interview asking about your experiences and perceptions from your mission participation. After the interview tape is transcribed and analyzed, you will be asked to review the information and the researcher’s interpretations. In addition, you will be asked to complete a questionnaire. There are no foreseeable risks or benefits to you from your participation, as this research is descriptive and interpretive and not a treatment study.

All audiotaped information will be coded and strictly confidential. Your identity will not be revealed without your written consent. You are free to choose to participate or not participate, and you may stop your participation at any time. Whether you participate or not will have no detrimental effect on your relationship with the University of Toledo or any affiliated institution or healthcare mission group. By completing the questionnaire, you are giving your consent to participate in the project and your are certifying that you are over 18 years old.

Benefits

Although you may not receive any direct, personal benefits from participation in this research, your cooperation will enhance understanding the effects of a healthcare professional student’ mission experiences. Through this understanding, efforts can be made to strengthen the mission experiences and possibly support additional mission opportunities for future healthcare professional students.

Questions

If you have any questions regarding your participation in this research, feel free to contact me.

Martha Gallagher
Phone: 419-841-7790
Email: msgallagher@buckeye-express.com

Thank you for your investment of time to aid understanding the impact of your mission experiences.