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REACHING CONSENSUS ON GLOBAL HEALTH NURSING COMPETENCIES FOR BACCALAUREATE NURSING EDUCATION IN THE UNITED STATES: A DELPHI METHOD STUDY

by

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A DISSERTATION

Submitted to the graduate faculty of The University of Alabama at Birmingham,
in partial fulfillment of the requirements for the degree of
Doctor of Philosophy

BIRMINGHAM, ALABAMA

2018

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REACHING CONSENSUS ON GLOBAL HEALTH NURSING COMPETENCIES FOR BACCALAUREATE NURSING EDUCATION IN THE UNITED STATES: A DELPHI METHOD STUDY

HERICA M. TORRES ALZATE

DOCTOR OF PHILOSPHY IN NURSING

ABSTRACT

The purpose of this study was to reach consensus among experts on global health competencies for baccalaureate nursing students in the United States. A Nursing Global Health Competencies Framework (NGHCF) was created to guide identification of the domains and competencies for BSN nursing education. A three-round modified Delphi study intersected with a mixed methods research approach to reach consensus from experts in global health on essential global health competencies in nursing. The first phase revised the original list of competencies based on: (a) qualitative responses to the surveys conducted by Wilson et al. (2012), Ventura et al. (2014), and Warren et al. (2016); (b) a pilot study performed by this author; (c) a review of literature; and (d) the Nursing Global Health Competencies Framework (NGHCF) developed in a preliminary pilot study. In the first phase, nine global health domains and 52 competencies were identified. In phase two, two surveys were conducted for validation of the revised list of global health competencies using a group of six nurses with expertise in global health and baccalaureate nursing education which produced modifications in the competencies used for the third phase of the study. In phase three, 41 participants completed a survey to rate the extent to which they thought the 40 competencies obtained in Round Two survey were essential for BSN students. The domains and competencies derived in this study can be used to guide

undergraduate nursing curriculum development in global health and provide a framework for both clinical instruction and evaluation of global health student experiences.

Keywords: global health nursing, global health nursing framework, global health competencies, Delphi method, mixed methods, mixed methods integration.

DEDICATION

To my Son, Avi.

You are the reason I have a smile on my face every day.

To my Husband, Jatin

Thank you *Hus* for always encouraging and supporting me.

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This work would not have been possible without the extensive support of many individuals. First, I want to thank my dissertation co-chairs, Dr. Lynda Wilson and

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CHAPTER 1

INTRODUCTION

Current trends in globalization require that nurses possess sufficient understanding and education to face global health challenges. In order to provide culturally competent care and decrease health disparities, nurses need knowledge about topics that transcend geographical borders (Eustace & Boesch, 2018). Historically, the effects of globalization on the health of individuals can be seen as early as the 1200s, when outbreaks of plague occurred in Europe as the Mongolians traveled to the West to trade (Campbell, MacKinnon, & Stevens, 2010). More recently, the Ebola outbreak of 2014 brought death and illness to Africa and beyond. According to the World Health Organization (WHO), more than 27,000 people have been infected with Ebola worldwide, resulting in more than 11,000 deaths (WHO, 2015a). Although the initial Ebola outbreak occurred in December 2013 in the West African country of Guinea, the disease spread via travelers to the neighboring countries of Liberia, Sierra Leone, Nigeria, and Senegal as well as to distant nations including the United States (U.S.) and Spain.

Even though there has been a long history of relationships between health problems and global travel, the manner in which countries and institutions respond to these problems is changing. For example, in 1665 the only method used to control the plague epidemic was massive fire that left fewer people to spread the disease (Campbell et al., 2010). By comparison, the latest Ebola outbreaks have been controlled using large-

scale collaboration among countries and institutions. Preparedness and lessons learned from the first countries affected were essential to curtail the spread of Ebola. In Nigeria, Mali, and Senegal, vigilance and tracking, along with close follow-up of cases and the rapid introduction of control measures, helped control the outbreak to subsequently decrease morbidity and mortality (WHO, 2015b).

The spread of disease by travel, threats of natural disasters, and climate change all create a demand for healthcare professionals to be educated in global health issues. Nurses must receive educational preparation to respond effectively to these global challenges. To facilitate this educational process, a set of essential nursing global health competencies is needed to prepare nurses for the diversity of global health challenges they may encounter. Chapter 1 of this study presents an overview of the problem and problem statement, significance of the problem, purpose of the study, study aims, research questions, and a brief overview of the conceptual framework.

Overview of the Problem and Problem Statement

Nurses and other health professionals in the 21st century must be prepared to live and work in an increasingly globalized world, and to confront health issues and challenges both locally and globally (Beck, Dossey, & Rushton, 2013; Bradbury-Jones, 2009; Frenk et al., 2010; Gimbel, Kohler, Mitchell, & Emami, 2017; Seloilwe, 2005). Global health has been recognized by the U.S. government as a topic of interest in protecting the health of its citizens. *Healthy People 2020* describes a governmental initiative that aims to improve the health of Americans by setting goals for health promotion and disease prevention (U.S. Department of Health and Human Services [HHS], 2010). The main goal of this initiative is to “improve public health and strengthen

U.S. national security through global disease detection, response, prevention, and control strategies" (HHS, 2013, para. 1). Along with the HHS, international organizations have validated the need for involvement in global health. For example, the European Commission published a paper acknowledging its key role in global health and highlighted the European Union's (EU) leadership and experience in "international trade, global environmental governance and in development aid" (European Commission, 2010, p. 4). The Commission suggested that the EU could contribute to improved global heath by expanding the EU's vision of social justice and health care that is equitable and universal to individuals worldwide (European Commission, 2010).

The Commission on Education of Health Professionals for the 21st Century issued a seminal report in 2010 calling for interprofessional competency-based education for all health professionals (Frenk et al., 2010). The commission devised a framework with specific recommendations aimed at improving health within and between countries by developing and "nurturing" a different type of health care professional. The members of the commission stressed the importance of preparing health professionals to address global health challenges and to competently care for their clients using critical thinking and ethical principles "as members of locally responsive and globally connected teams" (Frenk et al., 2010, p. 1924).

The framework outlines interactions between the educational and health systems, and the Commission members suggested that these systems need to work together in order for the overall system to be effective, efficient, and egalitarian. Threats to the system include misalignments in the labor market (supply and demand) and the inability of some communities to translate health and educational needs into provision of adequate

health and educational services. Members of the commission suggested that the needs of the population should drive the education and health systems, and community members (including patients, health care trainees, and/or health care professionals) should be integrally involved in identifying population needs and priorities. The community members then become the drivers of health and education services (Frenk et al., 2010).

The members of the Commission suggested that the education system is composed of three dimensions: institutional design, instructional design, and educational outcomes. Institutional design addresses how the education system is structured and how it functions at systemic, organizational, and global levels. Instructional design focuses on four processes (criteria for admission, identification of competencies, methods of educational instruction, and career pathways). Frenk et al. (2010) reported that the educational outcomes proposed by the commission include transformative learning (improvements in instructional design) and interdependence in education (foreseen reforms in education). Frenk et al. (2010) advocated for a competency-based approach as critical for ensuring achievement of each profession's educational goals. Commission members recommended that competencies for health care professions should be patient-centered, evidence-based, and focused on continuous quality improvement, use of informatics, and public health (Frenk et al., 2010).

Interconnectedness, technological advances, and the increasing incidence of non-communicable diseases are some of the issues that affect the health of populations worldwide. Nurses cannot afford to stand back and watch globalization reshape the world without knowing how to address global challenges to improve individual and population health outcomes (Bradbury-Jones, 2009; Seloilwe, 2005). Global health issues cross

many cultures and countries. The problems that will need to be addressed by graduating health care professionals will increase due to population growth, the increase in migrant and refugee populations, and the evolution of emerging viruses and resistant organisms. Although there is increasing recognition of the importance of incorporating global perspectives and competencies into educational programs for nurses and other health professionals (Arthur, Battat, & Brewer, 2011; Frenk et al., 2010; Jogerst et al., 2015), to date there is no consensus about specific global health competencies that should be incorporated into nursing curricula. Higher education institutions and faculty need to be accountable for preparing nurses to meet the demands of global health.

Significance of the Problem

Hughes (2006) reported that in many countries, nurses provide up to 80% of the healthcare in primary settings. Because nurses are first-line health care providers worldwide (Amieva & Ferguson, 2012), nurse educators need improved tools to better prepare nursing students to effectively care for the populations they will serve, whether at home or in international settings. This educational process begins with identifying nursing competencies in global health. Calls for nurses to engage in global health have been published in recent years (Edmonson, McCarthy, Trent-Adams, McCain, & Marshall, 2017; Premji & Hatfield, 2016). Premji and Hatfield (2016) invited nurses to engage in global health by addressing disparities in healthcare and to collaborate with peers across the world in research, practice, and policy to achieve the Sustainable Development Goals. In addition, Edmonson et al. (2017) called on nurses, as global leaders, to act upon global health issues such as human trafficking, health inequities, and

emerging infectious diseases. These authors suggested that nurses can positively impact global health issues by being leaders and agents of change.

Although accrediting bodies do not currently specify requirements for global health competencies in nursing curricula, there are references to global health topics in the curriculum guidelines specified by several accrediting organizations in the U.S. Presently, there are three organizations accrediting baccalaureate nursing programs in the U.S.: the National League of Nursing Accrediting Commission (NLNAC), now the Accreditation Commission for Education in Nursing (ACEN); the new National League for Nursing Commission for Nursing Education Accreditation (CNEA); and the Commission on Collegiate Nursing Education (CCNE).

ACEN accreditation standards include concepts that are relevant for global health competencies. Standard 4 (curriculum), Section 4.1 stipulates that the curriculum should address health environments that are contemporary (ACEN, 2013). Similarly, Standard 4, Section 4.5 requires that baccalaureate nursing curricula include “cultural, ethnic, and socially diverse concepts and may also include experiences from regional, national, or global perspectives” (ACEN, 2013, p. 4).

The CCNE has defined the standards used in the accreditation of U.S. baccalaureate nursing programs in a document entitled *Standards for Accreditation of Baccalaureate and Graduate Nursing Programs* (American Association of Colleges of Nursing [AACN], 2008). This document identified four standards related to program quality and effectiveness. In addition to meeting the standards for accreditation, the CCNE recommended that programs demonstrate the incorporation of professional

nursing standards and guidelines including *The Essentials of Baccalaureate Education for Professional Nursing Practice* (CCNE, 2013).

The *Essentials* document is the product of consensus among nurse educators, researchers, administrators, and clinicians who gathered with the goal of identifying the "role of the professional nurse in the healthcare system," also taking into consideration the Institute of Medicine's (IOM) knowledge required for healthcare professionals (AACN, 2008, p. 46). The *Essentials* document contains nine essentials that delineate the outcomes that each student in a baccalaureate program is expected to achieve by the time of graduation.

The concept of global health is visible throughout the *Essentials* document which includes themes such as nursing practice in a globalized world and multicultural environments; care of patients with different backgrounds; learning a second language; social justice and responsibility; effects of global issues in health and nursing practice; and the view of health in a broader context. However, the document does not include a list of specific global health competencies. Nevertheless, several of these essentials address concepts related to global health, as noted in the following discussion.

In the Essential I section (*Liberal Education for Baccalaureate Generalist Nursing Practice*), "the need to demonstrate tolerance for the ambiguity and unpredictability of the world and its effect on the healthcare system" (CCNE, 2013, p. 12) is described. The document further presents the content to fulfill this essential as "concepts related to globalization and migration of populations" (CCNE, 2013, p. 13). This approach clearly supports the requirement for quality nursing programs to address program content related to global health.

The Essential VII section (*Clinical Prevention and Population Health*) includes suggestions that the curriculum should address concepts of global health as well as advocacy for social justice, promoting health of vulnerable populations, and elimination of health disparities (CCNE, 2013, p. 25). These concepts clearly relate to several definitions of global health that have been proposed in the literature (Campbell, Pleic, & Connolly, 2012; Gabriel, Jens-Jørgen, & Peter, 2009; Janes & Corbett, 2009; Koplan et al., 2009; Rowson, Willott et al., 2012).

Essential VIII: *Professionalism and Professional Values* states "Professionalism and the inherent values of altruism, autonomy, human dignity, integrity, and social justice are fundamental to the discipline of nursing" (p. 4). Social justice, in particular, is a central component of global health. For instance, Rowson, Smith, et al. (2012) described global health concepts of inequality and social responsiveness. Concepts within this Essential section are related to increasingly diverse populations, health disparities, and culture.

The Essential IX section (*Baccalaureate Generalist Nursing Practice*) describes the nursing program content related to individuals, families, groups, communities, and populations across healthcare environments and the increased use of healthcare resources within these populations (CCNE, 2013). Related specifically to global health, this Essential section notes "the increasing globalization of healthcare requires that professional nurses be prepared to practice in a multicultural environment and possess the skills needed to provide culturally competent care" (CCNE, 2013, p. 30). Cultural concepts in global health have been emphasized by numerous authors as a critical

component of nursing care (Cameron, Carmargo Plazas, Salas, Bourque Bearskin, & Hungler, 2014; Siantz & Meleis, 2007).

In addition, the Essential IX section outlines the need for nursing program content related to emergency preparedness, disaster response, environmental factors, and risks. Koplan et al. (2009), in their definition of global health, referred to health-related issues that cross international borders, as well as economic interdependency and insufficient resources. Disaster relief and recovery is a prime example of this interdependency, where resources are commonly outstripped by a population's need for them. Emergency preparedness is an international concern and requires an interdisciplinary response that must be included in nursing programs.

Gimbel et al. (2017) stated that in order for academic institutions to promote global health nursing, they need to follow a framework of four critical components: research, education, policy, and partnership. Regarding the education component, the authors indicated that nurses need to be educated in global health at the undergraduate and graduate levels not only from the clinical perspective, but also from the perspective of social justice, health equity, and determinants of health. According to the authors, nursing students need a broader understanding of globalization, health economics, policy, and global health diplomacy. In addition, nursing students need to understand crucial global health research on the global burden of disease and key global health policies as well as how this research relates to all aspects of global health.

Identifying competencies in education is an important initiative for many reasons. First, it will make all actors in the educational system (students, higher education institutions, faculty, and accrediting bodies) accountable for the product delivered

(Anema & McCoy, 2010). Second, establishing competencies will help guide programs, assessment of student achievement, and curricula. Third, students, faculty, institutions, and other stakeholders in the educational and labor market areas will share expectations of every undergraduate in terms of knowledge, skills, and attitudes in a particular area (U.S. Department of Education, 2002).

This study was built on the initial studies aimed at identification of global health competencies that nursing faculty in the U.S., Canada, Latin America, Brazil, Africa, and the Caribbean viewed as essential for undergraduate nursing students (Ventura et al., 2014; Warren, Breman, Budhathoki, Farley, & Wilson, 2015; Wilson et al., 2012; Wilson, Moran et al., 2016). Respondents in these studies rated a list of 30 global health competencies that had been adapted from previous studies aimed at identifying global health competencies for medical students (Arthur et al., 2011). Qualitative comments made by the 998 respondents to these initial surveys suggested the need to revise the original list of competencies to reflect a more comprehensive and holistic nursing conceptual model.

Purpose of the Study

The purpose of this study was to reach consensus among experts on global health competencies for BSN students in the United States.

Specific Aims and Questions

Aim 1. Revise the original list of global health competencies for baccalaureate nursing students based on: (a) qualitative responses to the surveys conducted by Wilson et al. (2012), Ventura et al. (2014), and Warren et al. (2015) reported in Wilson, Moran et

al. (2016); (b) a pilot study performed by this researcher, (c) a review of literature, and (d) the NGHCF developed by this researcher.

Research question 1. What revised global health domains and competencies are recommended as essential for baccalaureate nursing education in the United States based on qualitative analyses of previously conducted surveys of nursing faculty in the United States, Canada, Latin America, Africa, and the Caribbean, the researcher's findings of a pilot study conducted on global health competencies in the United States and Canada, a review of literature, and a proposed NGHCF?

Aim 2. Seek content validation of the revised list of global health competencies using a group of six nurses with expertise in global health and baccalaureate nursing education.

Research question 2. What revised global health competencies and domains are recommended as essential for baccalaureate nursing education in the United States by a group of six nurses with expertise in global health and baccalaureate nursing education in the United States?

Aim 3. Reach consensus on essential global health competencies for baccalaureate nursing students in the United States from a sample of nurses with expertise in global health and baccalaureate nursing education in the United States.

Research question 3. What global health competencies for baccalaureate nursing students in the United States reach consensus as essential by a sample of nurses with expertise in global health and baccalaureate nursing education in the United States?

Review of Concepts Guiding the Study: Globalization, Global Health, Global Nursing, and Competency-Based Education

The concepts that are essential to provide context to this dissertation study are globalization, competency-based education (CBE), and global nursing. These concepts are addressed here.

Globalization

Globalization is the integration across nations of trade, technology, labor, migration, and the flow of capital (Globalization, 2016). There is a growing body of literature that focuses on the implications of globalization for higher education (Frenk et al., 2010; Merson, 2014; Merson & Page, 2009). The globalization of trade, capital, environment, services, and people, can have both positive and negative effects on individual and population level health outcomes (Molyneux & O'Hare, 2013). Climate change resulting from increased industrialization and use of carbon fuels may impact population health directly by means of interruptions in food supply, water, and sanitation (Huynen, Martens, & Hilderink, 2005). Indirectly, the globalization of markets and trade may help reduce poverty in some settings allowing individuals to increase their quality of life (Molyneux & O'Hare, 2013). Globalization has also increased the use of information technology throughout the world with increased heath literacy and access to information that may positively impact health (Huynen et al., 2005; Molyneux & O'Hare, 2013). Yet, Labonte (2003) argued that globalization can negatively impact income equality, the environment, and equal access to health care.

Skolnik (2015) stated that global health and the health of people worldwide should be a matter of concern to everyone. The author provided four reasons for this statement:

- Diseases are not limited by country boundaries. For example, when the Mexican government reported the first cases of influenza in March 2009, by April 25, the WHO had declared a public health emergency of international concern (an event that constitutes a public health risk that may affect other territories via international spread of the disease and that may warrant an international response). By June 2009, 30,000 cases were confirmed in 74 countries (WHO, 2013). Skolnik (2015) noted "the health of each of us increasingly depends on the health of others" (p. xxvii).
- There are injustices and ethical issues tied to the health of individuals worldwide. In many countries, children die from malnutrition, war, or diseases that are preventable. In others, pregnant women (especially in low resource countries) die from birth complications.
- Health issues are usually connected to the economic and social development of regions. In order to help fight poverty, there is a need for children to stay in school and reach their maximum potential and become productive adults. Women need not suffer from preventable birth complications that keep them from continuing to live a productive life, impacting their children and families.
- Maintaining the health of people worldwide contributes to global security and freedom. Skolnik (2015) tied these ideas to the billions of dollars spent in

responding to outbreaks of diseases worldwide (severe acute respiratory syndrome, cholera, plague, etc.) and also to the millions of people who have died from diseases that have a direct impact on the economic development of nations (health professionals dying from HIV at a higher rate than those being trained).

Global Health

The term *global health* has evolved from earlier concepts of international health. The concept of international health arose during the colonial era in the 19th century and focused on control of global epidemics and addressing health needs of low resource countries (Frenk, Gómez-Dantés, & Moon, 2014; Rowson, Smith et al., 2012). In the early 1900s, Bandaranayake (1993) referred to "international health" as "instruction in comparative morbidity or mortality, service provision, demographic change and disease prevalence in non-industrialized developing countries" (p. 360).

The term global health has evolved from a focus on unilateral development aid and charitable missions to a focus on international interdependency and rights to universal health care (Campbell et al., 2012; Janes & Corbett, 2009). The concept of global health has also evolved to imply an interdisciplinary approach to the study of health issues and a focus on determinants of health (Rowson, Willott et al., 2012). The term transnational health has been used by some authors to refer to health issues that are approached by reaching across borders in cooperative ventures. Transnational is a term more commonly applied to business, financial, and governmental practices within country blocks and is more commonly associated with the term *international*, referring to governmental and intergovernmental activities (Gabriel et al., 2009).

Although Fried et al. (2010) stated that there is no difference in the terms global health and public health, there have been many proposed definitions of the term global health which suggest that global health is a broader concept than public health. Beaglehole and Bonita (2010) referred to global health as building on public health, and Khubchandani and Simmons (2012) described global health as including the concept of transnationalism.

Koplan et al. (2009) developed a common definition of global health. The resulting definition was:

> Global health is an area of study, research, and practice that places priority on improving health and achieving equity in health for all people worldwide. Global health emphasizes transnational health issues, determinants, and solutions; involves many disciplines within and beyond the health sciences and promotes interdisciplinary collaboration and is a synthesis of population-based prevention with individual level clinical care. (p. 1995)

The description of global health that Koplan et al. (2009) proposed includes health issues that transcend national boundaries, solutions that require global cooperation (disease and disasters), individual and population prevention and care, and most importantly – health equity. Koplan et al. (2009) presented examples of global health issues including nutritional problems, specific diseases, mental health problems, injuries, and health problems related to displacement and migration, noting that addressing these problems requires awareness of the impact of culture, limited resources, and social and economic inequities.

A group of 15 global health experts was convened by the Canadian Academy of Health Sciences (2010) to review existing global health definitions and propose a definition to guide Canadian global health strategies. After extensive review and deliberation, the members of the council accepted the definition proposed by Koplan et al. (2009). In addition, the EU has recognized Koplan's definition (Aluttis, Krafft, & Brand, 2014). It is Koplan's definition that has been most widely used when identifying global health competencies.

A more recent definition of global health has been recommended by a taskforce of the Global Advisory Panel on the Future of Nursing (GAPFON). This definition includes concepts that had not been included in previous definitions including planetary health, holistic health, health promotion, and sustainability, among others (Wilson, Mendes et al., 2016). Although these concepts have been reported in the literature in a discrete manner, the GAPFON taskforce merged them together in a way that better explains what global health is from a wider and more modern perspective. This definition reads:

> Global health refers to an area for practice, study and research that places a priority on improving health, achieving equity in health for all people (Koplan et al. 2009) and ensuring health-promoting and sustainable sociocultural, political and economic systems (Janes & Corbett 2009). Global health implies planetary health which equals human, animal, environmental and ecosystem health (Kahn et al. 2014) and it emphasizes transnational health issues, determinants and solutions; involves many disciplines within and beyond the health sciences and promotes interdependence and interdisciplinary collaboration; and is a synthesis

> of population-based prevention with individual holistic care. (Wilson, Mendes et al., 2016, p. 1536)

Global Nursing

In addition to proposing a definition of global health, the members of the GAPFON taskforce also reviewed the literature and proposed a definition of global nursing. This definition contains concepts and values that are relevant to the nursing profession such as holistic care, equity, caring, and advocacy among others. The definition proposed by Wilson, Mendes et al. (2016) is:

> Global nursing is the use of evidence-based nursing process to promote sustainable planetary health and equity for all people (Grootjans & Newman 2013). Global nursing considers social determinants of health, includes individual and population-level care, research, education, leadership, advocacy and policy initiatives (Upvall et al. 2014). Global nurses engage in ethical practice and demonstrate respect for human dignity, human rights and cultural diversity (Baumann 2013). Global nurses engage in a spirit of deliberation and reflection in interdependent partnership with communities and other health care providers. (p. 1537)

Competency-Based Education

There is growing recognition of the importance of Competency Based Education (CBE) (Anema & McCoy, 2010). CBE is defined as an approach to teaching, learning, assessment, and grading. It puts emphasis on students demonstrating the knowledge, skills, and attitudes that have been attained as a result of the education process, work, and

life experiences regardless of a specific timeline, educational setting, or pace of learning (Klein-Collins, 2012; U.S. Department of Education, n.d).

CBE increases accountability of higher education institutions (Bedard-Voorhees, 2001). Higher education institutions have been criticized for the quality of undergraduate student outcomes (Jones, 2001; Klein-Collins, 2012). Paulson (2001) noted that even though many business leaders admit that new graduates come to their jobs academically prepared, these new graduates often cannot apply their knowledge to daily tasks. Higher education institutions (providers and accrediting organizations) need to assure the community (parents, students, and the industry) that new graduates are ready to enter the workforce (Anema & McCoy, 2010).

Another incentive to implementing CBE is the notion that competencies will give all interested parties a common language to communicate. When competencies are established for a specific discipline, a common language will help students, the industry, and other consumers of education be in agreement in regards to how a graduate in that discipline is expected to perform. Competencies that are clearly defined and measured will provide the parties involved with a clear understanding of what the students will be able to know and do upon graduation (Paulson, 2001; U.S. Department of Education, 2002; Voorhees, 2001).

The concept of competency. Dubois and Rothwell (2004) described the origins of the competency movement and suggested that the concept of competence became prominent in the field of human resource development with the work of White and McClelland in the 1950s through 1970s. Since that time, the concept of competency has been applied to multiple disciplines including business, psychology, law, and nursing

(Harzallah & Vernadat, 2002; Markus, Cooper-Thomas, & Allpress, 2005; Parry, 1996). There continue to be differences in the definitions of competency across different disciplines (Anema & McCoy, 2010; Axley, 2008; Marrelli, 1998; Stobinski, 2008; Stoof, Martens, van Merriënboer, & Bastiaens, 2002; Tilley, 2008). Some of the adjectives that define competence and competency are used interchangeably throughout the literature.

The definition of competency that was used in this study is the one provided by the International Council of Nurses (ICN, 2005): “Competency is the effective application of knowledge, skill, and judgement demonstrated by an individual in daily practice or job performance” (p. 9). The ICN suggested that competencies are the mixture of knowledge, skills, and personal attributes and attitudes that nurses need to demonstrate when performing in a job. An essential competency is the minimum set of knowledge, skills, and attitudes a learner needs to perform in a specific area.

In order to understand the definition of competency, it is important to define the concepts of knowledge, skill, and attitude. Knowledge refers to disciplinary content that learners can “recall, relate and appropriately deploy” (Ewell, 2001, p. 6). Skill is the learned ability to effectively do something – perform procedures, critically think, collaborate with others effectively, etc. (Ewell, 2001; Marrelli, 1998). Attitude denotes the beliefs and values (e.g., empathy, flexibility, self-respect, humility) students modify or develop during the learning experience (Ewell, 2001).

Although the concepts of knowledge, skills, and abilities (KSAs) and competencies are used interchangeably, it can be confusing to do so. According to a report published by the U.S. Department of Education (2002), KSAs are attained during

the learning process while competencies are the different combinations of KSAs that an individual possesses. The authors of the Department of Education report suggested that competencies can be developed through educational programs, work, or personal experiences. It is also important to note that the concept of attitude is not included in some definitions of competency (Anema & McCoy, 2010; Marrelli, 1998; Mirabile, 1997; U.S. Department of Education, 2002). The issue of attitude is addressed by Lucia and Lepsinger (1999) and Kouwenhoven (2009) who agreed that even though personal attitudes may sometimes be challenging to teach and assess, they are important to include in the definition of competency because some particular attitudes (e.g., self-confidence, emotional stability) are needed to successfully perform certain tasks.

Writing competency statements. There have been numerous publications providing guidelines for writing competencies. This section highlights recommendations that were incorporated in this dissertation.

- Competency statements should be written in a clear manner and should reflect the level of learning (i.e., novice versus expert) that they are intended to evaluate (Calhoun, Rowney, Eng, & Hoffman, 2005).
- Higher level competencies should build on lower level competencies (Bers, 2001). For example, it would not be appropriate to require practical nurses to practice at the same level as a nurse specialist (Jhpiego, 2013).
- According to Calhoun et al. (2005), Bloom's taxonomy provides a useful framework that can guide development of competencies at different educational levels.

- All competency statements should contain "an action verb (observable or measurable performance of a learner), content (subject matter, type of performance, specific task), and context (limitations, conditions, circumstances, or context within which the competency is performed)" (Columbia University School of Nursing & Association for Prevention Teaching and Research [CUSNAPTR], 2008, p. 5).
- Competency statements also should specify the level of performance that will be required in order to determine whether the competency was achieved (Jhpiego, 2013, p. 3).

Two examples of competency statements that illustrate these components were proposed by the Center for Health Policy, Columbia University School of Nursing, and the Association of Teachers of Preventive Medicine in the Competency-to-Curriculum Toolkit (CUSNAPTR, 2008):

- "Translate (verb) policy (content) into organizational plans, structures, and programs (context)" (CUSNAPTR, 2008, p. 5).
- "Carries out (verb) a complete and accurate (level of performance) physical examination (content) of patients with simple health problems (context)" (Jhpiego, 2013, p. 3).

According to Shachak, Ophir, and Rubin (2005), learning objectives describe what the learners should be able to achieve at the end of an instruction period, once competencies are identified.

Developing and leveling competencies. Bloom's taxonomy of learning objectives provides a useful framework for developing specific learning objectives and

competencies; it was used to guide the development of competencies in this study. After several years of organized work, Bloom, Engelhart, Furst, Hill, and Krathwohl (1956) published the *Taxonomy of Educational Objectives* to create a framework or taxonomy of classifying objectives in a unified language that would be well-understood by teachers. Although this taxonomy was primarily intended as a means of assessment and to guide educational curricula, it has been used in other fields. Researchers on competency development have used Bloom's taxonomy as a way to classify competencies (Calhoun, Davidson, Sinioris, Vincent, & Griffith, 2002; Coleman, Hudson, & Maine, 2013). The taxonomy is divided into three main domains that reflect cognitive, affective, and psychomotor KSAs (Pickard, 2007). In this study, Bloom's taxonomy was used primarily to create appropriate verbs for competency wording.

Objectives in the cognitive domain relate to knowledge, comprehension, application, analysis, synthesis, and evaluation (Bloom et al., 1956). The cognitive domain is the one that was the most developed because it was seen as the most related to curriculum development and standardization of test development (Calhoun et al., 2002; Coleman et al., 2013).

Objectives in the affective domain describe "changes in interest, attitudes, and values, and the development of appreciations and adequate adjustment" (Bloom et al., 1956, p. 7). This domain was particularly challenging for Bloom et al. (1956) to operationalize because there is not much consensus among instructors regarding strategies that can be used to evaluate these objectives. Both the cognitive and affective domains were classified in a hierarchical manner where a learner moves from a basic to a more complex level.

Objectives in the psychomotor domain relate to motor skills and coordination (Krathwohl, Bloom, & Masia, 1964). The framework for the psychomotor domain was developed by Simpson (1966), who classified objectives in this domain as perception, set (or readiness to act), guided response, mechanism, and complex overt response.

Levels of proficiency. Benner (1982) developed a theory to describe the progression of skill development in the classic publication *From Novice to Expert*. This theory was derived from the *Model of Skills Acquisition* proposed by Dreyfus, S., and Dreyfus, H. (1980). In Benner's (1982) model, the nurse passes through five levels of skill acquisition or development: novice, advanced beginner, competent, proficient, and expert. In the novice stage, the nurse relies primarily on rules and prior knowledge rather than personal experiences which are often limited at this level. Performance at this level is more task-oriented than judgment-oriented. The advanced beginner nurse, with more situational experience, recognizes recurrent patterns. In this stage, nurses are unable to decide what patterns or aspects require more attention than others. Competent nurses are able to base their actions "in terms of long range goals or plans" (Benner, 1982, p. 404). They are able to assign more importance to some patterns or aspects than others. Competent nurses feel a sense of mastery and believe they are able to face different challenges in their practice. At the proficient level, nurses base their performance on principles or guidelines that are situation-specific (Benner, 1982; Dreyfus & Dreyfus, 1980). Proficient nurses strongly rely on the understanding of a specific set of principles before performing a needed action. At the expert level, nurses rely less on guidelines and principles, and incorporate intuition in their practice of providing holistic care (Benner, 1982).

For this dissertation, the identification of global health competencies was geared to the *novice level* for nursing students who will graduate with a bachelor's degree in nursing (Benner, 1982). This dissertation focused primarily on Bloom's cognitive domain. However, future studies may add competencies in the affective and psychomotor domains. Additionally, competency identification may be done for the other levels (advanced beginner, competent, proficient, and expert).

Conceptual Framework

This section begins with a definition of key concepts that are relevant to the current study and concludes with a proposed framework that was developed by the researcher.

Definitions of Key Concepts

Concepts related to professional nursing and nursing education. The concepts of nursing, registered nursing, and bachelor's education in nursing are addressed below.

***Nursing*.**

> Nursing encompasses autonomous and collaborative care of individuals of all ages, families, groups and communities, sick or well and in all settings. Nursing includes the promotion of health, prevention of illness, and the care of ill, disabled and dying people. Advocacy, promotion of a safe environment, research, participation in shaping health policy and in patient and health systems management, and education are also key nursing roles. (ICN, 2002, para. 3)

***Registered nurse*.** According to the ICN (2008), a registered nurse is

> [a] self-regulated health care professional who works autonomously and in collaboration with others and (a) has successfully completed a program of

> education approved by the nursing board/council, (b) has passed the required assessments established by the nursing board/council for entry into the profession and (c) continues to meet the standards of the nursing board/council. The terms licensed, professional or qualified nurse are used in a similar sense. (p. 7)

Bachelor of Science in nursing (BSN). In comparison to associate degree programs, bachelor's in nursing programs usually include additional education in the physical and social sciences, communication, leadership, and critical thinking. These programs also offer more clinical experience in non-hospital settings. A bachelor's degree or higher is often necessary for administrative positions, research, consulting, and teaching in the United States. In many institutions across the country (i.e., Magnet designated facilities), the BSN is the required entry into practice for novice nurses.

Concepts related to global health. The concepts of global health and global nursing are defined next.

Global health. Based on an extensive literature review, members of GAPFON proposed the following definition of global health:

> Global health refers to an area for practice, study and research that places a priority on improving health, achieving equity in health for all people (Koplan et al. 2009) and ensuring health-promoting and sustainable sociocultural, political and economic systems (Janes & Corbett 2009). Global health implies planetary health which equals human, animal, environmental and ecosystem health (Kahn et al. 2014) and it emphasizes transnational health issues, determinants and solutions; involves many disciplines within and beyond the health sciences and promotes interdependence and interdisciplinary collaboration; and is a synthesis

> of population-based prevention with individual holistic care. (Wilson, Mendes et al., 2016, p. 1536)

Global nursing. The members of the GAPFON panel also proposed the following definition of global nursing:

> Global nursing is the use of evidence-based nursing process to promote sustainable planetary health and equity for all people (Grootjans & Newman 2013). Global nursing considers social determinants of health, includes individual and population-level care, research, education, leadership, advocacy and policy initiatives (Upvall et al. 2014). Global nurses engage in ethical practice and demonstrate respect for human dignity, human rights and cultural diversity (Baumann 2013). Global nurses engage in a spirit of deliberation and reflection in interdependent partnership with communities and other health care providers. (Wilson, Mendes et al., 2016, p. 1537)

Concepts related to competency-based education. The following concepts will be defined in the following paragraphs: competency, competency framework, domain, skill, knowledge, attitude, novice, advanced beginner, competent, proficient, and expert.

Competency. The definition of competency that was used in this study is the one proposed by the ICN (2005): "Competency is the effective application of knowledge, skill, and judgement demonstrated by an individual in daily practice or job performance" (p. 9). Competencies are operationally defined by a set of objectives (Zane, 2008).

Competency framework. A competency framework is an organized arrangement of interrelated competencies (MedBiquitous, 2013).

Domain. A domain is “a sphere of knowledge, influence, or activity” (Domain, 2016, para. 4). The U.S. Agency for International development (USAID) Global Working Group defined domain as “a set of competencies that are grouped together in a logical category” (USAID, 2013, p. 2).

Knowledge. Knowledge refers to content that learners can “recall, relate and appropriately deploy” (Ewell, 2001, p. 6).

Skill. A skill is the learned ability to effectively do something such as perform procedures, critically think, collaborate with others effectively, etc. (Ewell, 2001; Marrelli, 1998).

Attitude. Attitudes are the beliefs and values (empathy, flexibility, self-respect, humility, etc.) students modify or develop during the learning experience (Ewell, 2001).

Novice. The novice level nurse is one who uses situational attributes to make a decision. Without prior experience, the novice can only apply rules that are context-free (Benner, 1982).

Advanced beginner. The advanced beginner level nurse is one who has limited experience and can identify relevant components of a situation (aspects) as more comprehensive characteristics of a situation than the attributes used by the novice. The advanced beginner values all attributes and aspects as equally important in formulating guidelines for their practice (Benner, 1982).

Competent. The competent nurse has reached a level of mastery and ability for managing more complex situations, using two to three years of experience to consciously develop plans to achieve a more organized and efficient level of practice. Analytic

thinking and deliberate evaluation of the aspects of a situation by the nurse allows development of long-range goals (Benner, 1982).

Proficient. The proficient level nurse has moved from abstract principles to a holistic comprehension of a situation and can quickly attend to the attributes and aspects that are most important. Perception of the nuances of a situation allows the proficient nurse to develop maxims that can be used to guide decision-making (Benner, 1982).

Expert. The expert level nurse with extensive experience uses an intuitive approach to focus on the most significant areas of the problem without wasting effort on nonessential information. Reliance on the principles or aspects of a situation is no longer necessary (Benner, 1982).

Concepts related to levels of health promotion. Definitions of primary, secondary, and tertiary levels of prevention are addressed next.

Primary prevention. Primary prevention refers to all interventions that are targeted to prevent the development of an injury or illness (Savage, Groves, & Kub, 2015).

Secondary prevention. Secondary prevention deals with interventions that are directed towards early detection of disease and early treatment if the disease is already established (Savage et al., 2015).

Tertiary prevention. The purpose of tertiary prevention is to avoid incapacity and premature death in addition to focusing on rehabilitation if a disease is present (Savage et al., 2015).

Concepts related to study methodology. Definitions of Delphi Method and mixed methods research.

Delphi method. The Delphi method is used as a forecasting and consensus research method in areas where there is limited available data (Kennedy, 2004; Polit & Beck, 2012).

Mixed methods. In mixed methods research, investigators collect, merge, analyze, and interpret quantitative and qualitative data in order to answer research questions (Creswell, 2015).

Guiding Conceptual Framework

A conceptual framework guides the researcher throughout the inquiry and interpretation of the collected data. Although there is increased interest in identifying both interprofessional and discipline-specific global health competencies, there is a lack of a theoretical foundation in nursing to guide researchers in developing these competencies. For this dissertation, the researcher created a conceptual framework model – the Nursing Global Health Competencies Framework (NGHCF) – to guide the identification and development of nursing competencies in global health.

According to Polit and Beck (2012), a conceptual model or framework is the foundation of a study. Researchers use conceptual frameworks to develop and explain their ideas. Conceptual models depict relationships of the concepts analyzed under a specific theme (Polit & Beck, 2012). A conceptual framework guides the researcher throughout the inquiry and helps in the interpretation of the data collected.

Based on a scoping review of the literature aimed specifically at creating this framework, the researcher developed a conceptual framework to guide the development of global health domain definitions and identification and development of nursing global health competencies. The conceptual framework was not tested but was used as a guiding

structure for the study of global health competencies for baccalaureate nursing students in the U.S.

The conceptual framework created for this study incorporates concepts related to (a) what nursing is and what nursing as a discipline can contribute to global health; (b) concepts related to global health; (c) concepts related to competency-based education; and (d) a skills acquisition model from Benner's "Novice to Expert" (1982; 2004). A graphic model, referred to as the Nursing Global Health Competency Framework, that depicts the general relationships of these concepts was developed to show the inter-relationships as existing concomitantly (see Figure 1). A discussion of each conceptual piece of the model, beginning with the outer ring toward the center, will follow.

The NGHCF framework was initially developed with Koplan et al.'s (2009) definition of global health in mind but modified to include GAPFON's definitions of global health (Wilson, Mendes et al., 2016). A review of the literature was performed to identify sources that would help identify the theoretical underpinnings lacking in the competency identification area. Because the NGHCF framework is nursing specific, high priority was given to sources that addressed the concept of global health nursing. Grootjans and Newman's (2013) framework for "Sustainable Nursing Knowledge in a Globalized World" as well as Merry's (2012) views on global health nursing were two of the primary sources used in creating the NGHCF framework.

There are five dimensions to the NGHCF, with each dimension encompassing the following subcategories based on the literature:

1. Nursing core values and principles: social justice and equity, holistic care, advocacy, health as human right, sustainability, advocacy, and collaboration.

2. Environmental focus: personal and local, national, and global levels.
3. Care focus: primary, secondary, and tertiary levels of prevention.
4. Education focus: societal needs, and context.
5. Domains and competencies/KSAs: a dimension including the global health competencies for BSN students in the U.S. identified in this study.

Competency frameworks are usually leveled to indicate the different types of competencies trainees at each level should attain. This NGHCF framework was leveled using Benner's (1982) five levels of competency: novice, advanced beginner, competent, proficient, and expert.

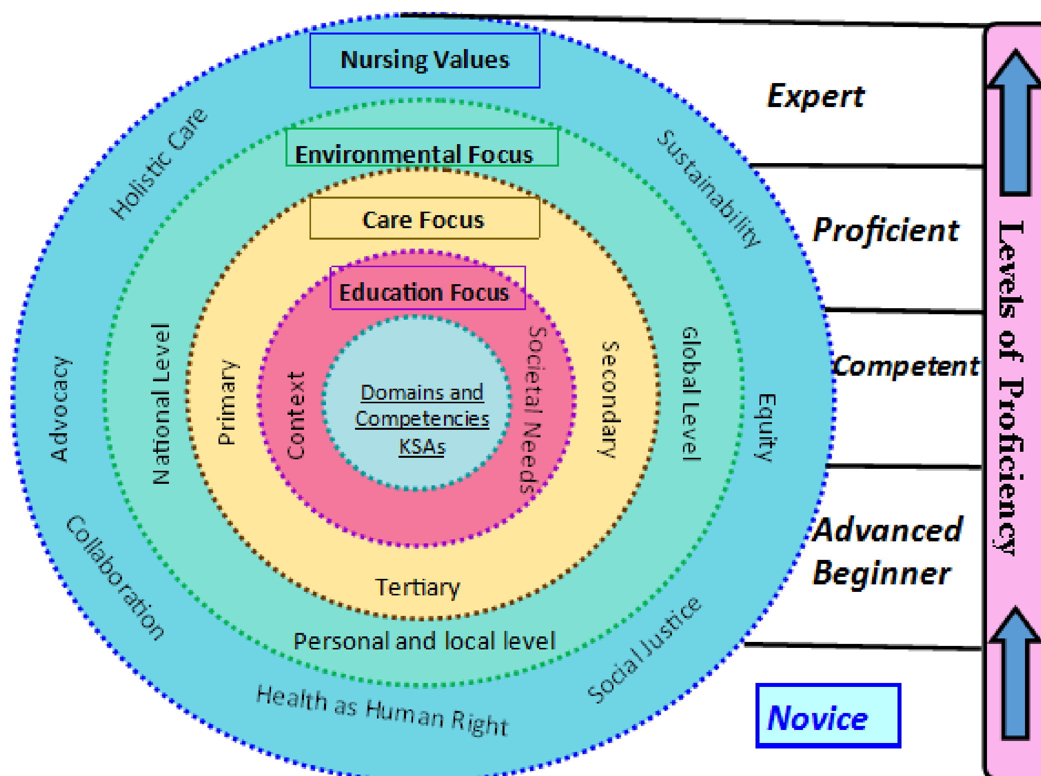

Figure 1. Nursing Global Health Competency Framework (NGHCF).

Nursing core values and principles. This dimension represents core values and principles that can be used as an essential background for core global health competencies and are shared by all nurses regardless of their education level. Six core values were identified, as listed below.

Social justice and equity. Codes of ethics for the nursing profession refer to social justice as one of the principles and responsibilities of nurses (American Nurses Association [ANA], 2007; ICN, 2012). Fowler (2008), in an introductory note for the "*Guide to the Code of Ethics for Nurses,*" stated:

> Within the Code for Nurses there is a truly abiding concern for the social justice at every level; for the amelioration of the conditions that are the cause of disease, illness, and trauma; for the recognition of the worth and dignity of all with whom

> the nurse comes into contact; for the provision of high quality nursing care in accord with the standards and ideals of the profession; and for the just treatment of the nurse. (p. xviii)

In the code of ethics published by the ICN (2012), social justice is addressed in one of the four elements of the code. Nurses are encouraged to advocate for social and health equity and to support initiatives that would promote meeting societal needs and in particular the needs of vulnerable populations. Nurses in all practice settings have the opportunity to advocate for social justice by providing interventions that help correct health inequities stemming from issues related to imbalances in power, gender and race disparities, and political views, among others. Falk-Rafael (2006) stated: "Nursing's fundamental responsibilities to promote health, prevent disease, and alleviate suffering call for the expression of caring for humanity and environment through political activism at local, national, and international levels" (p. 2). Nurses have the power and responsibility to shape national and global health policy that may affect their communities and the nursing profession itself.

Burris and Anderson (2010) described the emotional power of social injustice as a consequence of the world's indifference to the health and survival needs of those that are most deprived of health. The concept of social justice is fundamentally the driving force behind public health work and essential to understanding the meaning of health in a global world. The authors called for a convention of stakeholders to promote the use of public health concepts in research and analysis to examine pathological social injustice as well as to scrutinize public health skills and resources to intervene. The convention could evoke the power of influence to address social injustices endangering global health

through political pressure to address unjust social conditions. Public health has something unique to offer in the application of social justice: insight into the impossible decisions between taking action after a health crisis and seeking to address the social inequities that precipitate the crisis. Thus, global health issues and social justice are conceptually inseparable. Friedman and Gostin (2015) echoed this ideology in their discussion of global health law as a singular message of global health with justice. Improved global health requires closing the gap between the extensive domestic and global health inequities. These authors further posited that health must be integrated into public policies and global actions to overcome barriers to equity.

***Holistic care*.** According to the WHO (1978), health is not only the absence of disease as the concepts of physical, mental, and social well-being are contained in the definition. However, Merry (2012) stated that a definition of health that includes holistic care, quality of life, and well-being is aligned more with the goals of nursing. Merry explained that a greater emphasis on quality of life and well-being are very important considering the inability of western medicine to cure many global illnesses. The author noted that other options, such as complimentary therapies and non-medical healing approaches, are available and have seen increased use. In many global health settings, western medical approaches are not widely accepted. Implementing holistic care in these communities would benefit their health by meeting their medical, human, and spiritual needs by recognizing their human rights, empowering community systems, and recognizing human dignity. Although holistic care is one of the attributes nurses need to exhibit while practicing in any setting, holistic care does not only include the heath of humans, but animals and ecosystems as well. *One Health* is the concept that addresses

health in a way in which other entities, besides humans, benefit. According to Evans and Leighton (2014), One Health is "a paradigm in which health is determined by a broad, inclusive and interdependent continuum of cause and effect across ecosystems and human and animal populations that fully embraces food security, biodiversity, economic prosperity, and emotional and mental well-being" (p. 414). These authors stated that health within the One Health concept can be understood as animals, humans, and ecosystems living together in harmony.

***Advocacy*.** Nursing and advocacy are two concepts that are often discussed simultaneously. In global health, the role of a nurse as an advocate can take many forms. Nurses, as global citizens, must advocate not only for the health of the patients and communities they serve, but also for the broader population, considering the consequences of decisions relative to health care. In addition, nurses must advocate for the health of the planet as human, ecosystem, and animal health are essential to achieve planetary health. Long-term health risks associated with violence, climate change, poverty, and the myriad of environmental disasters are critical global issues. The goals for local and global level actions to address poverty, injustice, hunger, violence, and the disastrous sequelae of climate change have direct implications for nursing at the local, community, and global levels. Nurses must be advocates for proposals that have direct implications for health. This advocacy must focus on ensuring a competent workforce, maximizing nursing roles, intensifying the capacities of nurses through collaboration, and promoting policies to ensure evidence-based practice (Rosa, 2017).

Since 2002, nurses have been considered professionals with the highest level of ethical integrity in the U.S. (Jones & Saad, 2016). However, according to Khoury,

Blizzard, Moore, and Hassmiller (2011), nurses are not regarded as leaders in healthcare delivery and policy. Nurses can be an important resource to impact policy and advocate for global health issues locally and abroad.

***Health as a human right*.** Health is regarded as a right of every person, according to the United Nations (UN). Article 25 of the UN's (1948) Universal Declaration of Human Rights reads: "Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care, and necessary social services" (p. 5). In addition, the ICN (2011) and ANA (2010) have endorsed the concept of health as a human right. Although international and national organizations have made statements about supporting the notion of health as a human right, Merry (2012) suggested that in order to strengthen the perception of health as human right, this concept should be incorporated into definitions of health and global health.

***Sustainability*.** In their review of the literature about nurses and globalization, Grootjans and Newman (2013) found that sustainability was one the generic attributes of nursing practice in a globalized world. The concept of ecological sustainability in nursing is well explained by Anåker and Elf (2014). In their concept analysis work, the authors defined sustainability in nursing as:

> The concept of sustainability in nursing can be defined from a core of knowledge in which ecology, global and holistic comprise the foundation. The use of the concept of sustainability includes environmental considerations at all levels. The implementation of sustainability will contribute to a development that maintains

> an environment that does not harm current and future generation's opportunities for good health. (p. 387)

Regarding sustainability of the profession, Grootjans and Newman (2013) reported that nursing shortage, nurse migration, and emerging roles of nurses are some of the issues affecting the sustainability of nursing. Sustainability of the profession also rests on the ability of nurses to procure self-care. In a pilot study, Alliex (2010) found that self-care strategies were useful to nursing students who declared the strategies to be valuable in their personal and future professional lives.

Collaboration. In global health, as in any other practice setting, interprofessional collaboration (to include patients and communities) is important to attain positive patient and health outcomes. In order to achieve quality patient care, nurses need to work collaboratively with members of the same discipline and members of the healthcare team in a way that teamwork, mutual respect, shared decision-making, and communication are fostered (Disch, n.d.). In a review of literature about the benefits of collaboration, Disch (n.d.) found that when there is collaborative practice, there is a lower risk of negative patient outcomes, improved communication skills among team members, decreased patient length of stay, and lower resignation rates among nurses and physicians. In addition, the IOM (2010) recommended that nurses work in teams (patients, family, providers, social workers, community health workers, etc.) in order to address the nursing shortage and "maximize the available resources in care environments" (p. 270).

Collaboration in global health initiatives is an enormous challenge that encompasses cultural differences, territorial or tribal control, and basic language differences. The WHO commissioned a study to examine the themes common to

collaborative practice across the six WHO regions and 10 countries (Mickan, Hoffman, & Nasmith, 2010). Collaboration in global health practice was determined to be requisite. Collaborative practice requires teamwork and a strong political framework that promotes interprofessional education. Successful global health interventions are characterized by shared governance, interprofessional teams and common clinical pathways with care reflected in a common patient record. Collaborative healthcare teams need interprofessional preparation that encompasses team working skills and communication with educated leaders.

Environmental focus. This dimension reflects the focus of global health practice (personal, local, national, regional, global, or planetary). Grootjans and Newman (2012) stated that when nurses consider health determinants such as the environment, biological, social, and behavioral issues, they cannot focus only on the local level. It is important to understand that local, national, and global determinants of health may affect the health of patients and communities in different ways. In a globalized world, local problems are complex and exceedingly interconnected. When the Ebola outbreak ravished West Africa in 2014, the first U.S. patient to be diagnosed with the virus was cared for by a young nurse. Reportedly, this nurse did not have the knowledge or training to take care of the patient, subsequently she was infected days later. Fortunately, the nurse survived; however, the patient did not. This event occurred in Texas after the Centers for Disease Control and Prevention (CDC) warned health institutions to institute policies and train healthcare providers to effectively deal with this disease. Protocols were not in place in this hospital. Nurses need to become aware of events occurring in the world and work

with others to identify imminent dangers that may be placed upon the community they serve.

Care focus. Nurses play critical roles in health promotion regardless of practice setting. Grootjans and Newman (2013) suggested that nurses in any setting care setting should be able to promote health. The authors noted, for example, that nurses doing a dressing change are able to do primary prevention by means of preventing infection; secondary prevention by assessing the wound for any signs of infection; and tertiary prevention while doing patient teaching on how to change the dressing following discharge. The authors suggested that because of the demands imposed by a globalized world, nurses need to revise the way they think in terms of promotion of health. Nurses working in any care setting (emergency room, critical care units or medical units) have the important opportunity to promote well-being (Grootjans & Newman, 2013).

Education focus. This domain addresses how nursing actions need to be oriented to address societal needs and the current context and settings in which nurses are applying their knowledge and skills. The Commission on Education of Health Professionals for the Twenty First Century devised a framework with specific recommendations aimed to improve health within and between countries by developing and *nurturing* a different type of health care professionals (Frenk et al., 2010). The overarching framework operates as a system that incorporates the population (society), the education system, and the health system as interdependent drivers working together to maintain balance. In this framework, the society is the driver of the demand and supply of health care workers (Frenk et al., 2010), which means that people are on both the receiver

and provider ends of health services. Nurses need to be cognizant about the societal needs and the context in which competencies are being applied.

The final component of the conceptual model includes the domains and competencies that were developed in this study. The NGHCF was leveled at Benner's (1982) novice level as it is geared towards U.S. bachelor's students in nursing.

For more information about the method used to identify these competencies, see Chapter 3. For study findings, see Chapter 4, and for discussion of findings, see Chapter 5.

Summary

The effects of globalization on global health along with the growing interest in global health in the government, private, and education sectors make the identification of global health competencies a priority in baccalaureate nursing education. Competency development in education is beneficial as it makes all the actors in the educational system accountable for the professionals graduating from each discipline and aligns the expectations of graduates, institutions, accrediting bodies, and employers. The graduating professionals should be able to demonstrate competence in a particular set of knowledge, skills, and attitudes. Establishing a set of essential competencies will support program and curriculum development as well as assessment of learning. Although an initial set of competencies has been proposed for undergraduate nursing students, there was a need to develop and validate a revised list of competencies with a stronger nursing theoretical underpinning. The conceptual framework created for this study incorporates concepts related to (a) what nursing is and what nursing as a discipline can contribute to global health; (b) global health; (c) competency-based education; and (d) a skills acquisition

model from Benner's (1982, 2004) *From Novice to Expert*. Chapter 2 addresses the literature review performed to identify domains and competencies that are discipline-specific and interprofessional.

Assumptions

The following were assumptions of the study:

1. Study participants provided honest answers to questionnaires related to global health and BSN experience.
2. Data from Rounds Two and Three were entered accurately.
3. Participants in Round Two provided comments and feedback to the global health domain names, domain definitions, and competency statement to the best of their knowledge.

Limitations

Limitations of the study included:

1. Because small sample sizes and convenience sampling were used, the study sample may not be representative of the entire population.
2. Data obtained in Round One and Round Two (survey one) may be subject to different interpretations due to inherent researcher's bias.
3. Due to the fact that a multiphase mixed methods design was used, the quality of inferences obtained in Round One may have influenced the quality of inferences obtained in Round Two. The same can be said about the quality of inferences produced in Round Two which could have influenced inferences that resulted in Round Three. Therefore, the quality of inferences generated in the study could have been affected.

CHAPTER 2

LITERATURE REVIEW

This literature review focuses on a review of research related to the identification of global health competencies for specific health-related disciplines and interprofessional global health competencies. Findings from the literature review informed development of the revised list of competencies in this study.

Search Strategy

This section describes the review of research literature related to the identification of global health competencies for healthcare professionals. The databases used for this review included PubMed, Scopus, and CINAHL. The search terms used were: global health competencies, global health nursing, global health nursing competencies, global health and nursing, competencies in global health, and nursing competencies in global health. The initial search was limited to articles published between 2005 and 2016. Following completion of data collection for the study, the literature review was updated to include literature published between 2016 and 2018. Findings from the updated literature review are included at the end of this chapter. This researcher performed descendancy and ancestry approaches to identify key publications as mentioned in Polit and Beck (2012). Inclusion criteria consisted of articles published in English with a focus on global health competencies as well as articles in which the authors described systematic processes used to identify global health competencies for health professionals (position statements, literature reviews, and curriculum development articles).

Two hundred and forty-two articles were identified through database searching and seven through other sources (such as articles identified in articles being reviewed). After duplicates were removed, 133 sources remained. All 133 articles were reviewed, with 105 excluded after screening. Twenty-eight articles were reviewed in detail, with eight of the 28 articles being eliminated because they did not meet inclusion criteria. Finally, 20 articles were selected (see Figure 2). Twelve of the 20 articles were research studies (Ablah et al., 2014; Arthur et al., 2011; Kim, Woith, Otten, & McElmurry, 2006; Pechak & Black, 2015; Pfeiffer et al., 2013; Ventura et al., 2014; Veras et al., 2013; Warren et al., 2015; Williams, Morrissey, Goenka, Magnus, & Allen, 2014; Wilson et al., 2012; Wilson, Moran et al., 2016), and eight focused on development of proposed global health competencies (Battat et al., 2010; Benzian et al., 2015; Hagopian et al., 2008; Houpt, Pearson, & Hall, 2007; Howard, Gladding, Kiguli, Andrews, & John, 2011; Jogerst et al., 2015; Redwood-Campbell et al., 2011; Rowthorn & Olsen, 2014; Walpole et al., 2016).

Figure 2 depicts the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) diagram for inclusion and exclusion criteria of the articles selected for this literature review. The literature review matrix is included in Appendix A-1.

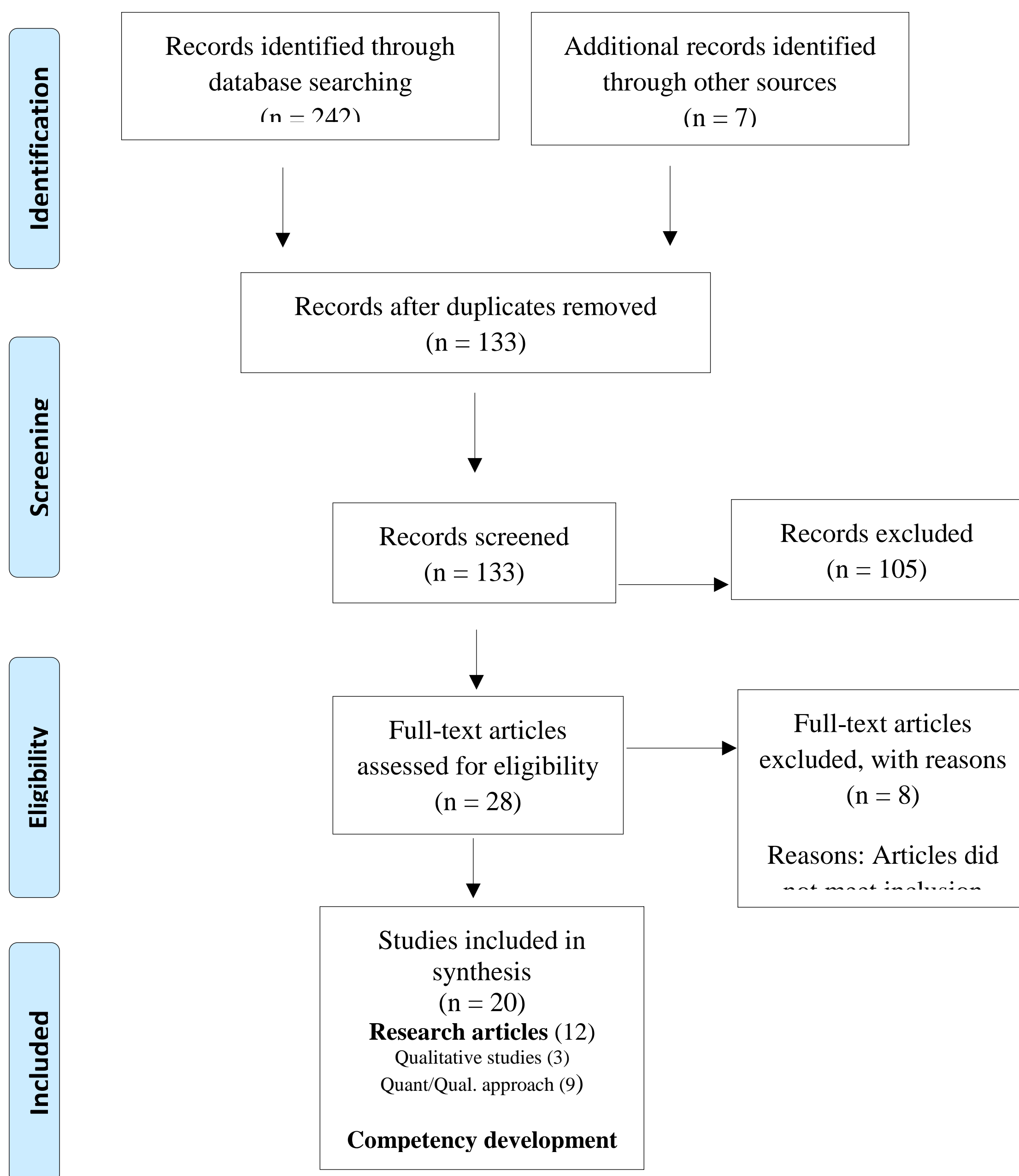

Figure 2. Inclusion-exclusion of articles flow chart following Preferred Reporting Items for Systemic Reviews and Meta-Analyses (PRISMA). Adapted from "Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement," by D. Moher, A. Liberati, J. Tetzlaff, D. G. Altman, & the PRISMA Group, 2009, *PLOS Medicine 6*(7): e1000097. doi:10.1371/journal/pmed1000097.

Screening and Data Extraction

The matrix method was used to organize, screen, review, and synthesize the articles that met inclusion criteria (Garrard, 2013). A matrix table was created with the following headings: (a) authors, title, and journal; (b) purpose or aims; (c) study design; (d) methodology and procedure; (e) sample size and characteristics and recruitment method; (f) data collection; and (g) findings. See research matrix in Appendix A-1.

Discipline Specific Global Health Competencies

A total of 16 articles addressed global health discipline-specific competencies. Two articles described competencies for public health education (Ablah et al., 2014; Hagopian et al., 2008); three articles addressed undergraduate medical education (Arthur et al., 2011; Battat et al., 2010; Houpt et al., 2007); four articles highlighted competencies for graduate medical education (Howard et al., 2011; Redwood-Campbell et al., 2011; Walpole et al., 2016; Williams et al., 2014); and five articles described nursing competencies (Kim et al., 2006; Ventura et al., 2014; Warren et al., 2015; Wilson et al., 2012; Wilson, Moran et al., 2016). In addition, Benzian et al. (2015) and Pechak and Black (2015) addressed competencies for oral health and physical therapy, respectively.

Global Health Competencies in Public Health

Two articles addressed competencies for public health students (Ablah et al., 2014; Hagopian et al., 2008). The University of Washington's (UW) School of Public Health used a consensus-building process to identify and revise curriculum for a new master's in public health program focused on international health (Hagopian et al., 2008). Global health competencies were identified by the curriculum committee of the newly created Department of Global Health. Beginning with a literature search and an

exploration of information from other agencies with global health goals, a collective value system was established. The next step included a review of websites of other graduate programs with competencies or goals in global health. The resulting list of nine competencies was used to review existing courses. New courses were designed in consultation with UW's Center for Instructional Development and Research and these courses, along with the nine competencies were reviewed for "importance" by program faculty and students. The nine competencies focused on the following areas: Power Structures and Determinants of Health; Health Problems and Disparities; Intervention Strategies and Priorities in Low Resource Settings; Research and Epidemiology; Collaborative and Culturally Relevant Leadership; Transnational Networks and Global Laws and Policies; and Evaluation and Financial Management. Even though a limited sample of participants was involved and the competencies that were developed were program-specific, the work of this school could serve as a model for other schools to develop their own unique global health curricula.

The Association of Schools of Public Health (ASPH) developed a set of global health competencies for master's level public health students in global health programs. The process of developing these competencies started in 2008 during the annual ASPH conference when the Global Health Committee started discussing the increased interest in global health and global health programs (Calhoun, Spencer, & Buekens, 2011). In 2009, under the guidance of Buekens, the leadership group outlined the goals and scope of the competency model. Seven domain workgroups were created based on seven topic areas. In addition, seven core groups (n ~ 10 members each) and seven resource groups (n ~ 10-20 members each) were created to develop this model. Each of the workgroups included

experts in academia and practice for each thematic area. Competencies were identified using a three-round modified Delphi method. Prior to the submission of the first Delphi round, each of the seven core groups identified a preliminary list of competencies. Members of the core workgroups completed Delphi rounds one, two, and three, while members of the resource groups completed rounds two and three. All workgroup members were asked to provide comments on the final model (Ablah et al., 2014). Resulting data from all Delphi rounds were discussed via conference calls and emails. The final list of competencies was organized in seven domains:

- Capacity Strengthening (four competencies);
- Collaboration and Partnering (four competencies);
- Ethical Reasoning and Professional Practice (four competencies);
- Health Equity and Social Justice (four competencies);
- Program Management (eight competencies);
- Socio-cultural and Political Awareness (six competencies); and
- Strategic Analysis (six competencies).

Global Health Competencies in Undergraduate Medical Education

Three publications addressed global health competencies for students in undergraduate medical education programs (Arthur et al., 2011; Battat et al., 2010; Houpt et al., 2007). Houpt et al. (2007) proposed three domains of global health competencies for U.S. and Canadian medical students: Burden of Global Diseases, Traveler's Medicine, and Immigrant Health. Although not stated in the article, it appears that the authors developed the domains and competencies for Burden of Global Diseases and Immigrant Health based on their professional knowledge and experience in the topics.

Examples of competencies under the Burden of Global Diseases domain include an understanding of major diseases that affect individuals globally, as well as indicators of global mortality and disability adjusted life years. Examples of competencies in the domain of Immigrant Health included competencies related to managing health problems of immigrant communities and practicing with cultural competent care. For the Traveler's Medicine competency domain, the authors sent surveys to approximately 500 members of the American Committee on Clinical Tropical Medicine and Traveler's Health (ACCTMTH) asking how many hours need to be allocated to tropical medicine and traveler's health in the medical curricula and how this time should be assigned. They also asked participants to prioritize a list of topics obtained from the ACCTMTH exam. Examples of competencies in the domain of Traveler's Medicine included knowledge of diseases such as HIV, tuberculosis, malaria, diseases caused by intestinal protozoa, and other tropical diseases.

Battat et al. (2010) performed a literature review in order to identify global health competencies and educational methods for medical students. The authors completed this literature review by looking for relevant articles in two databases (Ovid and Web of Science) and McGill Global Health program files. Sixty-three articles were selected for review by the researchers, but only 32 articles were selected for a more in-depth review, with 11 of those selected articles addressing global health competencies. In their review of the literature, Battat et al. (2010) reported a lack of consensus in regards to which competencies were relevant for medical students because they did not see any specific global health topic addressed in more than five of the articles reviewed. The authors noted that the educational approaches recommended the most were experiential learning

and didactic activities. Fourteen themes related to global health competencies were extracted from the 11 articles. Although some of these statements are not the usual way competencies and domains are stated, this researcher decided to list the competencies how the authors reported them in their studies:

- Skills to better interface with different populations, cultures and healthcare systems;
- Understanding of immigrant health;
- Primary care within diverse cultural settings;
- Understanding healthcare disparities between countries;
- Understanding the burden of global disease;
- Understanding travel medicine;
- Developing a sense of social responsibility;
- Appreciating contrasts in healthcare delivery systems and expectations;
- Humanism;
- Scientific and societal consequences of global change;
- Evolving global governance issues;
- Cost of global environmental change;
- Taking adequate patient histories and physical examinations in resource poor settings; and
- Cost-consciousness, using physical diagnosis without high technologic support.

Arthur et al. (2011) described a study conducted by the Association of Faculties of Medicine of Canada (AFMC) resource group on global health and the Global Health

Education Consortium (GHEC) to identify global health competencies for medical students in the U.S. and Canada (Arthur et al., 2011). These competencies were developed based on a review of existing literature and websites describing global health programs for undergraduate medical students. The preliminary list of competencies was evaluated by experts in global health, students, and medical educators using a modified Delphi method, although specific details of the Delphi method were not discussed in the article. The resulting list of global health competencies included seven topic areas, and 18 competencies proposed for all medical students. The topic areas were:

- Global Burden of Disease;
- Health Implications of Travel, Migration, and Displacement;
- Social and Economic Determinants of Health;
- Population, Resources, and the Environment;
- Globalization of Health and Health Care;
- Health Care in Low-resource Settings; and
- Human Rights in Global Health.

Global Health Competencies in Graduate Medical Education

Four studies focused on identification of global health competencies for graduate medical students (Howard et al., 2011; Redwood-Campbell et al., 2011; Walpole et al., 2016; Williams et al., 2014). A competency-based curriculum in global health was developed for pediatric residents at the University of Minnesota (Howard et al., 2011). Using six steps, a group of the University of Minnesota's pediatric medical and education faculty as well as medical faculty from Uganda worked through an iterative, collaborative process to develop the curriculum. Multiple cycles of literature review, online revisions,

and in-person conferences were used to determine how to train globally competent pediatricians and the knowledge, skills, and attitudes needed by pediatricians for practice in resource-poor communities. The competency domains that were developed included:

- Patient Care;
- Medical Knowledge;
- Practice-based Learning and Improvement;
- Interpersonal and Communication Skills;
- Professionalism; and
- System-based Practice.

Members of the Global Child Curriculum Workgroup in the United Kingdom (UK) conducted a literature review and a modified Delphi survey to identify competencies for pediatricians practicing in the UK (Williams et al., 2014). The specific details of the Delphi method were not described, but the authors proposed five areas of competencies for UK pediatricians related to the following areas:

- Effective Delivery of Care and Management of Diseases;
- Understanding of Specific Needs of Children that are Affected by Conflicts or are Immigrants;
- Alternative Disease Prevention Approaches;
- Management of Common Diseases in Displaced Communities; and
- Identification of Global Health Issues that Affect Children Worldwide.

Redwood-Campbell et al. (2011) proposed an interactive curriculum framework that could guide the design, delivery, and evaluation for curricula in global family medicine in Canada. Global health educators from six medical schools in Ontario

proposed this framework by convening a working group of 10 faculty members with expertise in medicine, global health, and/or medical education. Two education consultants and three support personnel were also part of the project. After a scoping literature review, the group met to debate and derive a consensus on a definition of global health for family medicine and to define the mission and principles for developing a curriculum framework. Research team members held weekly teleconferences over a 6 month period and shared documents and proposed the following core values and principles underlying global health: social justice; sustainability; reciprocity; respect; honesty and openness; humility; responsiveness and accountability; equity; and solidarity. The proposed global health competencies in family medicine mirror the general family medicine competencies proposed by CanMEDS, but have a global health focus. The competency domains include: Professional, Communicator, Collaborator, Advocate, Medical (Global Health) Expert, Scholar, and Manager. The components of values and principles and roles were depicted in a framework for global health education for family medicine postgraduate training for curriculum delivery, mentorship, practice, and evaluation. The working group described this preliminary work as the first step in laying the foundation for future curriculum development, research, and consensus.

Walpole et al. (2016) conducted a modified Delphi study to identify global health competencies for postgraduate doctors in the United Kingdom (UK). Initially, the study was designed to develop competencies for postgraduate health professionals in the UK, however, the researchers decided to focus on postgraduate doctors in the UK after round one. Three rounds of data collection were used to refine a list of competencies compiled from the literature, aligned using Bloom's taxonomy. Online questionnaires and

interviews were used to elicit comments from 250 stakeholders that included doctors, medical students, public health professionals, medical educators, and several nurses. Participant feedback guided refinement of the initial list of competencies to reflect a patient-centered approach. Six core competency areas resulted from the study:

- Diversity;
- Human Rights and Ethics;
- Environmental, Social and Economic Determinants of Health;
- Global Epidemiology;
- Global Health Governance; and
- Health Systems and Health Professionals.

The findings also reflected a wide diversity of opinions about what should be taught under each core competency, and many stakeholders noted a fear of over-burdening the curriculum. However, the results of this study clearly demonstrated support for integrating global health competencies in postgraduate medical education in the UK.

Global Health Competencies in Physical Therapy

Pechak and Black (2015) conducted an online survey to identify global health competencies for physiotherapists in the U.S. The authors reported that 188 physiotherapists working in the U.S. participated in the survey and answered all or part of the survey (Pechak & Black, 2015). The list of competencies used in this study was developed by Wilson et al. (2012) and was adapted to physiotherapy with minor discipline-specific terms. Four additional competencies specific to physiotherapy organizations and frameworks were added. Respondents rated each competency on a Likert-type scale and also provided open-ended comments at the end of the survey. The

majority of the 188 respondents agreed that the 33 global health competencies were relevant for physiotherapy students. In the open-ended responses, participants indicated that some of the competencies were beyond entry-level education, that competencies needed to have more relevance to physical therapy and the U.S., and that understanding of international issues was valuable. In terms of survey design, participants stated that the way the competencies were introduced was confusing, the language needed to be more neutral, and a definition of terms was needed. The authors noted that lack of an agreed upon definition for global health and a wide variability in the background and experience of participants (53% had not been involved in international work) may have limited the findings.

Global Health Competencies in Oral Health

Four interdisciplinary expert working groups were formed to propose and review lists of global health competencies for oral health (Benzian et al., 2015). Participants represented disciplines including medicine, dentistry, hygienists, nurses, community health workers, and non-health professionals. The reviews were conducted remotely by internet and in three face-to-face meetings. Three domains (Knowledge, Skills, and Abilities) and supporting competencies and principles were used to group competencies into a matrix. Competency categories under these three domains included:

- Oral Diseases;
- Risk Factors and Social Determinants;
- Disease Prevention and Health Promotion;
- Disease Management;
- Advocacy;

- Research;
- Monitoring;
- Evaluation;
- Interpersonal/Inter-sectoral Approach;
- Cultural and Social Competencies; and
- Professional Ethics.

The preliminary and exploratory list of competencies was developed by a convenience group of experts that may not be representative of those professions working in global health. However, the competencies associated with each of the three domains include many of those identified for other disciplines.

Global Health Competencies in Nursing

Kim et al. (2006) conducted one of the first studies aimed at identifying global competencies for nurses in a study to identify competencies for global executives and global nurse leaders. Seventeen nurses were interviewed using a modified instrument originally created by McCall and Hollenbeck (2002) to study the developing of global executives. In addition to the interviews, a literature review was conducted by the authors to identify key views about leadership development. The characteristics and competencies mirrored the ones identified by McCall and Hollenbeck (2002):

- Open Minded and Flexible,
- Cultural Interest and Sensitivity;
- Resilient;
- Resourceful;
- Optimistic, and Energetic;

- Honesty and Integrity;
- Stable Personal Life; and
- Value-Added Technical or Business Skills.

Although the competencies identified mirrored those from the original list, the authors incorporated changes to the original competencies in order to identify competencies and characteristics relevant for global nurse leaders. In addition, the authors added the categories of Political Savvy and Conviction and Passion based on interviews and a literature review.

The identification of global health competencies in undergraduate nursing education has been pioneered by Wilson and colleagues in a series of four separate studies of nursing faculty in the U.S., Canada, Latin America, the Caribbean, Brazil, and Africa (Ventura et al., 2014; Warren et al., 2015; Wilson et al., 2012; Wilson, Moran et al., 2016). Wilson et al. (2012) conducted an online survey of nursing faculty in the U.S., Canada, Latin America, and the Caribbean to determine their perceptions of global health nursing competencies. The survey included a list of 30 competencies that were adapted from the global health competencies for medical students that were proposed by the GHEC and the AFMC. Competencies that incorporated medical diagnosis or treatment were not included in this list. Nursing competencies were divided into six subscales:

- Global Burden of Disease;
- Health Implications of Travel and Displacement;
- Social and Environmental Determinants of Health;
- Globalization of Health and Health Care;
- Health Care in Low-Resource Settings; and

- Health Care as a Human Right and Development Resource.

In this exploratory descriptive study, 593 surveys (542 English surveys and 51 Spanish surveys) were received from nursing faculty in the U.S., Canada, Latin American, and the Caribbean. Based on results using mean values, the researchers reported that participants agreed that these competencies were essential for undergraduate nursing students in the U.S., Canada, Latin American, and the Caribbean (Wilson et al., 2012). One limitation of this study was that the competencies were based on the list of competencies developed for medical students and were not based on a framework specifically developed to guide baccalaureate nursing education. Another limitation was that the inclusion criteria of the nurses surveyed specified only that the respondents taught in undergraduate nursing programs and did not specify if they had any knowledge of global health and undergraduate nursing education.

Using the global health domains and competencies identified by Wilson et al. (2012), Ventura et al. (2014) surveyed 222 Brazilian nursing faculty to ascertain their perceptions about whether these competencies were essential in undergraduate nursing education and to assess whether these competencies were being taught at participants' institutions. The researchers established that the participants identified these competencies as essential for undergraduate nursing students in Brazil. Respondents reported that 17 of the 30 competencies were not addressed in their undergraduate nursing curricula. The competency domains least addressed in Brazilian nursing curricula were (a) Globalization of Health and Health Care, (b) Healthcare in Low-Resource Settings, and (c) Health as a Human Right and Development Resource.

Warren et al. (2015) studied the perceptions of 63 African nursing faculty about global health competencies and how these results compared to results by Wilson et al. (2012). In this non-experimental, cross-sectional study, Warren et al. (2015) translated the list of competencies used by Wilson et al. (2012) to French and conducted an online survey (in English and French) of African nursing faculty. Results indicated that African nursing faculty perceived that all of the competencies are important (subscale means above 3.3 on a four-point scale). Competencies related to Social and Environmental Determinants of Health obtained the highest scores (mean = 3.6).

Even though these studies have paved the way for research in nursing global health competencies, there were some limitations found in the studies. First, the researchers did not use a nursing framework to guide their studies. Second, the competencies were derived from medical education (graduate education) and not from a nursing theoretical framework. Third, responses from the Latin American and African samples were low, which may decrease generalizability. Fourth, the translations of the original list of competencies done for the Spanish, Portuguese, and French (African countries) did not follow a rigorous cross-cultural translation process – i.e., back translation, reconciliation, pilot testing, final revisions, and psychometric adequacy were not performed (Polit & Yang, 2016). Fifth, researchers working on identifying global health competencies for other disciplines have selected experts in the field (Arthur et al., 2011; Benzian et al., 2015; Pfeiffer et al., 2013; Redwood-Campbell et al., 2011); however, this was not part of the inclusion criteria of the nursing studies that were reviewed.

Wilson, Moran et al. (2016) conducted further research to analyze comments from 320 of the 989 nursing faculty members from Africa and the Americas who had responded to one of the four surveys conducted by the research team to identify essential nursing global health competencies for undergraduate nursing students. After indicating their level of agreement with the 30 proposed global health competencies described in the preceding paragraphs, participants were asked to identify additional competencies that should be addressed in undergraduate nursing programs (Wilson, Moran et al., 2016). The following categories were identified from the qualitative comments, suggesting the need for additional competencies to be added to the original list of 30 competencies:

- Culturally Competent, Humanistic, and Holistic Care;
- Prevention, Health Promotion, and Primary Care;
- Multidisciplinary Work, Teamwork;
- Communication;
- Professional Nursing Issues In Diverse Settings;
- Policy/Politics and Historical Context;
- War, Disaster, Pandemics, Terrorism, and Displacement;
- Program Development, Planning, and Evaluation;
- Leadership, Management, and Advocacy; and
- Vulnerable Populations.

This researcher conducted a pilot study as a preliminary step in developing this dissertation study (Torres, 2015). Six nurses from the U.S. and Canada with expertise in global health nursing were interviewed to elicit their opinions regarding: (a) the value of identifying global health competencies for undergraduate nursing education in the U.S.

and Canada, and (b) what global health competencies would be important for undergraduate nursing students in the U.S. and Canada.

All participants agreed that there is value in identifying global health competencies for undergraduate nursing students. Participants identified the following themes as reasons why it is important to identify and promote global health competencies in nursing students: (a) enhancing cultural competency; (b) promoting global citizenship; (c) interconnectedness; (d) providing a framework for higher education institutions; (e) increasing interest in global health (nurses and students); (f) providing increased educational offerings in global health; (g) influencing global awareness of life; (h) preparing for careers in global health; (i) promoting student empathy; (j) providing students with tools to promote global health; (k) others may benefit (nursing faculty, other health care professions, the client); and (l) global health content is essential. Even though most nursing educational programs in the U.S. incorporate a cultural competency framework, participants in the pilot study linked the theme of cultural competency to learning experiences occurring in diverse settings foreign to the students' personal backgrounds. These comments raise the question about whether there may be a set of cultural competencies that are unique or specific to global health. Although this pilot study included interviews with only six individuals with expertise in global health, their responses to this first question indicate support for the importance of identifying global health competencies for undergraduate nursing education.

Respondents in the pilot study identified multiple global health competency domains that they believed were important for undergraduate nursing students in the U.S. and Canada. The themes that emerged were grouped into 34 categories based on common

wording and context. Some competency themes that resulted from this study were similar to the six competency categories identified by Wilson et al. (2012); Global Burden of Disease (themes identified as epidemiology and specific diseases were merged to global burden of disease); Health Issues Related to Travel; Determinants that affect Global Health; Global Perspectives and Worldview; Healthcare in Low-Resource Settings; and Human Rights. Therefore, there was validation in the identification of the competencies in this pilot study. Themes that were identified in this pilot, but were not included in the list used in the studies by Wilson and colleagues (Ventura et al., 2014; Warren et al., 2015; Wilson et al., 2012; Wilson, Moran et al., 2016) included:

- Collaboration and Partnerships;
- Basic Nursing Competencies;
- Equity and Social Justice;
- Ethics in Global Health;
- Individual Health;
- Population Health;
- Principles of Global Heath;
- Research and Information Literacy;
- Self-Care and Preparation for Global Health Settings; and
- Role of Government, Politics and Organizations in Global Health.

Although Wilson et al. (2012) identified a competency related to different national health systems, the theme identified in this pilot study included comments related to political contexts, the role of institutions and governments in global health, and the influence of history and politics to global health.

There are a number of themes identified in the qualitative analysis of the four studies conducted by Wilson, Moran et al. (2016) and in the pilot study by Torres (2015) that were not addressed in the original list of 30 competencies evaluated by Wilson, Moran et al. (2016) and Wilson et al. (2012). The following areas were identified from qualitative analyses by Wilson, Moran et al. (2016) and Torres (2015) that were NOT specifically reflected in the original list of 30 nursing global health competencies: (a) Professional Nursing Issues in Diverse Settings; (b) Basic Nursing Competencies; (c) Equity and Social Justice; (d) Ethics in Global Health; (e) Health Systems Management and Strengthening; (f) Individual Health; (g) Principles of Global Health; (h) Research, Information Literacy, Self-Care, and Preparation for Global Health Settings; and (i) Theoretical Frameworks. Table 1 shows the historical progression of domain identification in global health nursing competencies.

It is important to recognize that some of the additional competencies identified by Wilson, Moran et al. (2016) and Torres (2015) may overlap with existing general nursing competencies. In the pilot study conducted by Torres (2015), five participants commented that global health competencies may overlap with other areas or competencies already addressed in nursing curricula. In addition, participants said it may be difficult to measure or document global health competencies in the broader curriculum. One participant highlighted the fact that some global health competencies could even overlap with competencies that are specific to other disciplines.

Table 1.
Proposed Global Health Domains for Nurses

Wilson et al. (2012) Global health competencies for nurses in the Americas. *Journal of Professional Nursing*, 28(4), 213-222	**Torres (2015)** Pilot study report	**Wilson, Moran et al. (2016)** Qualitative description of global health nursing competencies by nursing faculty in Africa and the Americas. *Revista Latino-Americana de Enfermagem*
1. Global burden of disease 2. Health implications of travel and displacement 3. Social and environmental determinants of health 4. Globalization of health and health care 5. Health care in low resource settings 6. Health care as a human right and development resource	1. Collaboration and partnerships 2. Basic nursing competencies 3. Equity and social justice 4. Ethics in global health 5. Individual health 6. Population health 7. Principles of global heath 8. Research and information literacy 9. Role of government, politics and organizations in global health. 10. Self-care and preparation for global health settings	1. Culturally competent, humanistic, and holistic care 2. Prevention, health promotion, and primary care 3. Multidisciplinary work, teamwork 4. Communication 5. Professional nursing issues in diverse settings 6. Policy/Politics and historical context 7. War, disaster, pandemics, terrorism, and displacement 8. Program development, planning, and evaluation 9. Leadership, management, and advocacy 10. Vulnerable populations

Summary of Discipline-Specific Competency Domains

Table 2 summarizes the discipline-specific global health competency domains that were identified in the articles reviewed. There are many similarities in the global health domains across the disciplines. The domains that were identified most frequently were: (a) Collaboration-Interprofessional/Inter-Sectoral Work (43.7%); (b) Health Implications of Travel, Migration, and Displacement (37.5%); (c) Global Burden of Disease (31.2%); (d) Cultural Competency (31.2%); (e) Human Rights in Global Health (25%); and (f) Socioeconomic and Environmental Determinants of Health (25%). Other

domains – such as Ethics, Advocacy, Research, Program Management, Interpersonal and Communication Skills, Global Governance, Program Management, and Health Promotion, Prevention, and Primary Care – were mentioned in 18.7 % of the articles. Other discipline-specific competencies were identified as well. For example, Benzian et al. (2015) referred to Oral Diseases as a domain. Some domains were specific to the medical profession, including: Taking Adequate Patient Histories and Physical Examinations in Resource Poor Settings, Cost-consciousness, and Using Physical Diagnosis without High Technologic Support. Pechak and Black (2015) included four specific competencies that relate to disability and rehabilitation.

Table 2
Global Health Competency Domains - Discipline Specific

Domains					
Medicine	**Post Graduate Medicine**	**Nursing**	**Master of Public Health/International Health**	**Physical Therapy**	**Oral Health**
• Burden of global disease • Traveler's medicine • Immigrant health • Skills to better interface with different populations, cultures and healthcare systems • Understanding of immigrant health • Primary care within diverse cultural settings • Understand healthcare disparities between countries • Understanding of the burden of global disease	• Patient care • Medical knowledge • Practice-based learning and improvement • Interpersonal and communication skills • Professionalism • System-based practice. • Professional • Communicator • Collaborator • Advocate • Medical (global health) expert • Scholar • Manager • Effective delivery of care and	• Open minded and flexible • Cultural interest and sensitivity • Resilient • Resourceful • Optimistic, and energetic • Honesty and integrity • Stable personal life • Value-added technical or business skills • Global burden of disease • Health implications of travel and displacement • Social and environmental determinants of health • Globalization of health and health care • Health care in low resource settings	• Power structures and determinants of health • Health problems and disparities • Intervention strategies and priorities in low resource settings • Research and epidemiology • Collaborative and culturally relevant leadership • Transnational networks and global laws and policies • Evaluation and financial management • Capacity strengthening • Collaboration and partnering • Ethical reasoning and professional practice	No domains specified. However, report follows Wilson's introductory statements for domains	• Oral diseases • Risk factors and social determinants • Disease prevention and health promotion • Disease management • Advocacy • Research monitoring and evaluation • Interprofessional/inter-sectoral approach • Cultural and social

• Understanding of travel medicine • Develop a sense of social responsibility • Appreciate contrasts in healthcare delivery systems and expectations • Humanism • Scientific and societal consequences of global change • Evolving global governance issues • Cost of global environmental change • Taking adequate patient histories and physical examinations in resource poor settings • Cost-consciousness, using physical diagnosis without high technologic support • Global burden of disease • Health implications of travel, migration, and displacement • Social and economic determinants of health • Population, resources, the environment • Globalization of health and health care • Health care in low-resource settings • Human rights in global health.	management of diseases • Understanding of specific needs of children that are affected by conflicts or are immigrants • Alternative disease prevention approaches • Identification of global health issues that affect children worldwide. • Diversity • Human rights and ethics • Environmental, social and economic determinants of health • Global epidemiology • Global health governance • Health systems and health professionals.	• Health care as a human right and development resource. • Culturally competent, humanistic, and holistic care • Prevention, health promotion, and primary care • Multidisciplinary work, teamwork • Communication • Professional nursing issues in diverse settings • Policy/Politics and historical context • War, disaster, pandemics, terrorism, and displacement • Program development, planning, and evaluation • Leadership, management, and advocacy • Vulnerable populations • Collaboration and partnerships • Basic nursing competencies • Equity and social justice • Ethics in global health • Individual health • Population health • Principles of global heath • Research and information literacy • Role of government, politics and organizations in global health. • Self-care and preparation for global health settings	• Health equity and social justice • Program management • Socio-cultural and political awareness • Strategic analysis		competence • Professional ethics

Interprofessional Global Health Competencies

Four of the reviewed articles focused on identification of interprofessional global health competencies (Jogerst et al., 2015; Pfeiffer et al., 2013; Rowthorn & Olsen, 2014; Veras et al., 2013). In response to the need for an assessment instrument to evaluate competency in global health, Veras et al. (2013) used a six-stage method to develop, pilot, and test a Global Health Competency Survey. The final instrument was used to survey 429 students in five Canadian universities who were enrolled in family medicine, physiotherapy, nursing, and occupational health disciplines. Face and content validity of each iteration of the survey, as well as the final 22-item survey, was established by an expert panel. An exploratory factor analysis confirmed that five factors accounted for 95% of the variance. The five factors reported were: Confidence Level in Socioeconomic Position and Health Disparities; Social Determinants of Health; Global Health Skills; Health Disparities; and Travel and Migration. These factors were consistent with the literature review performed by the authors. A Cronbach's alpha of 0.862 was determined for the entire questionnaire and each of the five factors. The discrimination index was strong for all items. The five factor categories of the Global Health Competency Survey were: Social Determinants of Health; Confidence Level in Socioeconomic Position and Health Disparities; Global Health Skills; Health Disparities; and Travel and Migration. Although this study included primarily white, female, middle class participants, the development of this competency assessment survey lays the foundation for further research with more diverse samples.

In 2013, Pfeiffer et al. published an article about the development of a global health curriculum that included the identification of global health competencies and

educational strategies for training global health students. The authors interviewed 21 individuals who were practitioners and leaders in the field and who had strong ties with the University of Washington's Department of Global Health. After analyzing the data, five competencies were identified: Knowledge of Socioeconomic and Environmental Determinants of Health; Knowledge of Systems Thinking (architecture and levers of health, health relevant systems, and health service delivery); Skills in Epidemiology and in Monitoring and Evaluation; and Skills in Policy Analysis and Development. The educational strategies to teach trainees in global health recommended by the group of experts included experiential learning and case studies and participation in interprofessional collaboration projects.

The Center for Global Education Initiatives at The University of Maryland in Baltimore organized a roundtable of experts in global health and interprofessional education (Rowthorn & Olsen, 2014). This group of 42 experts from nursing, medicine, pharmacy, public health, environmental health, physical therapy, epidemiology, engineering, law, physical and applied sciences, and social work, began by submitting comments prior to the roundtable discussions. The Interprofessional Education Collaborative core competencies (modified for global health), pre-conference comments, and competencies suggested by participants were used as a basis for developing the final list of 10 "team" competencies. The components of a global health team competency domain were: Teams and Teamwork; Values/Ethics for Interprofessional Global Health Teams; Roles/Responsibilities; Interpersonal Communication; and Personal Attributes Important to Global Health Practice. Ten descriptive competencies were derived under

these domains (knowledge and skills only), to serve as a starting point for teaching team abilities and refinement by a broader group of experts in global health.

In 2013, the chair of the Consortium of Universities for Global Health (CUGH) appointed a Global Health Competency Subcommittee and charged this subcommittee with reviewing the literature and proposing a set of interprofessional global health competencies. Members of the Subcommittee first conducted an extensive review of literature and websites to identify global health competencies that had been proposed for the major health-related disciplines (including medicine, public health, pharmacy, dentistry, nursing, optometry, psychology, anthropology, health economics, and engineering). Based on the literature review, Subcommittee members recommended four competency levels and developed proposed competencies for Levels I and III (Global Citizen and Program-oriented Basic Operational level). Subcommittee members held numerous conference calls and electronic correspondence to discuss the proposed domains and competencies, and then voted to reach consensus on the final list of proposed competencies in addition to allocating those competencies to each of the two levels selected (I and III). Competencies that were recommended by eight of the 11 members of the Subcommittee were retained. If only six or seven voted yes, those competencies were further discussed and included if there was verbal consensus. Competencies that did not meet these criteria were eliminated from the final list.

Four competency levels were proposed: (a) Global Citizen (Level I), (b) Exploratory Level (Level II), (c) Basic Operational Level (Level III), and (d) Advanced Level (Level IV). Level I refers to competencies that all post-high school students should exhibit. Competencies in the Exploratory Level (Level II) focus on knowledge, skills, and

attitudes of learners who are considering endeavors in global health such as a service learning experience. The Basic Operational Level (level III) is designed for students "wishing to spend at least some time, but not necessarily a career, working in the field of global health" (Wilson, Callender et al., 2014, p. 30). Two types of global health competencies were identified for this level: Practitioner-oriented and Program/Policy oriented. Lastly, Level IV refers to competencies for individuals with sustained engagement in global health activities. The Basic Operational Level (Level III) is the one that relates to baccalaureate nursing students. To date, the members of the Subcommittee have proposed 13 competencies across eight domains for the Basic Citizenship Level, and 39 competencies across 11 domains for the Basic Operational Level Program/Policy-oriented competencies. These domains are: Global Burden of Disease; Globalization of Health and Health Care; Social and Environmental Determinants of Health; Capacity Strengthening; Collaboration, Partnering and Communication; Ethics; Professional Practice; Health Equity and Social Justice; Program Management; Sociocultural and Political Awareness; and Strategic Analysis. Subcommittee members recommended that discipline-specific competencies for the practitioner-oriented basic operational level should be identified by individual disciplinary groups (Jogerst et al., 2015).

Table 3 summarizes the global health domains for interprofessional education extracted from the literature. The domains that were included in more than one article were: Social and Environmental Determinants of Health; Ethics; and Health Equity and Social Justice. It is important to note that most of the domains in Table 3 are addressed in the aggregate list of discipline-specific competencies illustrated in Table 2.

Table 3
Global Health Competency Domains - Interprofessional

Interprofessional Global Health Domains
• Social determinants of health • Confidence level in socioeconomic position and health disparities • Global health skills • Health disparities • Travel and migration • Knowledge of socioeconomic and environmental determinants of health • Knowledge of systems thinking (architecture and levers of health, health relevant systems, and health service delivery) • Skills in epidemiology and in monitoring and evaluation • Skills on policy analysis and development • Teams and teamwork • Values/ethics for interprofessional global health teams • Roles/responsibilities • Interpersonal communication • Personal attributes important to global health practice • Global burden of disease • Globalization of health and health care • Social and environmental determinants of health • Capacity strengthening • Collaboration, partnering and communication • Ethics • Professional practice • Health equity and social justice • Program management • Sociocultural and political awareness • Strategic analysis

Summary of Discipline-Specific and Interprofessional Global Health Competency Domains

A total of 28 competency topics or domains were identified across all of the 20 reviewed articles. The topics most frequently referenced were Determinants of Health (52%), Global Burden of Disease (47%), Communication (41%), and Professional Issues (41%). Other topics extracted from the analysis of literature are found in Table 4. The percentage of articles reporting a competency topic was calculated by dividing the total number of articles referring to a competency by the total number of revised articles minus two. Because Ventura et al. (2014) and Warren et al. (2015) used the same competency

list as Wilson et al. (2012) without any modifications, those articles were not used to calculate the percentage of articles mentioning a specific competency.

Table 4

Summary of Discipline-Specific and Interprofessional Global Health Competency Domains Identified Across 20 Studies

Competency Topic	n	%
Determinants of heath (Arthur et al., 2011; Battat et al., 2010; Benzian et al., 2015; Hagopian et al., 2008; Howard et al., 2011; Jogerst et al., 2015; Pfeiffer et al., 2013; Walpole et al., 2016; Williams et al., 2014; Wilson et al., 2012)	10	55.55
Global burden of disease (Arthur et al., 2011; Battat et al., 2010; Benzian et al., 2015; Hagopian et al., 2008; Houpt et al., 2007; Jogerst et al., 2015; Walpole et al., 2016; Williams et al., 2014; Wilson et al., 2012)	9	50.00
Professional issues in diverse settings (Ablah et al., 2014; Benzian et al., 2015; Howard et al., 2011; Jogerst et al., 2015; Kim et al., 2006; Redwood-Campbell et al., 2011; Wilson, Moran et al., 2016)	7	38.88
Communication (Battat et al., 2010; Hagopian et al., 2008; Howard et al., 2011; Jogerst et al., 2015; Redwood-Campbell et al., 2011; Rowthorn & Olsen, 2014; Wilson, Moran et al., 2016)	7	38.88
Culturally competent, humanistic, and holistic care (Benzian et al., 2015; Hagopian et al., 2008; Howard et al., 2011; Kim et al., 2006; Williams et al., 2014; Wilson, Moran et al., 2016)	6	33.33
Politics and historic context – sociocultural political awareness (Ablah et al., 2014; Hagopian et al., 2008; Kim et al., 2006; Pfeiffer et al., 2013; Redwood-Campbell et al., 2011; Wilson, Moran et al., 2016)	6	33.33
Program management – manager (quality improvement) (Ablah et al., 2014; Benzian et al., 2015; Hagopian et al., 2008; Pfeiffer et al., 2013; Redwood-Campbell et al., 2011; Wilson, Moran et al., 2016)	6	33.33
Global health governance (institution and initiatives; local and around the globe) (Battat et al., 2010; Hagopian et al., 2008; Pechak & Black, 2015; Walpole et al., 2016; Williams et al., 2014)	5	27.77
Systems thinking – strategic analysis – health care systems (Ablah et al., 2014; Battat et al., 2010; Howard et al., 2011; Jogerst et al., 2015; Pfeiffer et al., 2013)	5	27.77
Prevention, health promotion, and primary health care in diverse cultural settings (Benzian et al., 2015; Hagopian et al., 2008; Howard et al., 2011; Pechak & Black, 2015; Wilson, Moran et al., 2016)	5	27.77
Collaboration and partnering (Ablah et al., 2014; Hagopian et al., 2008; Redwood-Campbell et al., 2011; Rowthorn & Olsen, 2014)	4	22.22
Research (Hagopian et al., 2008; Pfeiffer et al., 2013; Redwood-Campbell et al., 2011; Williams et al., 2014)	4	22.22
Multidisciplinary- interprofessional work – teamwork (Pfeiffer et al., 2013; Rowthorn & Olsen, 2014; Williams et al., 2014; Wilson, Moran et al., 2016)	4	22.22
Social responsibility, social justice and health equity (Ablah et al., 2014; Battat et al., 2010; Hagopian et al., 2008; Jogerst et al., 2015)	4	22.22
Effects of globalization in society, health and health care (Arthur et al., 2011; Battat et al., 2010; Jogerst et al., 2015; Wilson et al., 2012)	4	22.22
Human rights – health as human right (Arthur et al., 2011; Hagopian et al., 2008; Wilson et al., 2012)	4	22.22
Healthcare care in low-resource settings (Arthur et al., 2011; Hagopian et al., 2008; Pfeiffer et al., 2013; Wilson et al., 2012)	4	22.22
Health implications of travel (Arthur et al., 2011; Battat et al., 2010; Houpt et al., 2007; Wilson et al., 2012)	4	22.22
Ethics (Ablah et al., 2014; Jogerst et al., 2015; Walpole et al., 2016; Williams et al., 2014)	4	22.22
Apply knowledge based on the context (Benzian et al., 2015; Howard et al., 2011; Redwood-Campbell et al., 2011)	3	16.66
Migration and displacement (Arthur et al., 2011; Battat et al., 2010; Houpt et al., 2007)	3	16.66
Capacity strengthening (Ablah et al., 2014; Jogerst et al., 2015; Pechak & Black, 2015)	3	16.66
Leadership (Hagopian et al., 2008; Pfeiffer et al., 2013; Wilson, Moran et al., 2016)	3	16.66
Vulnerable populations (Williams et al., 2014; Wilson, Moran, et al., 2016)	2	11.11
Health disparities (Battat et al., 2010; Hagopian et al., 2008)	2	11.11
Humanism (Battat et al., 2010)	1	5.55
Other (Pechak & Black, 2015)	1	5.55

Note. The percentage of articles reporting a competency topic was calculated by dividing the total number of articles referring to a competency by the total number of revised articles minus two. Percentage (%) = n/ (N-2)

The global health domains that were referenced the most were Determinants of Health (55.5%), Global Burden of Disease (50 %), and Professional Issues (38.8%). The high rate of articles mentioning specific domains may suggest that researchers are reaching consensus on what areas in global health education learners and educators need to focus on. In comparison, when Battat et al. (2010) performed a literature review about global health competencies for medical education, the authors found that not a single domain area was addressed in more than 16% of the articles they reviewed which suggested little consensus about the importance given to specific topics in global health.

After performing the comprehensive literature review about global health competencies reported above, it was seen that other researchers had identified most of the domains addressed by Wilson, Moran et al. (2016) and Torres (2015). For example, Ablah et al. (2014), Hagopian et al. (2008), Redwood-Campbell et al. (2011), and Rowthorn and Olsen (2014) identified Collaboration as an important global health competency domain. A domain of Culturally Competent Care was identified by six groups of researchers (Benzian et al., 2015; Hagopian et al., 2008; Howard et al., 2011; Kim et al., 2006; Williams et al., 2014; Wilson, Moran et al., 2016). The similarities in competency domains identified across the studies may indicate that researchers are reaching a consensus about essential global health domains for students in the health care professions.

Although there were similarities in competency domains identified in the literature review, there were a number of competency areas that were identified less frequently. For example, several competency domains were identified only in the studies aimed at identifying global health competencies for nurses reported by Wilson, Moran et

al. (2016) and Torres (2015) – specifically (a) War, Disasters, Pandemics, Conflicts, and Displacement; (b) Specific Professional Nursing Issues; (c) Principles of Global Health; and (d) Ethics In Global Health, among others.

Summary of Methods Used in the Studies That Were Reviewed

The aims and purposes of the reviewed articles included: the identification of competencies for specific areas or programs of study (Arthur et al., 2011; Benzian et al., 2015; Hagopian et al., 2008; Pechak & Black, 2015; Walpole et al., 2016; Williams et al., 2014; Wilson et al., 2012; Wilson, Moran et al., 2016); position statements (Houpt et al., 2007); literature review for competency development (Battat et al., 2010); development of global health curricula (Ablah et al., 2014; Howard et al., 2011); development of global health competency frameworks and models (Ablah et al., 2014); validation of competencies (Veras et al., 2013) and validation of competencies using different target populations (Ventura et al., 2014; Warren et al., 2015); and the development of interprofessional global health competencies (Jogerst et al., 2015; Pfeiffer et al., 2013; Rowthorn & Olsen, 2014).

Of the 20 articles reviewed, 12 were reports of research. Three of the 12 studies employed qualitative research methods (Kim et al., 2006; Pfeiffer et al., 2013; Wilson, Moran et al., 2016), and nine used qualitative/quantitative methods (Ablah et al., 2014; Arthur et al., 2011; Pechak & Black, 2015; Ventura et al., 2014; Veras et al., 2013; Walpole et al., 2016; Warren et al., 2015; Williams et al., 2014; Wilson et al., 2012).

In three of the 12 research articles, the researchers used the Delphi method to identify global health competencies (Ablah et al., 2014; Arthur et al., 2011; Williams et al., 2014). Walpole et al. (2016) used a modified policy Delphi method to develop the

competencies, and Williams et al. (2014) and Arthur et al. (2011) used a modified Delphi method. None of the articles reporting the results of the Delphi surveys included specific descriptions of samples, including the criteria used to identify expert survey participants (an important feature in Delphi studies), or the criteria used to determine consensus. Ablah et al. (2014) provided the most information about the Delphi process that was used, including survey response rate for all three rounds, and the number of competencies retained at each stage. The Delphi method is described in more detail in Chapter 3.

Three articles addressed global health competencies that could be used worldwide (Benzian et al., 2015; Jogerst et al., 2015; Kim et al., 2006). However, the vast majority of articles referred to global health competencies for a specific region or set of countries. Houpt et al. (2007) and Arthur et al. (2011) focused on the U.S. and Canada. Hagopian et al. (2008); Howard et al. (2011); Ablah et al. (2014); Pechak and Black (2015); Pfeiffer et al. (2013) wrote about competencies for U.S. programs only. Two articles focused on Canadian global health education (Redwood-Campbell et al., 2011; Veras et al., 2013). The more recent competency development articles in nursing education targeted Africa (Warren et al., 2015); Brazil (Ventura et al., 2014); and North America, Latin America, and the Caribbean (Wilson et al., 2012). The UK was also the geographical target of two of the articles (Walpole et al., 2016; Williams et al., 2014). Two articles did not mention which regions the competencies targeted (Battat et al., 2010; Rowthorn & Olsen, 2014).

Polit and Beck (2012) stated that although not every study is based on a formal theory, all studies should have a framework to guide the study and should offer clear, conceptual definitions. Of the 12 research articles analyzed for this literature review, only two included a theoretical framework (Ablah et al., 2014; Warren et al., 2015). Ablah et

al. (2014) used the master of public health core competency model and Bloom's taxonomy to guide their study. Warren et al. (2015) used the ICN's Nursing Care Continuum Framework and Competencies, but the researchers did not specify how the framework was used or how it was linked to the study. Walpole et al. (2016) mentioned Bloom's taxonomy not as the framework underlying the study but as a way to align the competencies within a learning framework.

All 20 articles were examined to determine if a conceptual definition of global health was used to guide the study. Researchers in 13 of the studies (65 %) used a definition of global health. The definition created by Koplan et al. (2009) was the most common definition used (10 articles). It is important to mention that, as it has been reported in the literature, the concept of global health has not reached a consensus yet. This could be seen in the articles reviewed as some of the researchers or participants in the studies used the terms international health and global health interchangeably (Hagopian et al., 2008; Howard et al., 2011; Kim et al., 2006). In addition, although the definition by Koplan et al. (2009) does not mention low resource settings specifically, some of the articles included this theme in their competency lists (Arthur et al., 2011; Wilson et al., 2012). Pechak and Black (2015) mentioned that a barrier in their study was not having an operational definition of global health because some of the participants assumed global health was synonymous with international health.

Competency based education (CBE) is another concept important to include when developing a competency framework, model or a list. All 20 articles were analyzed to assess whether the researchers addressed the concept of CBE or if they followed basic assumptions of competency development. Five (25%) articles mentioned CBE, albeit

briefly (Ablah et al., 2014; Howard et al., 2011; Jogerst et al., 2015; Rowthorn & Olsen, 2014; Warren et al., 2015).

Some researchers borrowed and adapted competency lists from other disciplines. Nursing researchers (Ventura et al., 2014; Warren et al., 2015; Wilson et al., 2012) adapted the competency list originally developed for medical students (Arthur et al., 2011). Physical therapy researchers (Pechak & Black, 2015) adapted the list from studies to identify interprofessional global health competencies and nursing-specific global health competencies. Participants in two of the reviewed studies criticized the "borrowed" competency lists because they were not centered in their respective professions (Pechak & Black, 2015; Wilson et al., 2012)

Non-probability purposive and convenience sampling were the two methods that researchers used most. The sample number in the studies ranged from 24 to 593 participants. Recruitment strategies included emailing, word-of-mouth, accessing listservs, contacting specialized institutions and networks, among others. Although in most of the reports it was stated that participants who developed the competencies were experts in the field, none of the researchers reported specific inclusion criteria for expertise in global health. However, it is important to acknowledge that some researchers reported that the sample included global health leaders (Ablah et al., 2014; Calhoun et al., 2011).

Gaps in the Literature Regarding Global Health Competencies

Great progress has been made in identifying global health competencies for the health care professions. However, a number of gaps remain: (a) limited reporting of the methods used to select the study samples or identify the competencies, (b) failure to

specify the definition of global health used to guide the studies, (c) failure to incorporate a conceptual framework, and (d) failure to specify a framework or definition of competency-based education. Only 10 of the 20 articles that were reviewed specified a definition of global health, and only five addressed the subject of competency-based education. In addition, because this area of research is very specialized, it is important to have individuals with expertise in global health participating in the studies. However, few articles reported participant inclusion criteria. Only two articles described a theoretical or conceptual framework used to guide the research.

A major gap identified in research aimed at identifying global health competencies for nurses was the failure to base the research on a nursing-specific conceptual framework. The competencies identified by Wilson et al. (2012) were adapted from a list of competencies developed for medical students, rather than from a competency framework that was specific to undergraduate nursing education. Findings from qualitative analyses reported by Wilson, Moran et al. (2016) and Torres (2015) suggest that there are additional competency domains that should be added to the list initially proposed by Wilson et al. (2012). In addition, accessing study participants who have experience in baccalaureate nursing education and global health will be essential for credibility and content validation of the derived competencies for nursing education.

Literature Review Update

The initial literature review was performed in 2016 and limited to documents published between 2005 and 2016. Following completion of data collection for the study, the researcher conducted an updated literature review to include articles published between 2016 and 2018. The databases used for this updated review included PubMed,

Scopus, and CINAHL. The search terms used were the same as the initial literature review: global health competencies, global health nursing, global health nursing competencies, global health and nursing, competencies in global health, and nursing competencies in global health. Inclusion criteria included articles published in English; research articles with a focus on global health competencies; and articles focused on systematic processes used to identify global health competencies for health professionals.

One thousand five hundred and twenty-nine articles were identified through database searching. After duplicates were removed, 214 sources remained. All 214 article abstracts were reviewed, and 209 were excluded after screening. In the end, five articles were selected for review. Figure 3 depicts the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) diagram for inclusion and exclusion criteria of the articles selected for the updated literature review. The matrix for the literature review update is included in Appendix A-2.

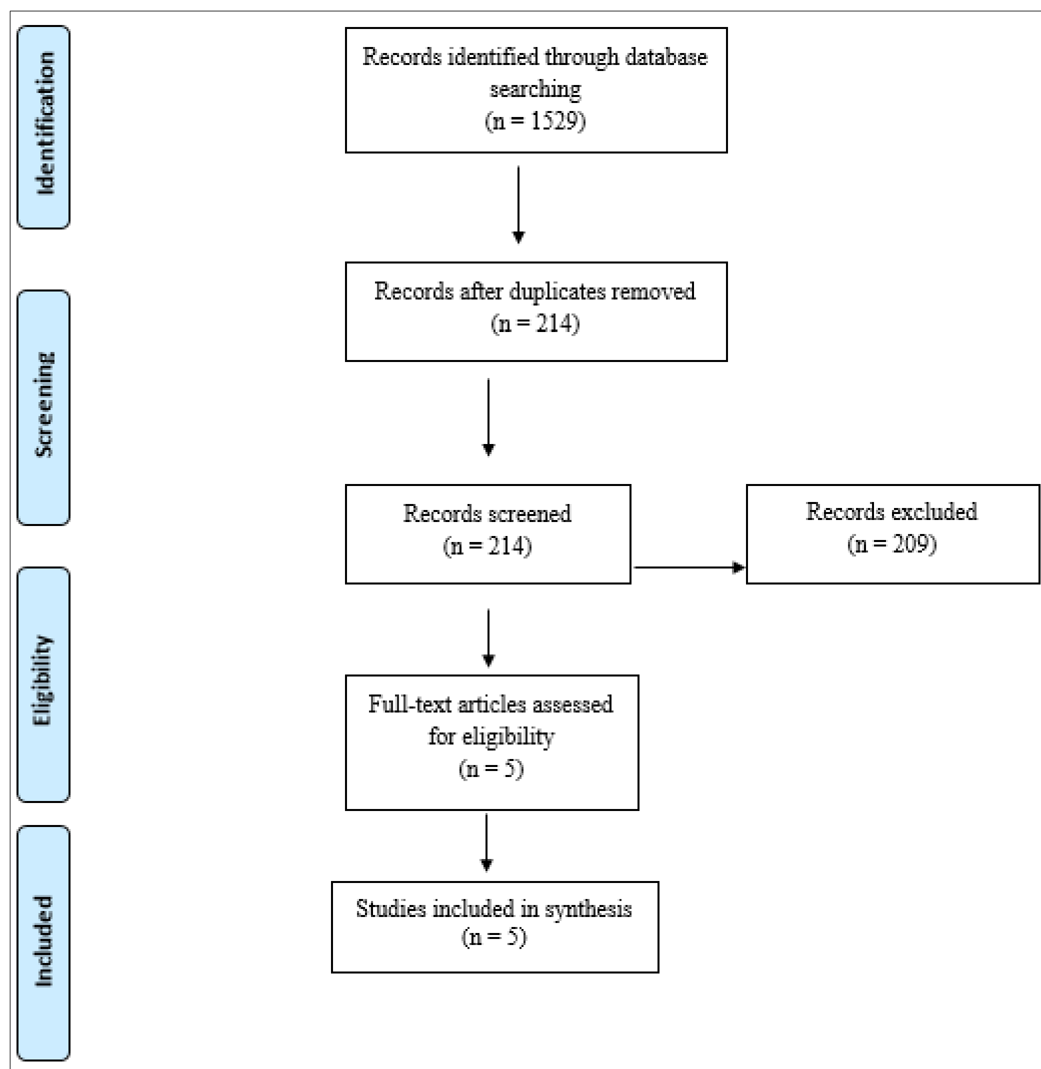

Figure 3. PRISMA inclusion-exclusion criteria flow diagram for updated literature review. Inclusion-exclusion of articles flow chart following preferred reporting items for systematic reviews and Meta-Analyses (PRISMA). Updated literature review. Adapted from "Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement," by D. Moher, D. A. Liberati, J. Tetzlaff, D. G. Altman, & the PRISMA Group, 2009, *PLOS Medicine 6*(7), e1000097. doi:10.1371/journal.pmed1000097.

Screening and Data Extraction

The matrix method was used to organize, screen, review, and synthesize the articles that met inclusion criteria (Garrard, 2013) in the updated literature review. A matrix table with the following topics was used to screen the articles selected: (a) authors,

title, and journal; (b) purpose or aims; (c) study design; (d) methodology and procedure; (e) sample size and characteristics, and recruitment method; (f) data collection; and (g) findings. See research matrix in Appendix A-2.

Review of the Articles

Hyter, Roman, Staley, and McPherson (2017) reviewed 27 articles and eight book sources to derive a framework for global competencies from the perspective of the communications sciences and disorders professions. Their framework revealed 35 concepts that were collapsed into four essential concepts of Dispositions, Knowledge, Skills, and Attitudes. The 49 competencies that were found in the reviewed articles were modified to more accurately reflect speech-language pathology and audiology and resulted in a list of competency terms such as Humility, Empathy, Globalization Consequences, Impact of Privilege, Self-Awareness, Ability to Communicate in More Than One Language, and Willingness to Value Ethical Behavior. Brief descriptions were proposed for each competency with associated references from the reviewed literature. The authors suggested that global competencies should be integrated into pre-professional education and professional standards in order to prepare professionals for practice outside of their home countries and to enable them to provide culturally sensitive care.

Sawleshwarkar and Negin (2017) reviewed 13 articles describing global health competencies to guide curriculum development for postgraduate education in public health. The authors first explored the definitions of global health posed by Frenk (2014) and Koplan (2009) but noted that a consensus definition has remained elusive. The global health competencies that were discovered in the literature review from 2005 to 2016

included a combination of educational competencies related to knowledge, attitudes, and skills for practice and were listed by source in their report. The authors concluded that the competency domains focused primarily on three areas: Knowledge of Health and Disease and Determinants of Health; Skills Central to Public Health; and “Soft Skills” including Collaboration, Communication, Partnering, Professionalism, Political Awareness, and Capacity Building. The authors concluded that global health competencies present an opportunity for integration in the public health curriculum to prepare professionals to face the global health challenges with respect to sustainable development. Educational programs need to explore ways to incorporate both the knowledge and skills with the “soft skills” needed for global health competency.

Rayess et al. (2017) used a modified Delphi method in an iterative consensus process to develop a mission statement and determine core competencies for the Family Medicine Global Health fellowship. The goals of the project were to develop a mission statement for global health fellowships in family medicine, to define consensus for the fellowship competencies, and to define core competencies for global health fellowships in family medicine. Using emails and conference calls, the researchers surveyed 18 experts in both global health and family medicine to elicit opinions on the mission, competencies, fellowship practicum, and future job opportunities for fellows. Two additional rounds of data collection were used to refine the mission statement, 30 core competencies and six domains. The findings were presented to 40 family physicians during a conference on global health in 2014. The final mission statement reflected Koplan’s (2009) definition of global health and stated that family medicine fellowships are working toward equity for all for high-quality, cost-effective, culturally relevant,

equitable, care for individuals and communities worldwide. The 30 core competencies were categorized under six domains: (a) Patient Care, (b) Medical Knowledge, (c) Professionalism, (d) Communication and Leadership, (e) Teaching, and (f) Scholarship. The domains and competencies were designed to be a framework for family medicine faculty who are teaching or planning global health fellowship programs.

In an effort to determine the essential components of an educational program in family medicine that incorporated global health/health equity enhanced skills, Dawe et al. (2017) conducted a Delphi study using a panel of 34 experts. Snowball sampling was used to form a group of experts in global health and family medicine education or primary care. The 34 panel members who completed all three rounds of the survey answered fixed response and open-ended questions on program features that included length and objectives, focus, content, and learner assessment. The respondents suggested that the preferred program length was 12 months, mentorship was essential, objectives should focus on advocacy skills, and the focus should include both domestic and international issues. Respondents suggested that core topics should include: Social Determinants of Health, Principles and Ethics of Health Equity/Global Health, Cultural Humility, Before and After Departure Training, Health Systems, Policy and Advocacy, and Community Engagement. Respondents did not reach consensus about specific medical topics or research requirements. Respondents reached consensus about four categories of assessment requirements: a portfolio, evaluation reports, participation, and a reflection essay. No specific definition of global health was identified for this study; however, a strong recommendation was made for post-graduate medical education in

family medicine to develop curriculum with clear objectives and meaningful evaluations with core themes in global health.

Clark, Raffray, Hendricks, and Gagnon (2016) conducted a systematic review of the literature relevant to global health, public health, and community health nursing in order to guide the curriculum at the McGill Ingram School of Nursing and to inform faculty at other schools about the global health content and core competencies. The authors reviewed 15 articles related to global health and 10 articles pertaining to public/community health, published between 2005 and 2012. The authors remarked that no consensus has been reached on a definition of global health, but they chose to use Koplan's (2009) definition because it was broadly applicable to both education and practice. Twelve categories of global health competencies were derived in three iterations of review by the authors. The least commonly mentioned competencies in global health were Travel and Migration, Research, and Management Skills. Ten public/community health competency categories were determined from the review with a high degree of consensus. The least identified competencies were related to Public Health Biology and Environmental Health. A final list of 14 competencies resulted by combining overlapping competency categories. These were: Social Justice, Cultural Competency, Communication, Collaborative Partnerships, Assessments and Management Skills, Environment, Disease Burden and Epidemiology, Ethics and Professionalism, Determinants of Health, Health Systems/Delivery, Travel and Migration, Key Players, Research, and Health Promotion/Illness Prevention. The authors recommended research to guide teaching strategies and curriculum development.

Summary of Methods Used in the Studies Selected for the Literature Review Update

Authors in three of the five articles used a review of literature to identify global health competencies (Clark et al., 2016; Hyter et al., 2017; Sawleshwarkar & Negin, 2017). Authors of two of the articles used the Delphi method (Dawe et al., 2017; Rayess et al., 2017). In both Delphi survey reports, researchers recruited experts in the field of study. Rayess et al. (2017) recruited 13 family medicine faculty with expertise in global health and family medicine education and Dawe et al. (2017) recruited 34 Canadian experts in global health and family medicine. In reporting the Delphi studies, only one group of researchers (Dawe et al., 2017) addressed the consensus of agreement among participants, which is very important to establish in Delphi studies. In regards to including definitions of global health in the study reports, Koplan's (2009) definition of global health was used in three studies (Clark et al., 2016; Rayess et al., 2017; Sawleshwarkar & Negin, 2017). Neither Dawe et al. (2017) nor Hyter et al. (2017) addressed global health definitions in their studies. None of the reports described a theoretical framework. Only one group of researchers mentioned the concept of Competency Based Education (Clark et al., 2016). Some researchers borrowed and adapted competency lists from other disciplines (Clark et al., 2016; Sawleshwarkar & Negin, 2017). Rayess et al. (2017) used open-ended questions in their first survey to create an initial list of competencies for a Family Medicine Global Health Fellowship program.

Summary

This literature review was conducted to identify the state of the science of global health competencies for health care professionals and for nurses in particular. Although findings from several studies by Wilson and colleagues (Warren et al., 2015; Wilson et al., 2012; Wilson, Morán Peña et al., 2014) have recommended global health competencies for undergraduate nursing students, findings from qualitative analyses of these studies (Wilson, Moran et al., 2016) suggested that there is a need to incorporate additional competencies into the original list of 30 competencies. In addition, these studies aimed at identifying global health competencies for nurses did not specifically target nurses with experience in global health and undergraduate nursing education. There is a need for additional research in order to achieve consensus on what global health competencies are essential for nursing education. Chapter 3 will address the study methodology.

CHAPTER 3

METHODS

The purpose of this study was to reach consensus among experts on essential global health competencies for baccalaureate degree nursing students in the U.S. A multi-phase, mixed methods research design was intersected with a three-round Delphi method to revise a previously developed list of domains and associated competencies. This chapter includes information about the research methodology, ethical approval, procedures, sampling, recruitment, and study rigor and quality.

Methodology

The research methodology selected for the proposed study was the Delphi method. The Delphi method was intersected with a mixed methods research approach, embedding a multiphase mixed method design to guide collection, analysis, and interpretation of data (Plano Clark & Ivankova, 2016).

The Delphi Method

By using the Delphi method, researchers aim to reach consensus among experts in a specific field about an important issue. The Delphi method is also used as a forecasting and consensus research method in areas where there is limited available data (Kennedy, 2004; Polit & Beck, 2012). When using the Delphi method, consensus is reached through an iterative, multistage process. This process usually consists of several rounds of anonymous questionnaire surveys completed by experts on the topic of interest (Hasson, Keeney, & McKenna, 2000; Polit & Beck, 2012). After each round, questions are

“analyzed, summarized, and returned to the experts within a new questionnaire” (Polit & Beck, 2012, p. 267). Important characteristics of this method include: (a) semi-anonymity because participants are not known to each other, but are known to the researchers; (b) the use of expert participants; (c) structured feedback given to participants; and (d) a consensus-forming process (Keeney, Hasson, & McKenna, 2001).

There are different types of Delphi methods – classical, decision, modified, policy, real time, etc. In the classical Delphi method, an initial round is used to gather opinions from experts about the topic of study, then one or more rounds in the form of questionnaires or surveys are administered to the same or other experts to reach consensus. The first round of the classic Delphi is referred as an “open round,” where researchers usually use a questionnaire with open-ended questions to elicit experts’ opinions about a specific topic. The decision Delphi method is very similar to the classical method except that the goal of the decision Delphi is to produce decisions instead of achieving consensus. The real-time Delphi follows the same procedures as the classical method, but with consensus being reached when participants meet in person instead of communicating via mail or email. The policy Delphi is designed to reach consensus on a topic and plan future policy.

In the modified Delphi, the first round usually involves the use of focus groups or interviews to elicit opinions from a group of experts or individuals knowledgeable in a specific field. Literature reviews have also been used in round one of the modified Delphi (Keeney, Hasson, & McKenna, 2011). For this research study, the modified Delphi method was selected because prior research was available on the topic of interest.

Studies using the Delphi method have employed varying standards for consensus. For example, Diamond et al. (2014) reviewed 72 Delphi studies and reported that 24 of the studies (33%) determined consensus based on a specified percentage of agreement. Polit and Beck (2012) explained that percentage of agreement needed to achieve consensus is generally set from 51% to 70%. Foth et al. (2016) reviewed nursing education studies using the Delphi method, selecting only those with a predefined value for consensus, and found that most researchers selected a value of 60% agreement or higher. Measures of central tendency such as mean, median, mode, stability, rank, as well as range and confidence intervals can also be used to determine consensus (Diamond et al., 2014; Keeney et al., 2001). For this study, the percentage of agreement was used to indicate consensus and was set at 70% in order to enhance the rigor of the findings. A percentage of agreement is referred to as level of agreement (Keeney et al., 2011)

The Delphi method is commonly used for the type of discovery research conducted for this dissertation study. Although other methods such as nominal group technique, literature review, expert panel interviews, stakeholder analysis, and benchmarking have been used to identify competencies (Calhoun et al., 2002), the Delphi method was considered to be the most appropriate approach for this project. The reasons for selection of the Delphi method are as follows: (a) participants were located in widely dispersed geographical areas, which makes online surveying the best way to collect data; (b) participants' responses were quasi-anonymous (available only to the researcher), which encouraged participants to be open and candid with their responses, and prevented participants with strong opinions from disproportionately influencing the group's decisions (Polit & Beck, 2012); (c) the Delphi method is known for achieving consensus

among experts or individuals knowledgeable in their fields (Day & Bobeva, 2005; Keeney, Hasson, & McKenna, 2006); and (d) the Delphi method has been widely used in the identification of competencies in many disciplines (Calhoun et al., 2011; Coleman et al., 2013; Foth et al., 2016; Johnston et al., 2014).

Mixed Methods Design

In mixed methods research, investigators collect, merge, analyze, and interpret quantitative and qualitative data in order to answer research questions (Creswell, 2015). In this study, the Delphi method was intersected with a multi-phase mixed methods design. Creswell and Plano Clark (2018) noted that in a multi-phase design, sequential and concurrent strands are combined. This study included three rounds, each corresponding to a specific mixed methods phase: QUAL (Round One/Phase 1) → QUAL+ quan (Round Two/Phase 2- survey one) → QUAN (Round Two/Phase 2 – survey two) → QUAN (Round Three/Phase 3). Figure 4 illustrates a simplified illustration of the three rounds and phases of the study. The Delphi Round One, Phase 1, involved qualitative data collection and analysis and is indicated by the abbreviation QUAL in all capital letters. Capital letters indicate that a given approach has high (or sole) priority. Qualitative data were given priority because it was the sole approach used in data collection in this Round. In Delphi Round Two, Phase 2, quantitative (quan) and qualitative (QUAL) data were collected and analyzed in survey one. In this phase, priority was given to the qualitative strand because the main goal of this phase was to elicit written feedback and comments from participants. In survey two (Round Two) quantitative data (QUAN) were collected and analyzed and the quantitative approach was the sole priority in this phase. The addition sign (+) noted in Round Two survey one

indicates that this portion was convergent and that quantitative and qualitative data were collected and analyzed concurrently. Round Three involved quantitative (QUAN) data collection and analysis. The horizontal arrows indicate that the phases were sequential, with each subsequent phase built on the results of the previous phase (Plano Clark & Ivankova, 2016).

During Round One, Phase 1, the researcher revised the original list of global health domains and competencies reported by Wilson et al. (2012). Delphi Round Two, Phase 2, consisted of two surveys sent to a small group of nurses with expertise and leadership experience in global health and baccalaureate nursing education in the U.S. In the first survey, participants were asked to provide qualitative and quantitative feedback about proposed definitions of each of the nine global health domains and competencies in the revised competency list developed in Round One.

Results from the first survey in Round Two informed the creation of Round Two survey two in which participants used a Likert-type scale to rate their level of agreement with the domain definitions, and the extent to which each competency was essential for baccalaureate nursing students in the U.S. Competencies rated as “agree” or “strongly agree” by at least 70 % of the respondents were retained on the list that was used in the Round Three survey of 41 participants with expertise in BSN nursing education and global health. Round Three, Phase 3, resulted in consensus regarding a revised list of global health competencies for BSN in the U.S. Figure 4 depicts the three phases in this study in addition to providing information about methodological procedures for each phase. As seen in the figure, Delphi Round One was used to address aim one of the study. Delphi Rounds Two and Three addressed aims two and three respectively.

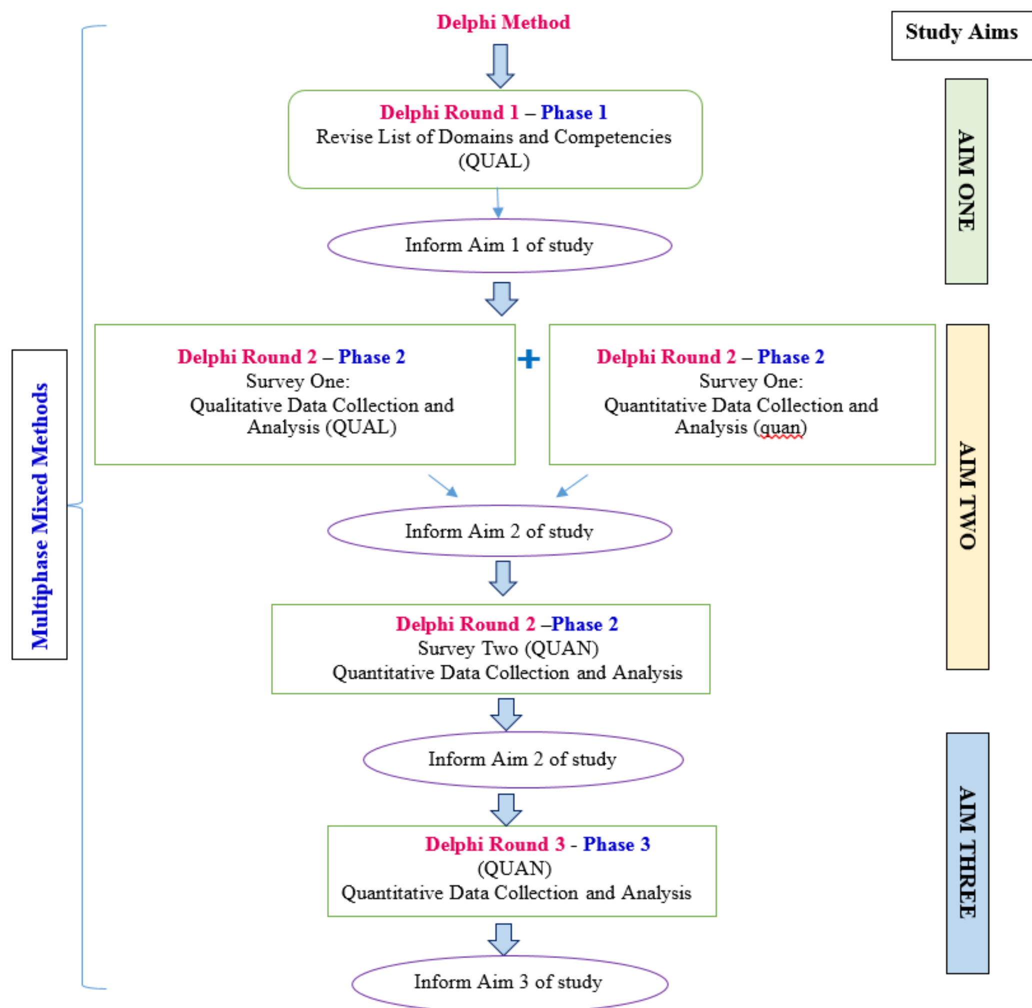

Figure 4. Illustration of the intersection of multi-phase, mixed-methods design and the Delphi method in this study. Adapted from N. V. Ivankova, J. S. Creswell, & S. Stick, 2006. Using mixed methods sequential explanatory design: from theory to practice. *Field Methods, 18*(1), 3-20.

Intersection of Multiphase Mixed Methods Design and Delphi Method

According to Plano Clark and Ivankova (2016), mixed methods research can be intersected within methodological approaches (in this case the Delphi Method), other research designs, or theoretical frameworks. Intersection in this study was aimed at the design level by embedding mixed methods within a methodological approach (Delphi method) and during data collection and analysis. Qualitative results from Round One, Phase 1 (identification of domains and competencies), were used to create the first survey sent to participants in Round Two, Phase 2. Likewise, results from Round Two survey one were used to create survey two for Round Two, Phase 2. The survey sent to particpants in Round Three, Phase 3, was created based on results in Round Two, Phase 2.

The rationale for intersecting mixed methods with the Delphi Method was related to the strengths and unique characteristics of each of the methods, which complemented each other. Results from each round of the study helped produce a more comprehensive level of establishing consensus by using the complementary strengths of the qualitative and quantitative components. For example, because one of the aims of the study was to seek content validation of the domains and competencies identified in Round Two, a concurrent qualitative and a quantitative strand was needed in this phase of the study. Therefore, the researcher needed to use a multiphase mixed methods design. In Round Two (survey one), participants provided specific comments about the domain definitions and competencies which made the intersection of Delphi with mixed methods design, an important component of the study. In addition, a quantitative strand in Round Three (mixed methods Phase 3) was needed to achieve aim three of the study which was to

reach consensus on the competencies obtained in Round Two. The consensus component is a unique and important characteristic in Delphi Method studies. Intersecting both methods made findings of the study more robust. In addition, assessing rigor and quality of Delphi studies is complex for two reasons. First, there is the issue of Delphi studies not being considered to belong to a specific research paradigm (e.g., positivist or naturalistic) which makes it difficult to select what standards to apply. Second, there are very few articles addressing rigor or quality in Delphi studies and that makes it challenging to apply any type of criteria (Keeney et al., 2011). The legitimation model developed by Onwuegbuzie and Johnson (2006) for mixed methods was used to help assess the quality of the integrated results. A detailed illustration of the intersection of mixed methods with the Delphi Rounds is shown in Figure 5 below. The blue arrows correspond to the intersection points.

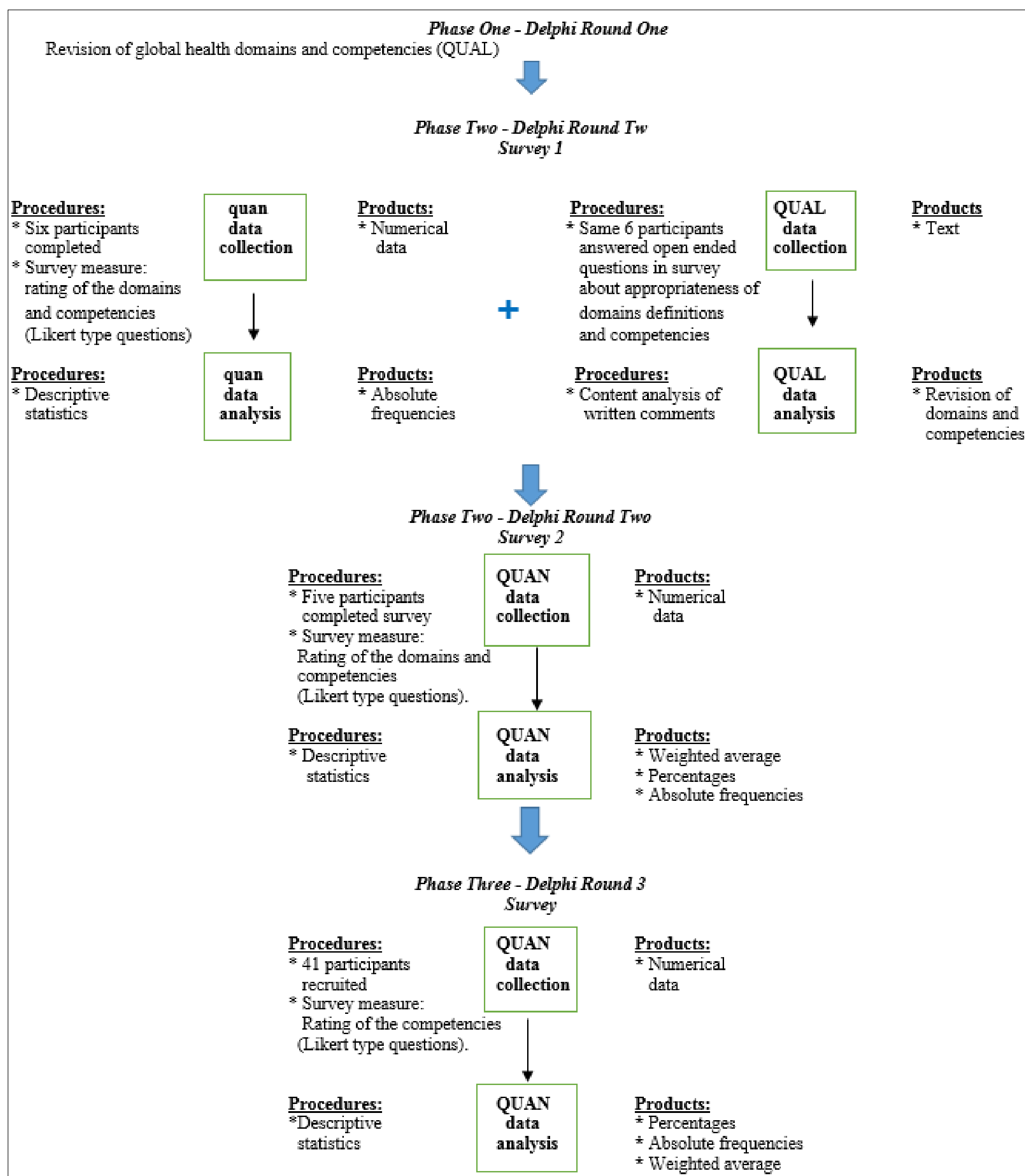

Figure 5. Procedural diagram depicting the study procedures for each phase. Adapted from N. V. Ivankova, J. W. Creswell, & S. Stick, 2006. Using mixed methods sequential explanatory design: From theory to practice. *Field Methods*, *18*(1), 3-20.

Ethical Approval

The study was originally approved for expedited review by the University of Alabama at Birmingham (UAB) Institutional Review Board (IRB) on December 14,

2016. Appendix B-1 includes a copy of the original IRB application and approval. Five amendments were submitted and approved in order to accommodate changes that were made to the recruitment letters and the type of software used for data collection. UAB IRB regulations necessitated a change from REDCap to the SurveyMonkey Premier platform. See detailed information about the amendments in Appendix B-2.

Recruitment letters explicitly stated that participation was voluntary and participants were free to withdraw from the study at any point without penalty. Participants were advised that their responses would be accessible only by members of the research team. They were also informed that individual responses would not be identifiable in any publications resulting from this research. Participants were not identifiable in any data collection and analysis instruments and forms. Electronic data files are stored in the researcher's password-protected computer. All files and hard copies pertaining to research documents will be destroyed 3 years after the study is completed.

Target Population and Sample

The target population for the study included nurses who self-identified as having expertise in global health with at least 3 years of experience as faculty in the United States in baccalaureate nursing education. Keeney et al. (2010) suggested that experts for Delphi surveys can be considered as "informed individuals … and specialists in their field" (p. 7). Purposive sampling was used to recruit participants. Powers and Knapp (2006) defined a purposive sample as a "type of nonprobability sampling in which the researchers select only those subjects that satisfy the needs of the study" (p. 137).

In a review article, Okoli and Pawlowski (2004) stated that in Delphi studies, the sample size deemed adequate to achieve significant findings is between 10 and 18.

However, Akins, Tolson, and Cole (2005), while acknowledging the lack of guidelines to determine an ideal sample, found that many Delphi researchers included from 10 to 100 participants in their studies.

Inclusion Criteria

Inclusion criteria for the study sample were as follows: (a) any gender; (b) age older than 25 years; (c) any race or ethnicity; (d) English proficient; (e) self-identified expertise in global health; (f) 3 years or more of experience in a baccalaureate nursing education program in the U.S.; (g) nursing degree at the BSN level or higher; and (h) internet access. Expertise in global health was determined by first providing participants with the definition of global health proposed by members of GAPFON (Wilson et al., 2016), and then asking participants the following six questions:

1. Do you understand the GAFPON definition of global health?
2. Do you recognize that global health is different from international health?
3. Have you been involved in activities that promote global health research, education, and/or practice as defined by GAPFON?
4. Have you presented or written about global health in national or international events?
5. Have you collaborated with others in research, education, and/or practice related to global health as defined by GAPFON?
6. Do you identify yourself as an informed individual in global health as defined by GAPFON?

Individuals were asked to reply to the recruitment email answering the inclusion criteria questions. Potential participants who responded affirmatively to three or more of

the above six questions were deemed to have met the inclusion criterion of having expertise in global health in baccalaureate nursing education. The researcher screened each of the emails to make sure participants met the criteria. Sample size as well as level of content expertise and leadership experience in global health for Round Three was different than that for Round Two.

Recruitment for Round Two

Recruitment for Round Two (surveys one and two) started on March 31, 2017, and required submission of two IRB amendments (see Appendix B-3). For this round, the researcher initially aimed to recruit a total of six participants from a pool of renowned nurses holding leadership positions in global health nursing education in the U.S. to provide feedback, comments, and assess the content validity of the definitions of the revised global health domains and competencies obtained in Round One. Email communication was used to send recruitment letters to 18 Directors and Deputy Directors of Pan American Health Organization (PAHO)/WHO Nursing and Midwifery Collaborating Centers. (See Appendix B-4). Nine of these 18 individuals replied to the recruitment email and five agreed to participate. Three of the five participants completed survey one and only two completed survey two. Following a discussion among dissertation co-chairs and the researcher, it was decided that the sample size was insufficient and additional participants were needed for Round Two. The researcher then reviewed websites of the 25 top nursing schools (ranked per *US News and World Report* 2017) to determine which schools offered global health programs. The researcher examined the websites of those schools to identify faculty members involved in global health initiatives. Twenty-one individuals from across the U.S. were identified as

potential participants and invited to participate in the study. Although seven individuals replied, four did not meet inclusion criteria. The three respondents who met criteria were enrolled in Round Two. Data collection for the first survey (second group recruited) in Round Two ended mid-October 2017. Survey two for the new recruitment group was sent October 28, of 2017. Reminder emails were sent on November 11, 16, and 29, and data collection ended on December 4, 2017, after the third participant completed the last survey.

Recruitment for Round Three

Recruitment for participants for Round Three was ongoing between April 2017 and December 2017. The goal was to recruit between 30 and 50 participants. Recruitment strategies for this round included distributing flyers, contacting potential participants via LinkedIn, emailing professional organizations with interest in global health, and emailing potential participants directly (emails obtained from university websites and personal contacts). For more information about recruitment strategies for Round Three, see Appendix B-5. Fifty-seven participants who met inclusion criteria were successfully recruited through all strategies. The recruitment letter for this round was divided into two sections. The first section included general information about the study (purpose of the study and general description of tasks involved in participation), and the second section provided specific details about the study (survey descriptions, inclusion criteria, definition of global health, and IRB information) (see Appendix B-6). Based on difficulties in recruitment in Round Two and because 30 to 50 participants were targeted to be recruited, snowball sampling was also used in order to recruit additional

participants. Participants were asked to refer the recruitment email to others who might be interested.

Procedures

Delphi Round One –Phase 1 (QUAL)

Identification of domains. During Round One, the researcher revised the original list of six global health domains reported in studies by Wilson et al. (2012), Wilson, Moran et al. (2016), and Torres (2015) using the review of previous research and the NGHCF developed for this study. The researcher and Wilson (dissertation co-chair and author of studies cited below) revised the list of global health domains and competencies reported in Wilson et al. (2012); Wilson, Moran et al. (2016); and a pilot study conducted by Torres (2015), as described in Chapter 2. Table 5 lists the domains that were identified in each of those studies.

Table 5
Proposed Global Health Domains for Nurses

Wilson et al. (2012) Global health competencies for nurses in the Americas. *Journal of Professional Nursing*, 28(4), 213-222	**Torres (2015)** Pilot study report	**Wilson, Moran et al. (2016)** Qualitative description of global health nursing competencies by nursing faculty in Africa and the Americas. *Revista Latino-Americana de Enfermagem*
1. Global burden of disease 2. Health implications of travel and displacement 3. Social and environmental determinants of health 4. Globalization of health and health care 5. Health care in low resource settings 6. Health care as a human right and development resource	1. Collaboration and partnerships 2. Basic nursing competencies 3. Equity and social justice 4. Ethics in global health 5. Individual health 6. Population health 7. Principles of global heath 8. Research and information literacy 9. Role of government, politics and organizations in global health. 10. Self-care and preparation for global health settings	1. Culturally competent, humanistic, and holistic care 2. Prevention, health promotion, and primary care 3. Multidisciplinary work, teamwork 4. Communication 5. Professional nursing issues in diverse settings 6. Policy/Politics and historical context 7. War, disaster, pandemics, terrorism, and displacement 8. Program development, planning, and evaluation 9. Leadership, management, and advocacy 10. Vulnerable populations

The list of domains was revised as follows:

- Domains that contained similar content were merged (e.g., war, disaster, and pandemic concepts were added to the domain of Health Implications of Travel and Displacement).
- Domains identified by multiple sources were added. For example, two new domains, Ethical Issues and Culturally Competent, Humanistic and Holistic Care, were added as they were identified by both Torres (2015) and Wilson, Moran et al. (2016).
- Domains deemed inappropriate were excluded. For example, the domain: Program Development, Planning, and Evaluation identified in Wilson, Moran et al. (2016) was not included because it was not considered appropriate for the baccalaureate nursing level.

Ten domains were initially identified: Global Burden of Disease; Health Implications of Pandemics, Displacement, Wars, Disasters, and Travel; Social and Environmental Determinants of Planetary Health; Globalization of Nursing and Health Care; Global Nursing Practice; Culturally Competent, Humanistic, and Holistic Care; Collaboration and Partnerships; Communication; Leadership, Management, and Advocacy; and Ethical Issues, Equity, and Social Justice in Global Health. These domains were revised multiple times in consultation with selected members of the dissertation committee to ensure leveling to BSN education, compatibility with the NGHCF framework, avoidance of redundancy, and precise wording. Based on these consultations, the domains of Globalization of Nursing and Health Care and Global Nursing Practice were merged. This merging occurred because both were considered redundant as many competencies under each of those domains mirrored each other. Using professional judgement, competencies under both domains were assigned to domains that fit them. The domain that emerged was named Global Nursing and Health Care. The nine domains resulting from Delphi Round One were:

1. Global Burden of Disease;
2. Health Implications of Pandemics, Displacement, Wars, Disasters, and Travel;
3. Social and Environmental Determinants of Planetary Health;
4. Global Nursing and Health Care;
5. Culturally Competent, Humanistic, and Holistic Care;
6. Collaboration and Partnerships;
7. Communication;

8. Leadership, Management, and Advocacy; and
9. Ethical Issues, Equity, and Social Justice in Global Health.

Further details about these domains are presented in Chapters 4 and 5.

Development of domain definitions. Once domains were identified, definitions were developed for each of the domains based on a scoping review of the literature published prior to 2016. In order to do this, the researcher identified the concepts addressed within the title of each domain. For example, domain eight contained three main concepts: leadership, management, and advocacy. Once those concepts were identified, the researcher looked in the literature for definitions of those concepts. Definitions were found in books (Skolnik, 2015; Yoder-Wise, 2015); articles (Jogerst et al., 2015; Klebanoff & Hess, 2013; Kleiman, 2012; Whitmee et al., 2015; Wilson et al., 2016); a position statement from the AACN (2008); and WHO reports (Rimal & Lapinski, 2009; WHO, n.d.). The domain definitions required multiple revisions to ensure that each one fit into the NGHCF, they were easy to read, and all concepts were properly described (see Appendix C for definition of domains).

Development of competencies. The process to select the competencies involved the steps listed below.

1. The researcher identified 20 articles that addressed global health competencies (Ablah et al., 2014; Arthur et al., 2011; Battat et al., 2010; Benzian et al., 2015; Hagopian et al., 2008; Houpt et al., 2007; Howard et al., 2011; ICN, 2009; Jogerst et al., 2015; Kim, Woith, Otten, & McElmurry, 2006; Pechak & Black, 2015; Pfeiffer et al., 2013; Redwood-Campbell et al., 2011; Rowthorn & Olsen, 2014;

Ventura et al., 2014; Veras et al., 2013; Walpole et al., 2016; Warren et al., 2015; Williams et al., 2014; Wilson, Moran et al., 2016).

2. The researcher reviewed each of the 20 articles to determine which articles contained competencies that had the potential to be leveled to the BSN level, fit under the nine domains previously identified, and fit within the NGHCF framework. The researcher used professional judgement to establish the fit with the domains and the NGHCF framework.
3. The researcher used seven sources from among the 20 articles identified in step 1 above from which to extract a first draft of the competencies (Hagopian et al., 2008; ICN, 2009; Jogerst et al, 2015; Rowthorn & Olsen, 2014; Williams et al., 2014; Wilson et al., 2012; Wilson, Moran et al., 2016). These seven sources were used because they were the ones that specifically included global health competency statements.
4. Using professional judgement, the researcher assigned each competency identified in step 3 to the appropriate domain.
5. The researcher modified the competency statements to ensure they fit under the nine domains previously identified, fit within the NGHCF framework, and were at the BSN level (using Bloom's taxonomy of verbs). Professional judgment was used to modify competency statements and to ensure the fit with the framework, domains identified, and leveling to BSN education.
6. After multiple revisions, the researcher identified 52 competencies under the nine domains (see Appendix C). The revisions were focused on appropriateness of

verb usage, fit with the NGHCF framework, leveling to BSN education, and fit with assigned domain.

Delphi Round Two – Phase 2 (QUAL & quan)

In Delphi Round Two, the researcher sent two surveys to a sample of U.S. nursing leaders with global health and baccalaureate nursing education expertise. Participants were provided with GAPFON's definition of global health (Wilson et al., 2016) to use as a basis for answering the survey questions. Further information regarding the surveys in Phase Two is presented in the following paragraphs.

Round Two survey one (QUAL + quan). The domains, domain definitions, and competency statements resulting from Round One informed the researcher's development of Round Two survey one. This survey was divided into six sections (see survey in Appendix D):

1. General information about the study including participant commitment and IRB information;
2. Demographic and inclusion criteria questionnaires;
3. Instructions on how to fill out the survey including GAPFON's definition of global health (Wilson et al., 2016);
4. Questions referring to global health domain definitions, with participants asked to select one of four options – accept definition as written, accept with changes, reject, or consider an alternative (*quan* portion of the survey) – for each of the nine domain definitions identified in Round One and then being given the opportunity to comment or provide feedback using a text box (*QUAL* portion of the survey);

5. Questions referring to global health competency statements, with participants asked to select one of the four options – accept competency as written, accept with changes, reject, or consider an alternative (*quan* portion of the survey) – for each of the 52 competencies identified in Round One and then being given the opportunity to comment or provide feedback using a text box (*QUAL* portion of the survey); and
6. A list of references used to define global health domains and create competency statements.

Data collection. Data collection for this phase involved sending participants a link to the survey. SurveyMonkey Premier Platform was used as the data capture system. Participants were asked to return the survey within 3 weeks. Two reminders were sent at 2 week intervals to the group that was recruited in April 2017. The group recruited in October did not need reminders.

Data analysis. The researcher used Hsieh and Shannon's approach (2005) to the qualitative content analysis of the first survey. According to Hsieh and Shannon (2005), content analysis can be performed using three approaches: conventional, directed, and summative. The conventional approach is used when there is little or nonexistent knowledge about the phenomena to be studied. Directed content analysis is used when there is prior knowledge or research on the topic, but the study of the phenomena is not complete and would benefit from further inquiry. The summative approach consists of counting the frequency of appearance of certain words in the text in order to understand how those words were used. The directed content analysis approach was selected for this study because research has been published about the topic of global health nursing

competencies but the topic would benefit from further inquiry. Hsieh and Shannon (2005) suggested that one approach to content analysis using the directed approach involves the use of predetermined codes that have been identified. In this case, some global health domains and competencies had previously been identified. Using prior research, the researcher used the existing domains and competencies as building blocks for the present study.

Qualitative data analysis of survey one in Round Two involved content analysis of the themes identified in the participants' comments about the proposed definitions of the global health domains and the proposed global health competencies. In this study, the researcher used the domains, domain definitions, and competencies from Round One as the previously identified codes. The researcher carefully analyzed the qualitative data (participants' comments) from survey one (Round Two) to identify new codes and also to identify codes that were repeated from the previously identified domains and competencies. The researcher used this information to revise, add or eliminate content from the domain definitions and competency statements. The researcher consulted with three members of the committee to provide oversight of the process.

Quantitative data analysis of survey one in Round Two consisted of analyzing absolute frequencies of participants' responses on sections 4 and 5 of survey one (accept as written, accept with changes, reject, or propose an alternative).

Round Two survey two (QUAN). The domains, domain definitions, and competency statements that were revised in survey one (Round Two), informed the creation of Round Two survey two. Survey two was divided into six sections (see survey in Appendix E):

1. Introductory section thanking participants for completing the first survey. General information about the survey and IRB information.
2. Instructions on how to fill out the survey including GAPFON definition of global health (Wilson et al., 2016).
3. Questions about global health domains (QUAN). Participants were asked to rate their level of agreement with the domain definitions that were obtained in survey one (Round Two) using a five-point Likert-style questionnaire (1= strongly disagree; 2= disagree; 3= neither agree nor disagree; 4= agree; 5= strongly agree).
4. Questions about global health competency statements (QUAN). Participants were asked to rate the extent to which each competency obtained in survey one (Round Two) was essential for baccalaureate nursing students in the U.S. using the same five-point Likert scale as in section 4.
5. Questions about clarity of the survey items. The researcher asked participants about the amount of time taken to answer the survey and any difficulties encountered when using the survey link.
6. List of references used to define global health domains and create competency statements.

Data collection. The researcher sent Round Two survey two to those who completed the first survey via SurveyMonkey Platinum platform. Participants were given 2 weeks to complete the survey and two reminders were sent at 2 and 4 week intervals. A copy of the reminder is found in Appendix F.

Data analysis. Data analysis for Round Two survey two included descriptive statistics (weighted average, percentage, and absolute frequency). Domains and competencies that were rated as "agree" or "strongly agree" by at least 70 % of the respondents were retained on the list that was used in the Round Three survey.

Delphi Round Three – Phase 3 (QUAN). Responses to Round Two survey two informed the development of the Round Three survey. This survey was divided into the five sections listed below (see survey in Appendix G).

1. General information about the study including participant commitment and IRB information;
2. Demographic and inclusion criteria questionnaires.
3. Instructions on how to fill out the survey including GAPFON's definition of global health (Wilson et al., 2016);
4. Questions about rating the competency statements in which the researcher asked participants to rate the extent to which each competency obtained from Round Two, survey two, was essential for baccalaureate nursing students in the U.S. using a five-point Likert-style questionnaire (1= strongly disagree; 2= disagree; 3= neither agree nor disagree; 4= agree; 5= strongly agree); and
5. A list of references used to define global health domains and create competency statements.

Data collection. Forty-one participants (out of 57 individuals recruited) completed the survey developed for Round Three. Data collection for this round started in early December of 2017 and ended approximately one month later. Four reminders were sent (as needed) at one-week intervals after the initial survey was emailed.

Data analysis. Data analysis for Round Three included absolute frequencies, weighted average, and percentages in order to determine which competencies achieved consensus. Competencies that were rated as “agree” or “strongly agree” by at least 70 % of participants were considered to have achieved consensus.

Establishing Rigor and Quality of the Study

Assessing rigor and quality of Delphi studies is complex for several reasons. First, Delphi studies are not considered to belong to a specific research paradigm (e.g., positivist or naturalistic) which makes it difficult to select appropriate standards to apply. Second, there is limited published guidance addressing rigor or quality in Delphi studies, making it challenging to apply any type of criteria (Keeney et al., 2011). Because there are no specific guidelines on how to assess quality in Delphi studies, it was important to assess quality for each of the methodological approaches of the study (qualitative, quantitative, and mixed methods). In this section, the steps taken to enhance the rigor and quality of the qualitative, quantitative, and mixed methods components of the study are addressed. For the qualitative components of the study, trustworthiness and credibility were assessed using Creswell and Miller’s (2000) verification strategies. Validity was used for the quantitative component. For the mixed methods component, the researcher followed the legitimation model developed by Onwuegbuzie and Johnson (2006).

Qualitative Component

According to Creswell and Miller (2000), there are eight strategies for documenting the credibility of qualitative studies. These strategies include prolonged engagement and persistent observation, triangulation, peer review or debriefing, negative case analysis, clarifying researcher bias, member checking, rich-thick description, and

external audits. For this study, the researcher used the dissertation committee audit. This audit was conducted by the dissertation co-chairs and committee members who provided the researcher with feedback and kept checks on methodology and the researcher's interpretation of the data. Results from data analysis of the qualitative components of the study are described in detail in Chapter 4.

Quantitative Component

Validity assessment. Validity of a study design refers to the extent to which study findings are unbiased and accurate (Polit & Beck, 2012). Validity in this study was assessed via content validity. Content validity is generally referred to as reflecting the truthfulness or accuracy in capturing the full content or construct that it was intended to measure (Polit & Beck, 2012). In order to assess content validity, the list of global health domains and competencies was obtained from the review of literature and previous studies. In addition, members of the dissertation committee (Wilson and Harper), who have written about global heath competencies in nursing education, revised and provided feedback throughout the entire process of identifying these domains and competencies. In addition, content validity was assessed by asking a group of renowned experts to review, comment, and provide feedback in Round Two (Phase Two) on the revised list of global health domains and competencies obtained in Round One (Phase 1). Based on this feedback, the global health domains and competency list was modified for the third Delphi round (Phase 3). In addition, during Delphi Round Three, another set of experts was surveyed to reach a consensus on the competency list.

Mixed Methods Design

According to Creswell and Plano Clark (2018), validity in mixed methods research is defined as "employing strategies that address potential issues in data collection, data analysis, and the interpretations that might compromise connecting the quantitative and qualitative strands of the study and the conclusions drawn from the combination" (p. 239). In this study, validity of the mixed method design was addressed using Onwuegbuzie and Johnson's (2006) approach, referred to as legitimation.

Legitimation. Onwuegbuzie and Johnson (2006) presented a discussion of validity issues in mixed methods research. The authors stated that assessment of this validity is complex and frequently met with conflicting opinions. Legitimation refers to the overall context of mixed methods research and infers the difficulty of using findings to make inferences that are not only credible, trustworthy and confirmable, but also dependable and transferable (Onwuegbuzie & Johnson, 2006). Both qualitative and quantitative research have issues of representation and legitimation that may present an additive effect, termed the problem of integration. In other words, the validity issues of both types of research used in a mixed methods approach may compound concerns about the integrated validity. The generalizability of the mixed methods findings would appropriately be termed inference transferability to encapsulate the ability to transfer findings to other entities. The model that Onwuegbuzie and Johnson (2006) created consists of nine types of legitimation that address legitimation at the philosophical, design, and result levels. These nine types are: sample integration, inside-outside, weakness minimization, sequential, conversion, paradigm mixing, commensurability,

multiple validities, and political legitimation. In Table 6, the concept of legitimation is addressed as it applies to this study.

Table 6
Study Legitimation

Type of legitimation	Description	Strategies used in the study
Sample integration legitimation	Refers to how the sample of the qualitative and quantitative arms of the study can be used to make statistical generalizations and inferences (Onwuegbuzie & Johnson, 2006). As noted by Onwuegbuzie and Johnson (2006), if the inferences stemming from the quantitative and qualitative phases were consistent, then the meta-inference quality likely would be higher. However, they also state that other considerations related to sample quality need to be examined when assessing this type of legitimation.	Although the participants for rounds two and three were not the same, both samples possessed the same eligibility criteria. More importantly, due to the nature of the study, the fact that both samples had expertise in global health and BSN education was paramount.
Weakness minimization legitimation	Weakness minimization legitimation is a tactic that balances the validity risks by using the strengths of one approach to compensate for the weaknesses of the other (Onwuegbuzie & Johnson, 2006).	Addressed in this study by combining quantitative and qualitative methods of data collection and analysis. Weaknesses of each of the quantitative and qualitative approaches were compensated by their own strengths. Using clear cut questions in the open ended questionnaire in the qualitative phase of the study provided richer information used to revise the competency list. Alternatively, having the participants rate the extent to which each competency was essential for baccalaureate nursing students in the United

		States was important to establish consensus.
Inside-outside legitimation	Refers to the extent that the researcher accurately presents the insider's view (participant) in tandem with the observer's view (researcher) (Onwuegbuzie & Johnson, 2006). The researcher may use peer review to balance the etic view of the outsider with the emic view of the insiders.	In this study, the researcher's dissertation committee members served as the reviewers of the entirety of the study to help attain inside-outside legitimation.
Multiple validities legitimation	Multiple validities legitimation refers to how addressing quality of each component of the study (quantitative, qualitative, and mixed methods) produces high quality meta-inferences (Onwuegbuzie & Johnson, 2006	For this study, quality was addressed for each of the study components: quantitative, qualitative, and mixed methods.

Summary

This chapter provided a description of the research design, methods, sample, recruitment process, data collection procedures, processes to ensure rigor, and ethical considerations. The modified Delphi method used in this study was explained and the reasons for its selection were elaborated. The modified Delphi method was selected because participants were located in a widely dispersed area, which made online

surveying optimal for data collection. In addition, the online surveys provided one opportunity for participants to freely state their point of view without being influenced by face-to-face interactions with other participants. The Delphi method is often used for achieving consensus in identifying competencies among experts or individuals knowledgeable in their fields. The Delphi method was intersected with a multi-phase mixed method design in order to guide data collection, analysis, and interpretation. Data analysis performed after each round informed the development of the surveys for subsequent rounds to achieve integration.

This research study was divided into three Delphi Rounds or Phases. In Round One (Phase 1), a list of domains and competencies was revised based on previous research reports. In Round Two (Phase 2), a group of nurses (n = 6) expert in global health and BSN education provided feedback regarding the global health domain definitions and competency statements obtained in Round One. In Round Three (Phase 3), the researcher used the competency statements obtained in Round Two to create a survey which was sent to a second group of nurses with expertise in global health and BSN education in the U.S. to determine which competencies they rated as essential for BSN students in the U.S. Quality of the study was established using criteria for each of the components of the study (quantitative, qualitative, and mixed methods). The findings will be presented in Chapter 4 and discussed in Chapter 5.

CHAPTER 4

RESULTS

The purpose of this study was to reach consensus among experts on essential global health competencies for baccalaureate nursing students in the United States using a multi-phase, mixed-method research design intersected with a Delphi method. This chapter presents results of the three Delphi Rounds: QUAL (Round One/Phase 1) → QUAL + quan (Round Two/Phase 2-survey one) → QUAN (Round Two/Phase 2-survey two) → QUAN ((Round Three/Phase 3) and describes how data from the preceding rounds were used in the development of surveys used in subsequent rounds.

Delphi Round One, Phase 1, (QUAL)

Delphi Round One addressed research question one: What revised global health domains and competencies are recommended as essential for baccalaureate nursing education in the U.S. based on qualitative analyses of previously conducted surveys of nursing faculty in the U.S., Canada, Latin America, Africa, and the Caribbean, the researcher's findings of a pilot study conducted on global health competencies in the U.S. and Canada, a review of literature, and a proposed Nursing Global Health Competencies Framework?

Results Related to Development of Domains

In Round One, Phase 1, nine global health domains were identified by revising the list of global health domains reported in previous studies (Wilson et al., 2012;

Wilson, Moran et al., 2016), and Torres (2015) using the review of previous research and the NGHCF (see Appendix C) as described in Chapter 3. The domains identified were:

1. Global Burden of Disease,
2. Health Implications of Pandemics, Displacement, Wars, Disasters, and Travel,
3. Social and Environmental Determinants of Planetary Health,
4. Global Nursing and Health Care,
5. Culturally Competent, Humanistic, and Holistic Care,
6. Collaboration and Partnerships,
7. Communication,
8. Leadership, Management, and Advocacy, and
9. Ethical Issues, Equity, and Social Justice in Global Health

Results Related to Development of Definition of Domains

Once the domains were identified, definitions were developed for each of the domains based on a scoping review of the literature published prior to 2016. Ten sources were used to develop the domain definitions (AACN, 2008; ICN, 2009; Jogerst et al, 2015; Klebanoff & Hess, 2013; Kleiman, 2012; Rimal & Lapinski, 2009; Skolnik, 2015; WHO, n.d.; Whitmee et al., 2015; Wilson et al., 2016; Yoder-Wise, 2015). See Appendix C for domain definitions.

Results Related to Development of Competencies

Seven references were used in developing the initial competency statements in Round One (Hagopian et al., 2008; ICN, 2009; Jogerst et al, 2015; Rowthorn & Olsen, 2014; Williams et al., 2014; Wilson et al., 2012; Wilson et al., 2016). Fifty-two

competencies under the nine domains were identified. See Appendix C for competency statements identified in this round.

Data integration

This is the first integration point of the multiple phase mixed methods design where Round Two was built on results from Round One through survey development. The list of domains (and definitions) and competency statements obtained in Round One informed the development of Round Two survey one.

Delphi Round Two, Phase 2, (QUAL-quan)

Round Two addressed the second research question of the study: What revised global health competencies and domains are recommended as essential for baccalaureate nursing education in the U.S. by a group of six nurses with expertise in global health and baccalaureate nursing education in the U.S.?

Results Survey One (QUAL + quan)

Participants in this phase were asked to review and provide feedback about the definition of each of the nine domains and the 52 competency statements generated in Phase 1. The following paragraphs present qualitative and quantitative results from survey one Round Two.

Participant demographic information – survey one. All six participants were female and 46 years old or older. All of the participants met the Delphi survey criteria as having expertise in global health and BSN education. Participants' experience ranged from 3 years to more than 21 years with BSN education and from 6 to more than 21 years with global health. Based on the definitions of global health proposed by the Global Advisory Panel for the Future of Nursing (GAPFON) (Wilson et al., 2016), all six

participants indicated that they had expertise in global health education and practice, and five had experience in global health research. All six participants held leadership positions in academic settings (Professor, Associate Dean, Director of Global Health Initiatives, and Deputy Director of PAHO/WHO Collaborating Center, among others). For participant demographics, see Table 7.

Table 7
Demographic Characteristics of Round Two Respondents

	Frequency	Percentage
Age range		
25 - 35 years	0	0
36 - 45 years	0	0
46 - 55 years	1	16.67
56 - 65 years	2	33.33
Older than 65 years	3	50.00
Total	6	
Years of experience in BSN education		
3 - 5 years	1	16.67
6 - 10 years	0	0
11 - 15 years	1	16.67
16 - 20 years	1	16.67
More than 21 years	3	50
Total	6	
Years of experience in global health		
1 - 5 years	0	0
6 - 10 years	2	33.33
11 - 15 years	1	16.67
16 - 20 years	2	33.33
More than 21 years	1	16.67
Total	6	
Areas of expertise in global health		
Research	5	83.3 †
Education	6	100†
Practice	6	100†

† Percentages in group results sum to more than 100 because participants may have had experience in multiple areas of global health.

Survey one results related to definition of domains. Tables 8 to 16 contain the list of domains and domain definitions. The definitions of all domains contain numbers in parentheses, which correspond to the sources used to write the definitions. See Appendix H for the sources that correspond to these numbers.

Participant evaluation of domains. Participants were asked to select one of four options to describe the definition of each domain obtained in Round One: accept definition as written, accept with changes, reject, or consider an alternative. All of the domain definitions were rated either as "accept as written" or "accept with changes" except for domain five (culturally competent, humanistic, and holistic care) for which one participant selected "consider an alternative definition". None of the domain definitions were rejected. The domain definitions were modified to include complementary information (wording added to the definition that complements the statement), supplementary information (wording that adds to the definition), and rewording.

Domain One: Global Burden of Disease. The definition of the Global Burden of Disease domain was accepted as written by four participants while one accepted the definition with changes. The changes included in the final version involved complementary information. The domain definition developed in Round One as well as participants' recommendations, and the revised definition of the first domain are presented in Table 8.

Table 8
Recommendations about Global Burden of Disease Domain

Original domain definition sent in Survey One Round Two	**Accept as written n (%)**	**Accept with changes participants comments**	**Proposed alternative participants' comments**	**Domain definition revised based on participants' comments from Survey One Round Two**
1. *Global Burden of Disease* This domain encompasses a basic understanding of major causes of morbidity, disability, and mortality and their variations between age, sex, ethnicity, and socioeconomic status within and across countries (1, 2).	**n = 4** (80%)	**n = 1** (20%) This domain encompasses a basic understanding of the major causes of morbidity, disability, and mortality and the *variations* caused by age, sex, ethnicity, and socioeconomic status within and across countries *…and the disproportionate representation in countries and regions* *Participant's changes used to revise definition are in italics.*	**n = 0**	1. *Global Burden of Disease* This domain encompasses a basic understanding of major causes of morbidity, disability, and mortality and the variations associated with age, sex, ethnicity, socioeconomic status within and across countries (1,2) *and the disproportionate representation in countries and regions.*

Domain Two: Health Implications of Pandemics, Displacement, Wars, Disasters, and Travel. For this domain, three participants accepted the definition as written, while the other three accepted it with changes. The changes included in the final version of the definition involved rewording and adding complementary information. See Table 9 for more information about the definition developed for this domain.

Table 9

Recommendations about Health Implications of Pandemics, Displacement, Wars, Disasters, and Travel Domain

Original domain definition sent in Survey One Round Two	Accept as written n (%)	Accept with changes, participants' comments	Domain definition revised based on participants' comments from Survey One Round Two
2. *Health Implications of Pandemics, Displacement, Wars, Disasters, and Travel* This domain refers to health issues associated to pandemics, displacement, wars, disaster, and travel of populations across the globe. Displacement occurs when individuals leave their homes either to go to other parts of the country or across nations as a result of a natural or man-made event (4).	**n = 3** (50%)	**n = 3** (50%) This domain refers to health issues associated with pandemics, displacement, wars, disaster, and travel of populations across the globe. Displacement occurs when individuals *are forced to* leave their homes to go to other parts of the country or across nations as a result of a natural or man-made event "This domain refers to health issues associated with pandemics, ... or health issues related to or health issues *as a consequence* of pandemics, displacement, ..." when individuals *ARE FORCED TO* leave their homes. *Participant's changes used to revise definition are in italics.*	2. *Health Implications of Pandemics, Displacement, Wars, Disasters, and Travel* This domain refers to health issues as consequence of pandemics, displacement, wars, disaster, and travel of populations across the globe. Displacement occurs when individuals *are forced to* leave their homes either to go to other parts of the country or across nations as a result of a natural or man-made event (4).

Domain Three: Social and Environmental Determinants of Planetary Health. Four participants accepted the definition of Social and Environmental Determinants of Planetary Health as written while two accepted it with changes. The modification to the definition consisted on rewording. The domain definition created in Round One as well as participants' recommendations, and the revised definition of the first domain are presented in Table 10.

Table 10
Recommendations about Social and Environmental Determinants of Planetary Health Domain

Original domain definition sent in Survey One Round Two	**Accept as written n** (%)	**Accept with changes, participants' comments**	**Domain definition revised based on participants' comments from Survey One Round Two**
3. *Social and Environmental Determinants of Planetary Health* This domain "focuses on an understanding that personal, social, economic, and environmental factors are important determinants of health, that health is more than the absence of disease" (2) and that planetary health "is rooted in understanding the interdependencies of humans and natural systems (7).	**n = 4** (67%)	**n = 2** (33%) Determinants of Planetary Health (to include all determinants, not just social and environmental)	3. *Social and Environmental Determinants of Planetary Health* This domain "focuses on an understanding that factors, *such as*, personal, social, economic, and environmental *influences* are important determinants of health, that health is more than the absence of disease" (2) and that planetary health "is rooted in understanding the interdependencies of humans and natural systems (7).

Domain Four: Global Nursing and Health Care. In regards to the domain of Global Nursing and Health Care, three participants accepted the definition as written and three accepted it with changes. The feedback included in the final version of the definition involved adding supplementary information See Table 11 for the changes to this domain definition.

Table 11
Recommendations about Global Nursing and Health Care Domain

Original domain definition sent in Survey One Round Two	**Accept as written n (%)**	**Accept with changes participants' comments**	**Domain definition revised based on participants' comments from Survey One Round Two**
4. *Global Nursing and Health Care* This domain focuses on understanding how globalization affects health, health systems, and the delivery of health and nursing care (2). Global nursing "is the use of evidence-based nursing process to promote sustainable planetary health and equity for all people (8)."	**n = 3** (50%)	**n = 3** (50%) This domain focuses on understanding how globalization affects health, health systems, and the delivery of healthcare services and nursing care (2). *in all countries and all regions.* *Participants' changes used to revise definition are in italics.* Underlined Comments were not included in revised definition.	4. *Global Nursing and Health Care* This domain focuses on understanding how globalization affects health, health systems, and the delivery of health and nursing care *in all countries and regions* (2). Global nursing "is the use of evidence-based nursing process to promote sustainable planetary health and equity for all people (8)."

Domain Five: Culturally Competent, Humanistic, and Holistic care. For the domain of Culturally Competent, Humanistic, and Holistic Care three participants accepted the definition as written, two with changes, and one suggested an alternative. Participant feedback included in the final version of the definition involved supplementary information and rewording. Table 12 describes how the definition of this domain was elaborated.

Table 12
Recommendations about Culturally Competent, Humanistic, and Holistic Care Domain

Original domain definition sent in Survey One Round Two	Accept as written n (%)	Accept with changes participants' comments	Proposed alternative participant's comments	Domain definition revised based on participants' comments from Survey One Round Two
5. *Culturally Competent, Humanistic, and Holistic Care* This domain addresses the concepts of culturally competent, humanistic, and holistic care as applied to global health and global nursing. Cultural competence refers to "the attitudes, knowledge and skills necessary to provide quality care to diverse populations (11)." Holistic nursing care refers to practice that has "healing the whole person as its goal (12)." Humanistic nursing care is "concerned with contributing to the dignity, happiness, and well-being of persons with whom (nurses) interact (13)."	**n = 3** (50%)	**n = 2** (33%) This domain addresses the concepts of culturally competent, humanistic, and holistic care as applied to global health and global nursing. Cultural competence refers to "the attitudes, knowledge and skills necessary to provide quality care to diverse populations (11)." *Holistic nursing care refers to practice with the goal of healing the whole person* (12). Humanistic nursing care is "concerned with contributing to the dignity, happiness, and well-being of persons with whom (nurses) interact. *Participant's changes used to revise definition are in italics.*	**n = 1** **(16.6%)** * *Patient-centered Care*; it encompasses holistic, humanistic and to some extent culturally competent care. *Participant's changes used to revise definition are in italics.*	5. *Culturally Competent, Humanistic, and Holistic Care* This domain addresses client *centered care* and encompasses the concepts of culturally competent, humanistic, and holistic care as applied to global health and global nursing. Cultural competence refers to "the attitudes, knowledge and skills necessary to provide quality care to diverse populations (11). *Holistic nursing care refers to practice with the goal of healing the whole person* (12)." Humanistic nursing care is "concerned with contributing to the dignity, happiness, and well-being of persons with whom (nurses) interact (13)."

Domain Six: Collaboration and Partnerships. Three participants accepted the definition of Collaboration and Partnerships with changes while the other three accepted it as written. The final version of the definition comprised feedback that added supplementary information and rewording of the definition. See Table 13 for a more detailed description of the edits to this definition.

Table 13
Recommendations about Collaboration and Partnerships Domain

Original domain definition sent in Survey 1 Round Two	**Accept as written n** (%)	**Accept with changes participants' comments**	**Proposed alternative participants' comments**	**Domain definition revised based on participants' comments from Survey 1 Round Two**
6. *Collaboration and Partnerships* This domain relates to collaborating and partnering, which refers to the ability to select, recruit, and work with a diverse range of global health stakeholders to advance research, policy, and practice goals, and to foster open dialogue and effective communication with partners and within a team (2)."	**n = 3** (50%)	**n = 3** (50%) This domain relates to collaborating and partnering, *as a means to select, recruit, and work* with a diverse range of global health stakeholders that will advance research, policy, practice goals, and foster open dialogue and effective communication with partners and within the team (2)." Would recommend more language regarding equity in partnerships. Collaboration is different than partnering. Inherent in this is reciprocity that all partners *can benefit* from the relationship in terms they define. *Participant's changes used to revise definition are in italics.*		6. *Collaboration and Partnerships* This domain relates to *reciprocal and equalitarian* collaborations and partnerships, *as a means to select, recruit, and work* with a diverse range of global health stakeholders to advance research, policy, and practice goals, and to foster open dialogue and effective communication with partners and within a team (2)."

Domain Seven: Communication. The definition of Communication was accepted as written by four individuals, and two participants accepted the definition with changes. Changes to this definition involved adding complementary information to make the definition more robust. Table 14 represents the changes made to the definition based on participants' recommendations.

Table 14
Recommendations about Communication Domain

Original domain definition sent in Survey 1 Round Two	**Accept as written n** (%)	**Accept with changes participants' comments**	**Proposed alternative participants' comments**	**Domain definition revised based on participants' comments from Survey 1 Round Two**
7. *Communication* Communication is a dynamic process that involves the symbolic exchange of shared meaning (16).	**n = 4** (67%)	**n = 2** (33%) Communication is a dynamic process that involves *synchronous or asynchronous* exchange of shared meaning. *in which everyone has an equal voice and is actively heard* *Participants 'changes used to revise definition are in italics.*		7. *Communication* Communication is a dynamic process that involves the *synchronous and asynchronous* exchange of shared meaning *in which everyone has an equal voice and is actively heard.*

Domain Eight: Leadership, Management, and Advocacy. For the domain of Leadership, Management, and Advocacy, four participants accepted the definition as written while two accepted it with changes. Participant feedback included supplementary information and rewording of the final definition. Table 15 illustrates changes to the definition based on participants' feedback.

Table 15
Recommendations about Leadership, Management, and Advocacy Domain

Original domain definition sent in Survey 1 Round Two	Accept as written n (%)	Accept with changes participants comments	Proposed alternative participants' comments	Domain definition revised based on participants' comments from Survey 1 Round Two
8. *Leadership, Management, and Advocacy* This domain refers to knowledge, skills, and attitudes nurses need to demonstrate in terms of leadership (use of personal traits to constructively and ethically influence patients, families, and staff), management (activities needed to plan, organize, motivate, and control the human and material resources to achieve a specific outcome), and advocacy (proactively speaking for another to ensure certain needs or wishes are met) (17).	**n = 4** (67%)	**n = 2** (33%) This domain refers to knowledge, skills, and attitudes nurses need to demonstrate *(in terms of)* leadership (use of personal traits to constructively and ethically influence patients, families, and staff), management (activities needed to plan, organize, motivate, and control the human and material resources to achieve a specific outcome), and advocacy (proactively speaking for another to ensure certain needs or wishes are met) leadership...*at all levels of the health system* *Participant's changes used to revise definition are in blue italics.*		8. *Leadership, Management, and Advocacy* This domain refers to knowledge, skills, and attitudes nurses need to demonstrate in terms of leadership *at all levels of the health system* (use of personal traits to constructively and ethically influence patients, families, and staff), management (activities needed to plan, organize, motivate, and control the human and material resources to achieve a specific outcome), and advocacy (proactively speaking for another to ensure certain needs or wishes are met) (17).

Domain Nine: Ethical Issues, Equity, and Social Justice in Global Health. In regard to the domain of Ethical Issues, Equity, and Social Justice in Global Health, four participants accepted the definition as written, while two accepted it with changes. The changes incorporated in the definition involved rewording a part of the definition. Table 16 depicts the modifications made to the definition of this domain in a more specific manner.

Table 16

Recommendations about Ethical Issues, Equity, and Social Justice in Global Health Domain

Original domain definition sent in Survey 1 Round Two	**Accept as written n** (%)	**Accept with changes participants comments**	**Proposed alternative participants' comments**	**Domain definition revised based on participants' comments from Survey 1 Round Two**
9. *Ethical Issues, Equity, and Social Justice in Global Health* This domain incorporates competencies related to ethics, equity, and social justice in global health. Ethics refers the use of moral principles to guide decisions and actions. Ethical principles include beneficence, do no harm, respect for autonomy, fairness, truthfulness, and justice. "Health equity and social justice is the framework for analyzing strategies to address health disparities across socially, demographically, or geographically defined populations (2)."	**n = 4** (67%)	**n = 2** (33%) Health equity and social justice is the framework for analyzing strategies to address health disparities *across populations defined by geography, demographics, or social considerations.* Globally accepted moral principles. *Participant's changes used to revise definition are in italics.* Comments underlined were not included in revised definition.		9. *Ethical Issues, Equity, and Social Justice in Global Health* This domain incorporates competencies related to ethics, equity, and social justice in global health. Ethics refers the use of moral principles to guide decisions and actions. Ethical principles include beneficence, do no harm, respect for autonomy, fairness, truthfulness, and justice. Health equity and social justice is the framework for analyzing strategies to address health disparities *across populations defined by geography, demographics, or social considerations* (2).

Results related to competency statements, survey one. The decisions made to keep, modify, or eliminate competencies are presented in this section. Decisions were based on participants' feedback and the following rationales: (a) competencies needed to

be leveled to the BSN level, (b) competencies needed to fit under each of the domains, (c) verbs used in competency statements needed to reflect Bloom's taxonomy, and (d) competency statements needed to fit into the NGHCF framework. Changes to competency statements were related to leveling the competency to the BSN level, rewording, and complementary and supplementary information.

The following tables contain the competency statements obtained in Round One and the rating of each of those (accept competency as written, accept with changes, reject, or consider alternative). Participants' comments and a brief explanation about changes or elimination of the competencies are provided in the table under each of the competency statements. The tables also indicate which of the original competency statements were not modified. As is seen in Tables 17 to 25, the numbers contained in each competency statement refer to the sources used to create that statement. See Appendix H for the list of sources.

Competencies under the domain of Global Burden of Disease. For this domain, one of the two competencies remained as originally written while the other was accepted with changes, resulting in two remaining competencies. Changes to this competency involved leveling the competency to the BSN degree. No competencies were eliminated in this domain. See Table 17 for more detailed information about decisions regarding competencies in this domain.

Table 17
Findings Related to Competencies under the Domain of Global Health

Original competency statements sent in Survey One	Accept as is n (%)	Accept with change s n (%)	Comments	Final competency statements based on participants' comments to Survey One Round Two
Domain 1. Global Burden of Disease				
1 a) Asses the major causes of morbidity, disability, and mortality around the world and how the risk of disease varies with regions (3).	4 (67%)	2 (33%)	Identify the major causes of.... and assess how the risk of disease varies by region of the world. Define (At the baccalaureate level assessing may not be the level of competency)"	1 a) *Describe* the major causes of morbidity, disability, and mortality around the world and how the risk of disease varies with regions (3).
Changes to competency statement	Leveling: From "assess" to "describe"			
1 b) Describe major public health efforts to reduce disparities in global health (such as Sustainable Development Goals and Global Fund to Fight AIDS, TB, and Malaria) (3).	6 (100%)	0	N/A	1 b) Describe major public health efforts to reduce disparities in global health (such as Sustainable Development Goals and Global Fund to Fight AIDS, TB, and Malaria) (3).
Changes to competency statement	No Changes			

Competencies under the domain of Health Implications of Pandemics, Displacement, Wars, Disasters, and Travel. Of the six competencies at the end of Round one, one competency remained as written, two competencies required rewording, and three were deleted in the domain of Health Implications of Pandemics, Displacement, Wars, Disasters, and Travel. The three deleted competences were either too advanced for the BSN level or too similar to competencies under different domains. Three competencies remained in this domain. See Table 18 for more information about the decision process for including/deleting competencies under this domain.

Table 18

Findings Related to Competencies under the Domain of Health Implications of Pandemics, Displacement, Wars, Disasters, and Travel

Original competency statements sent in Survey One Round Two	**Accept as is –n (%)**	**Accept with changes – n (%)**	**Reject - n (%)**	**Alternative n (%)**	**Comments**	**Final competency statements based on participants' comments to Survey One Round Two**
Domain 2. Health Implications of Pandemics, Displacement, Wars, Disasters, and Travel						
2 a) Explain the health risks posed by international travel or foreign birth (3).	2 (33%)	2 (33%)	1 (17%)	1 (17%)	Explain the health risks posed by international travel, displacement, wars, disasters or foreign birth. Describe the health risks for populations as a result of worldwide travel and migration Explain the health risks posed by international travel (omit "foreign birth" as it is too vague and conveys bias) unclear. forced migration (internal displacement and cross border should be at center)	2 a. Explain the health risks for populations as a result of international travel (3)
Changes to competency statement	Rewording: "foreign birth" statement was eliminated.					
2 b) Analyze the effects of displacement, wars, and migration on health of refugees and immigrants (5).	3 (50%)	3 (50%)	0	0	Describe vs analyze... Analyze the effects of displacement, wars, and migration. [remove health of refugees and immigrants] Analyze the effects of displacement and migration on health of refugees and immigrants (omit "wars" since this is not the only cause of displacement and migration; i.e.	2 b) Analyze the effects of displacement and migration on *individual and population health* (5).

					poverty and political instability can also cause displacement/migration)	
Changes to competency statement	Rewording: “wars” eliminated. Individual and population health reworded from health of refugees and immigrants.					
2 c) Explain how travel or foreign birth places a patient at risk for unusual diseases or unusual presentation of common diseases and make an appropriate assessment or referral (3).	3 (50%)	2 (33%)	0	1 (17%)	Explain how international travel, displacement, wars, disasters or foreign birth....... These seem to be 2 different concepts, travel and foreign birth. Explain how travel places a patient at risk.... Identify health risks for a patient who may have traveled ... Explain how travel or place of birth puts a patient at risk for.... (the term "foreign" carries a bias)	
Changes to competency statement	Competency eliminated as it is similar to 2a.					
2 d) Identify world regions and/or travel activities associated with increased risk for life-threatening diseases including HIV/AIDS, malaria, and multidrug-resistant tuberculosis (3).	5 (83%)	0	1 (17%)	0	Probably too advanced for BSN level; more appropriate for MSN	
Changes to competency statement	Competency eliminated as it is similar to 1a.					
2 e) Describe basic principles of nursing roles in disasters including helping communities to prepare for and respond to disasters (6).	5 (83%)	1 (17%)	0	0	include nursing role at leadership level directing response efforts	2 e) Describe basic principles of nursing roles in disasters including helping communities to prepare for and respond to disasters (6).
Changes to competency statement	No Changes					
2 f) Analyze how travel and trade contribute to the spread of communicable and chronic diseases (3).	3 (50%)	1 (17%)	1 (17%)	1 (17%)	Describe how.... These could be separated, communicable diseases are different than chronic diseases.	

					Probably too advanced for BSN level; more appropriate for MSN	
Changes to competency statement	Competency eliminated as it is not appropriate for BSN level.					

Competencies under the domain of Social and Environmental Determinants of Planetary Health. For this domain, four competency statements were modified (rewording, leveling, and adding complementary information), and one was deleted (already covered in competencies 3a and 3b). See Table 19 for more detailed information.

Table 19

Findings Related to Competencies under the Domain of Social and Environmental Determinants of Planetary Health

Original competency statements sent in Survey One Round Two	**Accept as is n (%)**	**Accept with changes – n (%)**	**Reject - n (%)**	**Alternative - n (%)**	**Comments**	**Final competency statements based on participants' comments to Survey One Round Two**
Domain 3. Social and Environmental Determinants of Planetary Health						
3 a) Explain how social and economic conditions such as poverty, education, and lifestyles affect health and access to health care (3).	4 (67%)	1 (17%)	0	1 (17%)	There are different concepts here. Health and Access to Health Care are very different. Describe how economic conditions such as poverty affect health and access to health care Describe how personal and societal conditions such as family, education, and lifestyle contribute to health outcomes. include race	3 a) Explain how social and economic conditions such as poverty, *race*, education, and lifestyles affect access to health care (3).
Changes to competency statement	Rewording: Elimination of "health" in statement. Leaving only "health care" in statement. Complementary information: "Race" included.					
3 b) List major social determinants of health and their impact on differences in life expectancy between and within countries (3).	5 (83%)	0	0	1 (17%)	List major socio-economic and cultural determinants of health....	3 b) List major *socio-economic and cultural* determinants of health and their impact on differences in life expectancy between and within countries (3).
Changes to competency statement	Complementary information: "socio-economic and cultural" added to statement.					
3 c) Comment on the impact of low income, education, and communication factors on access to	2 (33%)	3 (50%)	1 (17%)	0	Explain the impact.... Comment on the impact of income, education, and communication factors on	

and quality of health care (3).					access to health care and quality of care... Content covered by 3a include race	
Changes to competency statement	Competency eliminated as it is it is covered in competencies 3a and 3b.					
3 d) Asses the relationship between access to clean water, sanitation, food, and air quality on individual and population health (3).	3 (50%)	3 (50%)	0	0	Explain the relationship.... Assess the impact of environmental factors such as clean water, sanitation, food, and air quality on the health of populations and individuals. Describe the relationship....	3 d) *Describe the impact* of *environmental factors* such as clean water, sanitation, food, and air quality on individual and population health (3).
Changes to competency statement	Leveled: From “assess the relationship” to “describe the impact” Reworded: “environmental factors” added to statement to have a better transition in the sentence.					
3 e) Summarize the relationship between environmental degradation and human health (3).	4 (67%)	1 (17%)	1 (17%)	0	Describe the relationship between environmental degradation and human health. [not sure one can summarize this at this phase] Too advanced for BSN level	3 e) *Describe* the relationship between environmental degradation and human health (3).
Changes to competency statement	Leveled: From “summarize” to “describe”					
If you think more competencies are needed in this domain, please enter those in box below: * need to understand institutional racism within health care system						

Competencies under the domain of Global Nursing and Health Care. The domain of Global Nursing and Health Care retained 11 competencies after one was deleted due to not being appropriate for the BSN level, five competencies remained the same, and seven were modified. Changes to these seven competencies were made to add information, to level the competencies, or to reword them to increase clarity. See Table 20 for more information.

Table 20

Findings Related to Competencies under the Domain of Global Nursing and Health Care

Original competency statements sent in Survey One Round Two	**Accept as is n (%)**	**Accept with changes – n (%)**	**Reject - n (%)**	**Alternative - n (%)**	**Comments**	**Final competency statements based on participants' comments to Survey One Round 2**
Domain 4. Global Nursing and Health Care						
4 a) Analyze how global trends in health care practice, commerce and culture, multinational agreements, and multinational organizations contribute to the quality and availability of health and health care locally and globally (3).	4 (67%)	1 (17%)	0	1 (17%)	planetary health is not common language in our school of nursing. Consider using global health Include displacement, war	4 a) Analyze how global trends in health care practice, *conflict*, commerce and culture, multinational agreements, and multinational organizations contribute to the quality and availability of health and health care locally and globally (3).
Changes to competency statement	Complementary information: "conflict" added to statement.					
4 b) Describe different national models or health systems for provision of health care and their respective effects on health and health care expenditure (3).	4 (67%)	1 (17%)	0	0	Describe 3 main healthcare provision models... on health outcomes	4 b) Describe different national models or health systems for provision of health care and their respective effects on *health outcomes*, and health care expenditure (3).
Changes to competency statement	Reworded: from "health" to "health outcomes"					
4 c) Analyze general trends and influences in the global availability and movement of health care workers (3).	5 (83%)	1 (17%)	0	0		4 c) Analyze general trends and influences in the global availability and movement of health care workers (3).
Changes to competency statement	No Changes					
4 d) Compare and contrast national and global health care worker availability and shortages (3).	4 (67%)	0	1 (17%)	1 (17%)	Compare and contrast national and global health worker availability and shortages in two countries. More appropriate for MSN level needs to be emphasis on health as a human right; resulting health systems reflect whether it is a human right or not	4 d) *Describe differences and similarities* about national and global health care worker availability and shortages (3).
Changes to competency statement	Leveled: From "compare and contrast" to "describe differences and similarities".					
4 e) Describe the most common patterns of health care worker	6 (100%)	0	0	0		4 e) Describe the most common patterns of health care worker migration and its

migration and its impact on health care availability in the country that the health care worker leaves and the country to which he or she migrates (3).						impact on health care availability in the country that the health care worker leaves and the country to which he or she migrates (3).
Changes to competency statement	No changes					
4 f) Analyze the economic, social, political, and academic conditions that can produce a strong health workforce (9).	4 (67%)	1 (17%)	1 (17%)	0	Also add professional conditions and workplace conditions More appropriate for MSN level	4 f) *Identify* the economic, social, political, *professional, workplace*, and academic conditions that can produce a strong health workforce (9).
Changes to competency statement	Leveling: From "analyze" to "identify" Supplementary info added: "professional, workplace…conditions"					
4 g) Provide examples of barriers to health and health care locally and globally (3).	3 (50%)	2 (33%)	1 (17%)	0	Not sure what this is emphasizing: Suggest Provide examples of barriers to health care locally and globally." human rights framework; universal health coverage	4 g) *Identify* barriers to health care access locally and globally (3).
Changes to competency statement	Reworded: from "provide examples" to "identify".					
4 h) Adapt clinical skills and practice in a variety of settings (3).	2 (33%)	0	3 (50%)	1 (17%)	Too broad and vague too vague. maybe low resource countries	
Changes to competency statement	Competency eliminated from list. Not at BSN level.					
4 i) Perform interventions and integrated strategies that have been demonstrated to substantially improve individual and/or population health (e.g., immunizations, essential drugs, maternal child health programs) (3).	3 (50%)	3 (50%)	0	0	identify interventions... remove population health and call it community health Carry out interventions that can substantially improve...	4 i) *Carry out* interventions and integrated strategies that have been demonstrated to substantially improve individual and/or *community* health (e.g., immunizations, essential drugs, maternal child health programs) (3).
Changes to competency statement	Reworded: from "perform" to "carry out"; from "population" to "community"					
4 j) Display integrity, regard, and respect for others in all aspects of global nursing practice (2).	5 (83%)	0	0	0		4 j) Display integrity, regard, and respect for others in all aspects of global nursing practice (2).
Changes to competency statement	No Changes					
4 k) Adapt clinical or discipline-specific skills and practice in varied settings (3).	6 (100%)	0	0	0		4 k) Adapt clinical or discipline-specific skills and practice in varied settings (3).
Changes to competency statement	No changes.					

4 l) Discuss the role and impact of nurses globally (10).	4 (67%)	2 (33%)	0	0	Discuss the role, challenges, and impact of nurses globally. and what could increase the leadership of nursing globally	4 l) Discuss different roles and contributions of nurses to *health care in different global regions* (10)
Changes to competency statement	Reworded: “from nurses globally” to “to health care in different global regions”					
If you think more competencies are needed in this domain, please enter those in box below						
					Identify strategies to support and protect the health of health care workers and nurses.	

Competencies under the domain of Culturally Competent, Humanistic, and Holistic care. A new competency was added to this domain after participant feedback (discuss the concept of cultural humility). See Table 21 for more detailed information about decisions made regarding competencies in this domain.

Table 21
Findings Related to Competencies under the Domain of Culturally Competent, Humanistic, and Holistic Care

Original competency statements sent in Survey One Round Two	**Accept as is n (%)**	**Accept with changes – n (%)**	**Reject - n (%)**	**Alternative - n (%)**	**Comments**	**Final competency statements based on participants' comments to Survey One Round Two**
Domain 5. Culturally Competent, Humanistic, and Holistic Care						
5 a) Provide culturally competent, humanistic, and holistic care and support for clients from diverse population groups (5).	5 (83%)	0	0	0		5 a) Provide culturally competent, humanistic, and holistic care and support for clients from diverse population groups (5).
Changes to competency statement	No Changes					
5 b) Explain how cultural context influences perceptions of health and disease (3).	6 (100%)	0	0	0		5 b) Explain how cultural context influences perceptions of health and disease (3).
Changes to competency statement	No Changes					
5 c) Elicit individual health concerns in a culturally sensitive manner (3).	5 (83%)	1 (17%)	0	0	Elicit health concerns in a culturally aware and sensitive manner.	5 c) Elicit individual health concerns in a culturally sensitive manner (3).
Changes to competency statement	No Changes					
5 d) Act respectfully according to what is appropriate in the culture and the situation, including gestures, expressions, and behaviors (14).	6 (100%)	0	0	0		5 d) Act respectfully according to what is appropriate in the culture and the situation, including gestures, expressions, and behaviors (14).
Changes to competency statement	No Changes					
If you think more competencies are needed in this domain, please enter those in box below						
					Discuss the concept of cultural humility	Discuss the concept of cultural humility. *Competency added for next round.*

Competencies under the domain of Collaboration and Partnerships. Four competencies in this domain were modified after participants provided feedback to reword three competencies and add complementary information to one. Two

competencies remained unchanged. See Table 22 for more information about the decision process.

Table 22
Findings Related to Competencies under the Domain of Collaboration and Partnerships

Original competency statements sent in Survey One Round Two	**Accept as is n (%)**	**Accept with changes – n (%)**	**Reject - n (%)**	**Alternative - n (%)**	**Comments**	**Final competency statements based on participants' comments to Survey One Round Two**
Domain 6. Collaboration and Partnerships						
6 a) Describe the process of team development and the roles and practices of effective teams (15).	5 (83%)	0	0	1 (17%)	much too vague	6 a) *Describe roles of key members of health care teams* (15).
Changes to competency statement	Reworded: from "describe the process of team development…" to "describe the roles of key members of health care teams"					
6 b) Apply leadership practices that support collaborative practice and team effectiveness (15).	4 (67%)	1 (17%)	0	1 (17%)	Apply collaboration skills including negotiation, communication, team building, conflict management. Apply leadership principles that support collaboration and team effectiveness	6 b) *Demonstrate collaboration and leadership skills including negotiation, communication, team-building, and conflict management* (15).
Changes to competency statement	Leveling: Form "apply" to "demonstrate" Complementary information: "collaboration and leadership skills including negotiation, communication, team-building, and conflict management"					
6 c) Apply relationship-building values and principles of team dynamics to perform effectively in different team roles (15).	4 (67%)	1 (17%)	0	0	Apply relationship-building practices to perform effectively in different team roles	6 c) Apply relationship-building practices to perform effectively in different team roles (15)
Changes to competency statement	Rewording: From "values and principles…" to "practices to perform"					
6 d) Exhibit interprofessional values and communication skills that demonstrate respect for, and awareness of, the unique cultures, values, roles/responsibilities, and expertise represented by other professionals and groups that work in global health (15).	6 (100%)	0	0	0		6 d) Exhibit interprofessional values and communication skills that demonstrate respect for, and awareness of, the unique cultures, values, roles/responsibilities, and expertise represented by other professionals and groups that work in global health (15).

Changes to competency statement	No Changes					
6 e) Recognize one's limitations in skills, knowledge, attitudes, and abilities (15).	5 (83%)	0	0	1 (17%)	not sure that this is a competency but of course is a positive attribute Recognize one's skills, knowledge, attitudes, and abilities, both strengths and areas for growth.	6 e) Recognize one's skills, knowledge, attitudes, and abilities, *both strengths and areas for growth* (15).
Changes to competency statement	Complementary information added: "both strengths and areas for growth"					
6 f) Engage self and others to constructively manage disagreements about values, roles, goals, and actions using respectful language appropriate for a given difficult situation, crucial conversation, or interprofessional conflict (15).	5 (83%)	0	0	0		6 f) Engage self and others to constructively manage disagreements about values, roles, goals, and actions using respectful language appropriate for a given difficult situation, crucial conversation, or interprofessional conflict (15).
Changes to competency statement	No changes					
If you think more competencies are needed in this domain, please enter those in box below						
					Describe steps in building equitable partnerships. * Discuss strategies for partnerships across multiple sectors. these are too weak on looking at breaking through hierarchical systems in which nursing is not recognized as an equal partner	No added competencies

Competencies under the domain of Communication. For the domain of Communication, two competencies remained the same, two were modified (rewording and complementary information added), and two were deleted (out of the global health context, and redundancy). See Table 23 for more detailed information.

Table 23
Findings Related to Competencies under the Domain of Communication

Original competency statements sent in Survey One Round Two	**Accept as is n (%)**	**Accept with changes – n (%)**	**Reject - n (%)**	**Alternative - n (%)**	**Comments**	**Final competency statements based on participants' comments to Survey One Round Two**
Domain 7. Communication						
7 a) Communicate effectively with patients and families, including using a translator when necessary (3).	4 (67%)	0	0	2 (33%)	Communicate effectively when confronted with language barriers, using effectively using translators as needed. [These competencies don't seem to only be about communication with patients or families that speak different languages]" who decides it is effective communication? The patient or population?	7 a) Communicate effectively *when confronted with language barriers* using translators when necessary (3)
Changes to competency statement	Complementary information added: "when confronted with language barriers"					
7 b) Participate in designing practical and culturally relevant communication programs for a variety of settings (9).	2 (33%)	2 (33%)	0	1 (17%)	I am not sure what you mean by communication programs Participate in designing practical and culturally relevant health information for a variety of settings with input from communities served	7 b) *With input from the community,* participate in designing practical and culturally relevant *health information* for a variety of settings (9).
Changes to competency statement	Complementary information added: "with input from the community" Rewording: from "communication programs" to "health information"					
7 c) Communicate with team members to clarify one's own role and responsibility and each member's role and responsibility on the team (15).	6 100%	0	0	0		7 c) Communicate with team members to clarify one's own role and responsibility and each member's role and responsibility on the team (15).
Changes to competency statement	No Changes					

7 d) Choose effective communication tools and techniques, including information systems and communication technologies, to facilitate discussions and interactions that enhance team function, avoiding discipline- or culturally specific terminology when appropriate (15).	6 100%	0	0	0		7 d) Choose effective communication tools and techniques, including information systems and communication technologies, to facilitate discussions and interactions that enhance team function, avoiding discipline- or culturally specific terminology when appropriate (15).
Changes to competency statement	No Changes					
7 e) Give timely, sensitive, instructive feedback to others about their performance on the team, responding respectfully as a team member to feedback from others (15).	4 (67%)	0	1 (17%)	0	Seems out of context and is focused on managing or leading. Not clear about how this is relevant. It's fine as it is if it's appropriate, but seems unrelated to other competencies.	
Changes to competency statement	Competency eliminated from list as it is out of global health context.					
7 f) Communicate effectively to promote global and planetary health.	2 (33%)	1 (17%)	1 (17%)	2 (33%)	not sure what this means Communicate to promote global health. Redundant; covered by previous items to whom? too vague	
Changes to competency statement	Competency eliminated from list. Redundant, already covered.					

Competencies under the domain of Leadership, Management, and Advocacy. The domain of Leadership, Management, and Advocacy yielded two changed competencies (rewording), two unchanged, and one deleted (it was advanced for the BSN level). See Table 24 for more information about the decision process to include or delete competencies under this domain.

Table 24

Findings Related to Competencies under the Domain of Leadership, Management, and Advocacy

Original competency statements sent in Survey One Round Two	Accept as is n (%)	Accept with changes – n (%)	Reject - n (%)	Alternative - n (%)	Comments	Final competency statements based on participants' comments to Survey One Round Two
Domain 8. Leadership, Management, and Advocacy						
8 a) Apply concepts of community development, policy, and advocacy to promote planetary health (9).	5 (83%)	1 (17%)	0	0	community engagement	8 a) Apply concepts of *community engagement*, development, policy, and advocacy to promote planetary health (9).
Changes to competency statement	Rewording: From "community development" to "community engagement"					
8 b) Advocate for the improved physical and mental health of vulnerable populations (5).	3 (50%)	2 (33%)	0	0	Advocate for improving the health of vulnerable populations. [health is mental and physical and social, etc]	8 b) Advocate for improving health of vulnerable populations (5).
Changes to competency statement	Rewording: Elimination of "physical and mental" from original statement.					
8 c) Participate in the development, implementation, and evaluation of strategies to address major health problems in varied settings, incorporating locally determined priorities and assessing their efficacy and cost-effectiveness (9).	6 (100%)	0	0	0		8 c) Participate in the development, implementation, and evaluation of strategies to address major health problems in varied settings, incorporating locally determined priorities and assessing their efficacy and cost-effectiveness (9).
Changes to competency statement	No Changes.					
8 d) Discuss priority setting, health care rationing, and healthcare funding for health and health-related research (3).	6 (100%)	0	0	0		8 d) Discuss priority setting, health care rationing, and healthcare funding for health and health-related research (3).
Changes to competency statement	No Changes.					
8 e) Analyze the role of policy development and enactment in addressing health inequities (10)	4 (67%)	0	1 (17%)	1 (17%)	Too advanced for BSN level too vague	
Changes to competency statement	Competency eliminated from list. Not for BSN level					

Competencies under the domain of* E*thical Issues, Equity, and Social Justice in Global Health. One competency was deleted (it was advanced for the BSN level) from the domain of Ethical Issues, Equity, and Social Justice in Global Health. Two competencies were unchanged and three were modified to reflect rewording and supplementary information participants added. See Table 25 for more detailed information about decisions made about competencies in this domain.

Table 25
Findings Related to Competencies under the Domain of Ethical Issues, Equity, and Social Justice in Global Health

Original competency statements sent in Survey One Round Two	**Accept as is n (%)**	**Accept with changes – n (%)**	**Reject - n (%)**	**Alternative - n (%)**	**Comments**	**Final competency statements based on participants' comments to Survey One Round Two**
Domain 9. Ethical Issues, Equity, and Social Justice in Global Health						
9 a) Examine the relationship between health, human rights and global inequities (2).	6 100%	0	0	0		9 a) Examine the relationship between health, human rights and global inequities (2).
Changes to competency statement	No Changes.					
9 b) Describe the role of organizations and agreements that address human rights in health care and health research (3).	6 100%	0	0	0	comment - not sure how to change this, but it's confusing to combine the role of organizations and agreements. Would it instead say organizations and governing bodies?	9 b) Describe the role of organizations and *governing bodies* that address human rights in health care and health research (3).
Changes to competency statement	Rewording: from "agreements" to governing bodies"					
9 c) Describe the role of WHO in linking health and human rights, the Universal Declaration of Human Rights, International Ethical Guidelines for Biomedical Research Involving Human Subjects (2002), Declaration of Helsinki (2008) (3).	4 (67%)	1 (17%)	0	0	change ROLE to CHALLENGES	9 c) Describe the role *and challenges* of the World Organization (WHO) in linking health and human rights, the Universal Declaration of Human Rights, International Ethical Guidelines for Biomedical Research Involving Human Subjects (2002), Declaration of Helsinki (2008) (3).

Changes to competency statement	Supplementary information added: "and challenges"					
9 d) Apply social justice and human rights principles in addressing global health problems (2).	5 (83%)	1 (17%)	0	0	learn how to apply....	9 d) Apply social justice and human rights principles in addressing global health problems (2).
Changes to competency statement	No Changes					
9 e) Demonstrate a commitment to social responsibility (2).	3 (50%)	1 (17%)	0	2 (33%)	how would you measure this? to ... social justice and social responsibility what does this mean? How would it be measured?	9 e) Demonstrate a commitment to *social justice* and social responsibility (2).
Changes to competency statement	Supplementary information added: "social justice"					
9 f) Analyze the implications of historic global interrelationships between colonization and health equity (10).	4 (67%)	1 (17%)	1 (17%)	0	between colonization and political movements and the impact on health equity. Rationale: Colonization is not the only form of governmental political acquisition and development. Too advanced for BSN level	
Changes to competency statement	Competency eliminated from list. Not for BSN level					

Data Integration

Of the 52 competencies identified in Round One, a total of 44 competencies remained (some unchanged and some modified) following survey one of Round Two. The feedback and comments from participants in this phase of the study were used to revise the domain definitions and competency statements obtained in Round One. This feedback was used to inform the development of the second survey sent to Round Two participants (see Appendix E). Additionally, only domains and competencies that remained in this phase of the study were sent to participants in survey two.

Results Survey Two (QUAN)

The researcher asked participants in this phase to rate their level of agreement with the domain definitions and competencies obtained in survey one (Round Two) using a five-point Likert-style questionnaire (1= strongly disagree; 2= disagree; 3= neither agree nor disagree; 4= agree; 5= strongly agree).

Results related to rating domains. As seen in Table 26, all domains were considered as essential to BSN education in the U.S. Domains that were rated as "agree" or "strongly agree" by at least 70% of the respondents were retained on the list that was used in the Round Three survey. The percentage of agreement was above 80% for all the domains. All domains were retained for Round Three.

Table 26
Round Two Survey Two – Rating of Global Health Domains

Domains	NA nor D n (%)	A n (%)	SA n (%)	A or SA level of agreement (%)
1. Global Burden of Disease		2 (40)	3 (60)	100
2. Health Implications of Pandemics, Displacement, Wars, Disasters, and Travel		3 (60)	2 (40)	100
3. Social and Environmental Determinants of Planetary Health		2 (40)	3 (60)	100
4. Global Nursing and Health Care		2 (40)	3 (60)	100
5. Culturally Competent, Humanistic, and Holistic Care		2 (40)	3 (60)	100
6. Collaboration and Partnerships		4 (80)	1 (20)	100
7. Communication	1 (20)	1 (20)	3 (60)	80
8. Leadership, Management, and Advocacy			5 (100)	100
9. Ethical Issues, Equity, and Social Justice in Global Health		1 (20)	4 (80)	100

NA nor D: Neither agree nor disagree; A: Agree; SA: Strongly Agree

Results related to competency ratings. Forty of the competency statements were rated as "agree" or "strongly agree" by at least 70% of the five participants and were retained for Round Three. However, four competency statements did not reach this criterion and were eliminated. The competencies eliminated were: (a) Analyze general trends and influences in the global availability and movement of health care workers (Domain 4), (b) Describe differences and similarities in national and global health care worker availability and shortages (Domain 4), (c) Describe the patterns and impact of

health care worker migration on health care in the country that the health care worker leaves and the country to which he or she migrates (Domain 4), and (d) discuss the concept of cultural humility (Domain 5). Table 27 provides more detailed information about the ratings of each of the competencies.

Table 27

Round Two Survey Two -- Rating of Competencies

Domains and Competencies	A or SA response agreement (%)
1. Global Burden of Disease	
a. Describe the major causes of morbidity, disability, and mortality around the world and how the risk of disease varies with regions (3).	100
b. Describe major public health efforts to reduce disparities in global health (such as Sustainable Development Goals and Global Fund to Fight AIDS, TB, and Malaria) (3).	100
2. Health Implications of Pandemics, Displacement, Wars, Disasters, and Travel	100
a. Explain the health risks for populations as a result of international travel	80
b. Analyze the effects of displacement and migration on individual and population health (5).	100
c. Describe basic principles of nursing roles in disasters including helping communities to prepare for and respond to disasters (6).	100
3. Social and Environmental Determinants of Planetary Health	
a. Explain how social and economic conditions such as poverty, race, education, and lifestyles affect access to health care (3).	100
b. List major socio-economic and cultural determinants of health and their impact on differences in life expectancy between and within countries (3).	100
c. Describe the impact of environmental factors such as clean water, sanitation, food, and air quality on individual and population health (3).	100
d. Describe the relationship between environmental degradation and human health (3).	80
4. Global Nursing and Health Care	
a. Analyze how global trends in health care practice, commerce, multinational agreements, and multinational organizations contribute to the quality and availability of health and health care locally and globally (3).	80
b. Describe different national models or health systems for provision of health care and their respective effects on health outcomes, and health care expenditure (3).	100
c. Analyze general trends and influences in the global availability and movement of health care workers (3).	**60**
d. Describe differences and similarities in national and global health care worker availability and shortages (3).	**60**
e. Describe the patterns and impact of health care worker migration on health care in the country that the health care worker leaves and the country to which he or she migrates (3).	**60**
f. Identify the economic, social, political, professional, workplace, and academic conditions that can produce a strong health workforce (9).	100
g. Identify barriers to health care access locally and globally (3).	100
h. Carry out interventions and integrated strategies that have been demonstrated to be sustainable and to substantially improve individual and/or community health (e.g., immunizations, essential drugs, maternal child health programs) (3).	100

i.	Display integrity, regard, and respect for others in all aspects of global nursing practice (2).	100
j.	Adapt clinical or discipline-specific skills and practice in varied settings (3).	80
k.	Discuss roles and contributions of nurses to health care in different global regions (10).	80
5.	**Culturally Competent, Humanistic, and Holistic Care**	
a)	Provide culturally competent, humanistic, and holistic care and support for clients from diverse population groups (5).	100
b)	Explain how cultural context influences perceptions of health and disease (3).	100
c)	Elicit individual health concerns in a culturally sensitive manner (3).	80
d)	Act respectfully according to what is appropriate in the culture and the situation (14).	80
e)	Discuss the concept of cultural humility.	**60**
6.	**Collaboration and Partnerships**	
a.	Describe roles of key members of health care teams (15).	100
b.	Demonstrate collaboration and leadership skills including negotiation, communication, team-building, and conflict management (15).	100
c.	Apply relationship-building practices to perform effectively as a member of an interprofessional team (15).	100
d.	Exhibit interprofessional values and communication skills that demonstrate respect for, and awareness of, the unique cultures, values, roles/responsibilities, and expertise represented by other professionals and groups that work in global health (15).	100
e.	Recognize one's skills, knowledge, attitudes, and abilities, both strengths and areas for growth (15).	100
f.	Engage self and others to constructively manage disagreements about values, roles, goals, and actions using respectful language appropriate for a given difficult situation, crucial conversation, or interprofessional conflict (15).	100
7.	**Communication**	
a.	Communicate effectively when confronted with language barriers using translators when necessary (3).	100
b.	With input from the community, participate in designing practical and culturally relevant health information for a variety of settings (9).	100
c.	Communicate with team members to clarify one's own role and responsibility and each member's role and responsibility on the team (15).	100
d.	Choose effective communication tools and techniques, including information systems and communication technologies, to facilitate discussions and interactions that enhance team function, avoiding discipline or culturally specific terminology when appropriate (15).	100
8.	**Leadership, Management, and Advocacy**	
a.	Apply concepts of community engagement, development, policy, and advocacy to promote planetary health (9).	100
b.	Advocate for improving the health of vulnerable populations (5).	100
c.	Participate in the development, implementation, and evaluation of strategies to address major health problems in varied settings, incorporating locally determined priorities and assessing their efficacy and cost-effectiveness (9).	100
d.	Discuss priority setting, health care rationing, and healthcare funding for health and health-related research (3).	80
9.	**Ethical Issues, Equity, and Social Justice in Global Health**	

a.	Examine the relationship between health, human rights and global inequities (2).	80
b.	Describe the role of organizations and governing bodies that address human rights in health care and health research (3).	80
c.	Describe the role and challenges of the World Health Organization (WHO) in linking health and human rights, the Universal Declaration of Human Rights, International Ethical Guidelines for Biomedical Research Involving Human Subjects (2002), Declaration of Helsinki (2008) (3).	100
d.	Apply social justice and human rights principles in addressing global health problems (2).	100
e.	Demonstrate a commitment to social justice and social responsibility (2).	80

Results related to survey construction. The third section of the second Round Two, Phase 2 survey focused on questions about construction and readability of the survey. On average, it took participants 17 minutes to complete the survey, and all participants agreed this was a reasonable amount of time. In addition, none of the participants expressed difficulty logging onto or using the survey. In terms of general appearance of the survey, four participants suggested that it was clear and well designed. One participants commented that it would have been helpful to have all domains and competencies in a table so that each item/question could be completed while looking at the whole picture. However, this modification was not feasible because of the length of competency list. No changes were made to survey design and construction for Phase Three based on Round Two participants' comments.

Data Integration

In this round, 40 competencies were selected to remain in the study. Based on this information, the survey sent in Round Three was developed. Participants in Round Three were asked whether or not these 40 competencies were essential for BSN students in the U.S.

Delphi Round Three, Phase 3, (QUAN)

Delphi Round Three addressed the third research question of the study:

What global health competencies for baccalaureate nursing students in the U.S. reach consensus as essential by a sample of nurses with expertise in global health and baccalaureate nursing education in the U.S.?

Participant Demographic Information

Although 57 individuals replied to the email invitation expressing interest in participating in the study, only 41 (71.9%) completed the survey. One participant was male and the other 40 were female. All of them were older than 36 years. All participants met the study's inclusion criteria. Thirty-six participants worked as faculty members (e.g., lecturers, professors, deans) in academic institutions, and five participants held other positions (retired, doctoral student, consultant, etc.). Participants were asked to consider the GAPFON definition of global health (Wilson et al., 2016) when responding to questions about their experience in global health (similar to Round Two). Participants' experience in global health ranged from 1 to more than 21 years and from 3 to more than 21 years with BSN education. Based on the definitions of global health proposed by GAPFON (Wilson et al., 2016), all 41 participants indicated that they had expertise in global health education and practice, and five had experience in global health research.

Table 28
Demographic Characteristics of Round Three Respondents

	Frequency	Percentage
Age range		
25 - 35 years	0	0
36 - 45 years	6	14.63
46 - 55 years	6	14.63
56 - 65 years	14	34.15
Older than 65 years	15	36.59
Total	41	
Years of experience in BSN education		
3 - 5 years	6	15
6 - 10 years	10	25
11 - 15 years	4	10
16 - 20 years	10	25
More than 21 years	10	25
Skipped	1	
Total	41	

Areas of expertise in global health		
Research	30	73.2*
Education	41	100*
Practice	31	75.6*
Years of experience in global health		
1 - 5 years	6	14.6
6 - 10 years	15	36.6
11 - 15 years	6	14.6
16 - 20 years	4	9.8
More than 21 years	10	24.4
Total	41	

* Percentages in table sum to more than 100 because participants may have experience in multiple areas of global health.

Results Related to Rating the Competencies

In Round Three survey, participants were asked to rate the extent to which they thought each of the 40 competencies identified in Round Two was essential for baccalaureate students in the U.S., using a 5-point Likert scale (1=strongly agree; 2= agree; 3= neither agree nor disagree; 4= agree; 5= strongly agree). All competency statements reached consensus as defined by a level of agreement at or above 70%. Information about consensus and weighted average in Round Three for all competencies is presented in Table 29. The list of domains and competencies in Table 29 represent the final list in this study. Appendix H includes a more detailed analysis of data related to the competencies in this phase.

Table 29

Percentage of Agreement and Weighted Average Scores on Global Health Competencies -- Delphi Round Three (Phase Three)

Domains and Competencies	**Percentage Agreement %**	**Weighted Average**
1. ***Global Burden of Disease***		
1a. Describe the major causes of morbidity, disability, and mortality around the world and how the risk of disease varies with regions (3).	95.1	4.60
1b. Describe major public health efforts to reduce disparities in global health (such as Sustainable Development Goals and Global Fund to Fight AIDS, TB, and Malaria) (3).	95.1	4.48
2. ***Health Implications of Pandemics, Displacement, Wars, Disasters, and Travel***		
2a. Explain the health risks for populations as a result of international travel (3).	80.5	4
2b. Analyze the effects of displacement and migration on individual and population health (5).	95.1	4.41
2c. Describe basic principles of nursing roles in disasters including helping communities to prepare for and respond to disasters (6).	90.3	4.39
3**.** ***Social and Environmental Determinants of Planetary Health***		
3a. Explain how social and economic conditions such as poverty, race, education, and lifestyles affect access to health care (3).	97.6	4.68
3b. List major socio-economic and cultural determinants of health and their impact on differences in life expectancy between and within countries (3).	95	4.57
3c. Describe the impact of environmental factors such as clean water, sanitation, food, and air quality on individual and population health (3).	97.6	4.78
3d. Describe the relationship between environmental degradation and human health (3).	97.6	4.53
4. ***Global Nursing and Health Care***		
4a. Analyze how global trends in health care practice, commerce, multinational agreements, and multinational organizations contribute to the quality and availability of health and health care locally and globally (3).	75.6	4
4b. Describe different national models or health systems for provision of health care and their respective effects on health outcomes, and health care expenditure (3).	82.9	4.09
4c. Identify the economic, social, political, professional, workplace, and academic conditions that can produce a strong health workforce (9).	85.4	4.07
4d. Identify barriers to health care access locally and globally (3).	94.87	4.61
4e. Carry out interventions and integrated strategies that have been demonstrated to be sustainable and to substantially improve individual and/or community health (e.g., immunizations, essential drugs, maternal child health programs) (3).	85	4.22
4f. Display integrity, regard, and respect for others in all aspects of global nursing practice (2).	97.6	4.70

4g. Adapt clinical or discipline-specific skills and practice in varied settings (3).	80.5	4.17
4h. Discuss roles and contributions of nurses to health care in different global regions (10).	83	4.29
5. ***Culturally Competent, Humanistic, and Holistic Care***		
5a. Provide culturally competent, humanistic, and holistic care and support for clients from diverse population groups (5).	95	4.63
5b. Explain how cultural context influences perceptions of health and disease (3).	95	4.56
5c. Elicit individual health concerns in a culturally sensitive manner (3).	95	4.60
5d. Act respectfully according to what is appropriate in the culture and the situation (14).	95	4.72
6. ***Collaboration and Partnerships***		
6a. Describe roles of key members of health care teams (15).	87.5	4.25
6b. Demonstrate collaboration and leadership skills including negotiation, communication, team-building, and conflict management (15).	85.3	4.21
6c. Apply relationship-building practices to perform effectively as a member of an interprofessional team (15).	87.5	4.37
6d. Exhibit interprofessional values and communication skills that demonstrate respect for, and awareness of, the unique cultures, values, roles/responsibilities, and expertise represented by other professionals and groups that work in global health (15).	90.2	4.48
6e. Recognize one's skills, knowledge, attitudes, and abilities, both strengths and areas for growth (15).	87.8	4.48
6f. Engage self and others to constructively manage disagreements about values, roles, goals, and actions using respectful language appropriate for a given difficult situation, crucial conversation, or interprofessional conflict (15).	87.5	4.40
7. ***Communication***		
7a. Communicate effectively when confronted with language barriers using translators when necessary (3).	95.1	4.60
7b. With input from the community, participate in designing practical and culturally relevant health information for a variety of settings (9).	90.2	4.43
7c. Communicate with team members to clarify one's own role and responsibility and each member's role and responsibility on the team (15).	87.8	4.51
7d. Choose effective communication tools and techniques, including information systems and communication technologies, to facilitate discussions and interactions that enhance team function, avoiding discipline or culturally specific terminology when appropriate (15).	85.3	4.39
8. ***Leadership, Management, and Advocacy***		
8a. Apply concepts of community engagement, development, policy, and advocacy to promote planetary health (9).	82.9	4.14
8b. Advocate for improving the health of vulnerable populations (5).	95.1	4.7
8c. Participate in the development, implementation, and evaluation of strategies to address major health problems in varied settings, incorporating locally determined priorities and assessing their efficacy and cost-effectiveness (9).	90.2	4.39

8d. Discuss priority setting, health care rationing, and healthcare funding for health and health-related research (3).	78	3.95
9. Ethical Issues, Equity, and Social Justice in Global Health		
9a. Examine the relationship between health, human rights and global inequities (2	87.8	4.53
9b. Describe the role of organizations and governing bodies that address human rights in health care and health research (3).	82.9	4.14
9c. Describe the role and challenges of the World Health Organization (WHO) in linking health and human rights, the Universal Declaration of Human Rights, International Ethical Guidelines for Biomedical Research Involving Human Subjects (2002), Declaration of Helsinki (2008) (3).	80.5	4.21
9d. Apply social justice and human rights principles in addressing global health problems (2).	95.1	4.58
9e. Demonstrate a commitment to social justice and social responsibility (2).	85.4	4.34

Summary

This chapter discussed the findings from three Delphi rounds integrated with a multi-phase mixed methods design, which was used in this study to identify essential global health competencies for BSN students in the U.S. In Round One, the researcher identified nine global health domains and 52 competencies to be presented to expert participants for content validation. In Round Two, six participants selected 40 competencies to be further validated in Round Three. Forty-one participants in Round Three arrived at consensus that all 40 competencies identified in Round Two were essential BSN students in the U.S. Table 29 is representative of the nine domains and 40 competencies retained from the Delphi rounds. In regards to intersection, results from Round One informed the development of Round Two survey. The development of survey two, Round Two, was based on results of Round Two survey one. Results of Round Two, survey two, were used to develop the survey deployed in Round Three. In summary, nine domains and 40 competencies were identified as essential for baccalaureate nursing students in the U.S. Discussion of findings and of the final domains and competencies will be addressed in Chapter 5.

CHAPTER 5

DISCUSSION

A three-round modified Delphi study intersected with a mixed methods design approach was conducted to reach consensus on essential global health competencies for BSN students in the U.S. This chapter contains a discussion of the findings related to the aims of the study and the Nursing Global Health Competency Framework (NGHCF). In addition, this chapter includes a discussion of study strengths and limitations, and implications for education, research, and practice.

Discussion of Findings

This section provides a discussion of findings related to the three study aims that were addressed by the three Delphi rounds of the study.

Delphi Round One, Phase 1 (QUAL)

Delphi Round One, Phase 1, addressed aim one of the study:

Revise the original list of global health competencies for baccalaureate nursing students based on: (a) qualitative responses to the surveys conducted by Wilson et al. (2012), Ventura et al. (2014), and Warren et al. (2016) reported in Wilson, Moran et al., (2016); (b) a pilot study performed by this author; (c) a review of literature; and (d) the Nursing Global Health Competencies Framework (NGHCF) developed by this researcher. In this qualitative phase, nine global health domains and 52 competencies were identified.

Results from Wilson, Moran et al. (2016) and a pilot study conducted by this researcher (Torres. 2015), supported the need of adding additional domains and competencies. In addition, domains identified in these two study reports were included in the present study. In addition to a scoping review of the literature, the development of the 52 competencies and definitions of the nine domains was informed by the use of professional judgement and the use of the NGHCF framework to ensure that the domains and competencies were at the BSN level.

In order to do a content validation of the domains, domain definitions, and competency statements, Round Two was designed. In Round Two, nursing leaders in global health and BSN education provided feedback about the domains and competencies identified in Round One.

Delphi Round Two, Phase 2 (QUAL & quan)

This phase consisted of two surveys sent to six nursing experts in global health and BSN education in order to address aim two of the study:

Seek content validation of the revised list of global health competencies by a group of six nurses with expertise in global health and baccalaureate nursing education.

The rationale for methods used for each round was well grounded in previous studies. Expert opinion used for competency development has long been substantiated in the literature. Expert opinion is an accepted means of determining the validity in terms of credibility of findings and has been widely used in the literature describing competency development studies (Benzian et al., 2015; Rayess et al., 2017; Redwood-Campbell et al., 2011; Rowthorn & Olsen, 2014; Torres, 2015). In addition, because this area of research was specifically focused on baccalaureate nursing and global health, it was important to

have individuals with expertise in both global health and baccalaureate nursing education participating in the study. To complement the qualitative analysis of the competencies in line with the NGHCF model, experts in nursing were the best source of study participants for validation of the competencies. Educational experts were ideally prepared to assess the novice level of proficiency of baccalaureate nursing students. Analysis of the 'expert' status of participants was variable across studies, however self-report of expertise is common in Delphi studies and was used in this study (Dawe et al., 2017; Nicolle, & Allison, 2017; Rayess et al., 2017).

Survey one (QUAL+quan). In the first survey, participants were asked to select one of the following four options in regards to the domain definitions identified in Round One: accept definition as written, accept with changes, reject, or consider an alternative (*quan* portion of the survey). If the participant selected the option to accept with changes or consider an alternative, he/she had the opportunity to comment or provide feedback using a text box (QUAL portion of the survey). The same process was followed for all the 52 competency statements identified in Round One.

Domain definitions. All nine domain definitions were modified based on participants' responses in this phase. These modifications were related to including complementary or supplementary information or rewording the domain. It is important to note that none of the domain definitions were rejected or required major changes. For most of the domains, participants selected the options of "accept the domain definition as written" or "accept it with changes".

Competency statements. Seventeen of the 52 competencies sent in the survey to be did not require any changes, nine were eliminated, and one was added. The

competency that was added was *Discuss the concept of cultural humility*. Competencies 2c, 2d, 3c, and 7f were eliminated because they were similar to other competencies in the list. Four other competencies were eliminated in this phase because they were rated as not at the BSN level: *analyze how travel and trade contribute to the spread of communicable and chronic disease; Analyze the role of policy development and enactment in addressing health inequities*; *Adapt clinical skills and practice in a variety of settings*; and *Analyze the implications of historic global interrelationships between colonization and health equity*.

***Integration of qualitative and quantitative findings*.** All of the competency domains were accepted as written or accepted with changes, and no domains were rejected. In addition, most of the competencies were accepted as written or with changes as well. This may indicate that the domains and competencies identified in Round One were found suitable for BSN education by the group of experts who completed the survey. Participants who selected accept a competency or domain definition with changes provided feedback to those. Revisions of domain definitions and competency statements proposed by participants were considered and informed the revised draft of competencies that was sent in Round Two survey two.

Round Two survey one was essential in the entire study because nursing leaders in global health and BSN education provided specific comments to each of the domain definitions and competency statements which helped develop the survey. In this round, the quantitative portion of the survey was important because it indicated which competencies or domains should be retained or changed.

Survey two (QUAN). The domains and competency statements obtained in the first Round Two survey were used to create survey two in Round Two. Participants were asked to rate their level of agreement with the nine domain definitions and 44 competencies that were obtained in survey one. Definitions or competencies that did not reach the 70% level of agreement were eliminated in this phase.

QUAN findings. Eight domains achieved 100% level of agreement and one reached 80% (Communication). In this phase, 40 competencies remained in the study and four were eliminated: *Analyze general trends and influences in the global availability and movement of health care workers*; *Describe differences and similarities in national and global health care worker availability and shortages; Describe the patterns and impact of health care worker migration on health care in the country that the health care worker leaves and the country to which he or she migrates; and Discuss the concept of cultural humility.* The first three competencies that were eliminated were described in two of the studies reviewed (Arthur et al., 2011; Wilson et al., 2012). The competency *Analyze general trends and influences in the global availability and movement of health care workers* was addressed in Jogerst et al. (2015). Walpole et al. (2016) addressed the concept of migration of workers; perhaps participants suggested eliminating these competencies because they were not at the undergraduate level as Arthur et al. (2011) and Walpole et al. (2016) focused the development of their competencies for medical education. Unexpectedly, the competency o*f Discuss the concept of cultural humility* did not reach the level of consensus threshold. Researchers in five studies (Dawe et al., 2017; Hyter et al., 2017; Pfeiffer et al., 2013; Rayess et al., 2017; Wilson, Moran et al., 2016) included the concept of humility or cultural humility as part of the competencies

recommended in these studies. Authors (Kools, Chimwaza, & Macha, 2014; Hadler & Rosa, 2018) supported the inclusion of this concept in global health as a concept underlying the ethical principle of equality and extends the idea of cultural competence. The term cultural humility may have been interpreted as a concept that was not unique from other cultural concepts and therefore did not need to be included.

Results from Round Two (Phase 2) extended the mixed methods results from Round One (Phase 1) as comments and feedback from participants in Round Two enriched the results obtained in Round One by ensuring that domains and competencies were leveled at the nursing baccalaureate level.

Delphi Round Three, Phase 3 (QUAN)

This phase of the study addressed study aim number three:

Reach consensus on essential global health competencies for baccalaureate nursing students in the U.S. from a sample of nurses with expertise in global health and baccalaureate nursing education in the U.S.

Findings. All 40 competencies in this final round reached consensus above 70%. Only one competency, *Analyze how global trends in health care practice, commerce, multinational agreements, and multinational organizations contribute to the quality and availability of health and health care locally and globally* had an agreement level of 75.6%, with all others at 78% or higher. The highest levels (95% and above) of agreement were in the domain of Social and Environmental Determinants of Planetary Health. The high degree of agreement suggests that the final competencies were supported by a consensus of experts.

It was not surprising that both competencies in the domain of Global Burden of Disease had a percentage of agreement of 95.1% as several authors addressing global health competencies in their reports mention this domain (Arthur et al., 2011; Battat et al., 2010; Clark et al., 2016; Jogerst et al., 2015; Hagopian et al., 2008; Houpt et al. 2007; Sawleshwarkar & Negin, 2017).

The second domain in this study, Health Implications of Pandemics, Displacement, Wars, Disasters, and Travel, was found (in part) in studies by Arthur et al. (2011); Battat et al. (2010); and Houpt et al. (2007); however, the current study expanded this domain by connecting the concepts of pandemics, wars, and disasters to this domain.

The domain of Social and Environmental Determinants of Planetary Health was referenced in five of the studies that identified global health competencies. Researchers in these studies specifically listed and discussed this domain with competencies related to social and economic conditions, socioeconomic and cultural determinants, environmental factors, and relationships environmental degradation and health (Wilson et al., 2012; Wilson et al., 2016; Jogerst, et al., 2015; Megan, Battat, & Brewer, 2011; Sawleshwarkar & Negrin, 2017). However, no study mentioned the concept of planetary health.

Although the domain of Global Nursing and Health Care has not been identified in any previous studies, the competencies identified under this domain are similar to competencies found in other studies. For example, this domain contains the competency of *Analyze how global trends in health care practice, commerce, multinational agreements and multinational organizations contribute to the quality and availability of health and health care locally and globally* which is very similar to the one identified in Arthur et al. (2011): *Understand how global trends in healthcare practice, commerce and*

culture contribute to health and the quality and availability of healthcare locally and internationally. In Jogerst et al. (2015), the competency of *Describe different national models or health systems for provision of health care and their respective effects on health and health care expenditure* is very similar to competency 4b in this study. The same applies to competency nine in the Hagopian et al. (2008) report and competency 4c in this study (*Identify the economic, social, political, professional, workplace, and academic conditions that can produce a strong health workforce*). Perhaps, after learners start applying this set of competencies, more competencies specific to global health nursing will be identified. Concepts related to cultural care, cultural competency, and cultural diversity were addressed in many studies (Clark et al., 2016; Rayess et al., 2017; Walpole et al., 2016; Williams et al., 2014). However, the concept of holistic care was only identified in this study.

The domain of Cultural Competent Humanistic and Holistic Care was included as domain in Clark et al. (2016) report. Clark et al. (2016) identified competencies under the cultural competence domain that were not comparable to the competencies under Culturally Competent Humanistic and Holistic Care domain in this study. Dawe et al. (2017) included cultural humility as a core content in their report identifying competencies in family medicine.

Numerous authors mentioned culture in other domains such is the case in Rayes et al. (2017) where culture is addressed under the domain of communication. Arthur et al. (2011) addressed cultural concepts under the domains of Healthcare in Low-Resource Settings domain and Health Implications of Travel, Migration and Displacement. Walpole et al (2016) included cultural components under the competency of Diversity,

Human Rights, and Ethics. Wilson et al. (2012) included cultural concepts under the domains of Health Implications of Migration, Travel, and Displacement and Health Care in Low-resource Settings. Jogerst et al. (2015) included cultural concepts under the domains of Social and Environmental Determinants of Health; Ethics; Sociocultural and Political Awareness, and Strategic Analysis. In addition, Hyter et al. (2017) included cultural concepts in their competency framework. Benzian et al. (2015) listed cultural and social competence and associated competencies in their report. It is important to note that terms of Humanistic and Holistic Care was only mentioned in Wilson, Moran et al. (2016) and in this study.

The terms Collaboration and Partnerships, addressed in domain six, were mentioned by many authors either within domain names or within competency statements as requisite to global health practice (Ablah et al., 2014; Clark et al., 2016; Hagopian et al., 2018; Hyter et al., 2017; Pfeiffer et al., 2013; Redwood-Campbell et al., 2011; Rayess et al., 2017; Sawleshwarkar & Negin, 2017).

Communication was another concept that was consistently reported in the competency development studies that were reviewed by the researcher. The competencies under this domain were very similar to all the studies reviewed. However, the concept of communicating in a different language or collaborating with interpreters was only addressed in a few of the reports (Arthur et al., 2011; Clark et al., 2016; Hyter et al., 2017). This indicates that communicating in a different language or collaborating with interpreters is critical in providing care in global health.

The concepts of Leadership, Management, and Advocacy included in domain eight were also found in different study reports. For example, leadership was addressed

as a domain by Rayess et al. (2017) and as part of competencies statements in study reports by Hagopian et al. (2008); Pfeiffer et al. (2013); Benzian et al. (2015); and Jogerst et al. (2015). However, this concept was not mentioned in other articles (Clark et al., 2016; Dawe et al., 2017; Walpole et al., 2016).

Ethical Issues, Equity, and Social Justice in Global Health as a domain was identified by five groups of authors who briefly presented competencies or categories for competencies related to ethics, equity, social justice, or human rights (Ablah et al., 2014; Dawe et al., 2017; Clark et al., 2016; Hyter, 2017; Rayess et al., 2017)Social Justice and ethics concepts were not addressed by Battat et al. (2010) and Pfeiffer et al. (2013).

The initial study by Wilson et al. (2012) was used to form the beginning of the current exploration by providing the list of six categories (similar to domains) and 30 competencies to be studied. Their survey was adapted for nurses based on the GHEC/AFNC (Global Health Education Consortium/Association of Medicine of Canada Resource Group) list of competencies in global health for medical students and the categories and competencies were incorporated so that there is a clear match between the present study and their initial work. The domain categories from Wilson et al. (2012) are evident in the results of this study with slight modifications except for the categories of Health Care in Low-Resource Settings and Globalization of Health and Health Care, which were not included as such in the present study. However, several of the competencies under the aforementioned domain categories were incorporated in some form under the final designated domains in this study. The domain category of Health as a Human Right and Development Resource was covered under the domains of Ethical Issues, Equality, and Social Justice in Global Health. The same was true for the domain

categories of Health Implications of Migration, Travel, and Displacement and Social and Environmental Determinants of Health, which were covered by the domains of Health Implications of Pandemics, Displacement, Wars, Disasters, and Travel and Social and Environmental Determinants of Planetary Heath, respectively. The final list of domains included additional concepts related primarily to leadership, collaboration, and advocacy that were not identified in the domain categories and competencies in Wilson et al. (2012). However, these concepts were all identified by qualitative comments made in the surveys reported by Wilson et al. (2012) that were further described in the publication analyzing these qualitative comments (Wilson et al., 2016). In fact, the recommendation was made by that group of researchers that further research be conducted to identify different competencies across various levels of nursing education using a Delphi method to find consensus of global health competencies.

The domains and competencies of this study also reflect the work done by Wilson, Moran et al. (2016), which built on the original work done by Wilson and colleagues and added additional competency categories. One of the additional competency categories was Culturally Competent, Humanistic, and Holistic Care, which was one of the domains included in this study. Another category that was addressed by Wilson, Moran et al. (2016) was Prevention, Health Promotion, and Primary Health Care which was directly reflected in this study's list under Global Nursing and Health Care and Leadership, Management, and Advocacy, although primary health care was not specifically identified as such. The category of Multidisciplinary Work-Teamwork from the Wilson, Moran et al. (2016) study was included in this research study as Collaboration and Partnerships. War, Disaster, Pandemics, Terrorism and Displacement

were addressed in the new study in domain number two Health Implications of Pandemics, Displacement, Wars, Disasters, and Travel. The category of Policy/Politics and Historical Context in Wilson and Moran's study (2016) was included in the revised list as a competency under the domain of Leadership, Management, and Advocacy; however, the Historical Context was not included, perhaps because this topic was not considered appropriate for the BSN level.

Findings as Related to the Nursing Global Health Competency Framework

Although models of global health have been described in the literature (Bozorgmehr, Saint, & Tinnemann, 2011; Leffers & Mitchell, 2011), they were not focused in nursing global health competencies. In the absence of a specific framework focused on nursing global health competencies, this researcher examined the literature to inform the development of a conceptual model to guide this research. The Nursing Global Health Competencies Framework (NGHCF) was created to guide the identification of the domains and competencies for BSN nursing education in the U.S. This framework consisted of five dimensions occurring concomitantly:

- Nursing core values and principles: social justice and equity, holistic care, advocacy, health as human right, sustainability, and collaboration.
- Environmental focus: personal, local, national, and global foci.
- Care focus: primary, secondary, and tertiary levels of prevention.
- Education focus: societal needs and context.
- Domains and competencies.

All competencies identified in the study were leveled for BSN nursing students (Benner's novice level) using Bloom's taxonomy of action verbs. Twenty-nine

competencies represented the cognitive dimension, eight reflected the skills dimension, and five denoted the attitude dimension. When appraising how the conceptual framework fit with the study findings, the researcher critically reviewed the NGHCF framework created for this study and slightly modified the design. Although the framework did not need to be updated theoretically, it seemed more appropriate to make minor revisions in the graphic image to better represent the concepts and their relationship. The new model puts the nursing value dimension closer to the center and more accurately reflects the connection between the nursing values and the domains. The Nursing Global Health Competencies Framework 2.0 (NGHCF 2.0) represents the updated framework (see Figure 6). When trying to identify which competencies fit within the model, this researcher identified that the only dimension in which that the competencies corresponded was the nursing core values and principles. The other dimensions (*environmental focus*, *care focus*, and *education focus*) seemed more appropriate as assumptions of the conceptual framework. The modified framework now contains one dimension, *nursing core value and principles,* which has seven subcategories: social justice and equity, holistic care, advocacy, health as human right, sustainability, advocacy, and collaboration. The global health domains and competencies identified in the study are located within the *nursing core value and principles* dimension. In addition, this framework contains four assumptions:

- Environmental Focus: includes personal and local, national, and global levels.
- Care Focus: includes primary, secondary, and tertiary levels of prevention.
- Education Focus: includes societal needs and context.

- Competency Leveling: Benner's (1982) five levels of competency: novice, advanced beginner, competent, proficient, and expert was useful to realize that the domains and competencies being identified are for the novice level (BSN nursing students). See Figure 6 for a representation of the updated model.

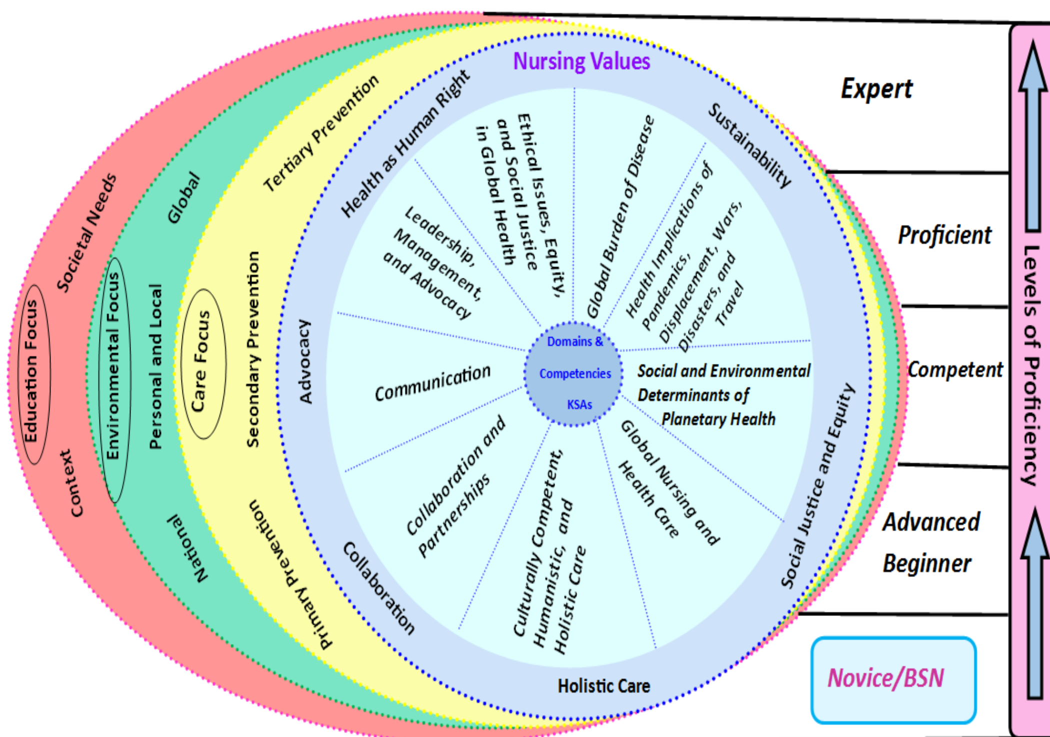

Figure 6. Updated Nursing Global Health Competencies Framework (NGHCF) 2.0.

Table 30 summarizes the correlation between the domains identified in this study and the *nursing core values* in the NGHCF framework.

Inclusion of the nursing core values in the framework ties nursing to the concepts in the framework by representing nursing values as the center of the model as key concepts guiding global health nursing. The concept analysis by Grootjans and Newman (2012) and Merry (2012) influenced the development of this study's NGHCF model by their concept analysis and literature review, respectively. Both authors described global health nursing as reflecting the values of social justice and equity, prevention,

sustainability, advocacy, holistic care, and sustainability. These values are echoed in numerous articles that discuss global health in nursing.

Table 30

Intersection of Domains and Nursing Core Values

Nursing Core Values	**Global Health Domains**
Social Justice and Equity	Ethical Issues, Equity, and Social Justice in Global Health Global Burden of Disease Global Nursing and Health Care Leadership, Management, and Advocacy
Holistic Care	Culturally Competent, Humanistic, and Holistic Care Social and Environmental Determinants of Planetary Health Communication Leadership, Management, and Advocacy
Advocacy	Communication Leadership, Management, and Advocacy
Health as Human Right	Ethical Issues, Equity, and Social Justice in Global Health
Sustainability	Social and Environmental Determinants of Planetary Health Health Implications of Pandemics, Displacement, Wars, Disasters, and Travel Global Nursing and Health Care
Collaboration	Collaboration and Partnerships Communication Leadership, Management, and Advocacy

The core value of *social justice and equity* is the one that is directly associated to the domain of Ethical Issues, Equity, and Social Justice in Global Health as all the five competencies in this domain address this core value. In addition, competencies 8a (*promotion of planetary health*) and 8b (*advocate for improving the health of vulnerable populations*) in the domain of Leadership, Management, and Advocacy fit into this core value as well. The core value of *holistic care* is addressed in domain five, Culturally

Competent, Humanistic, and Holistic Care. Competency 8a also fits into the model through the *holistic care* core value as it has to do with advocating for planetary health (health of ecosystems and animals included). The domain of Leadership, Management, and Advocacy fits into the *advocacy*'s core value, in particular, competencies 8a and 8b. The core value of *health as a human right* is detected in domain nine, Ethical Issues, Equity, and Social Justice in Global Health. The core value of *sustainability* is directly related to the domain three, Social and Environmental determinants of Planetary Health. In this domain, ecological sustainability (a concept addressed in *sustainability*) is evident. *Sustainability* of the profession, another concept addressed in this core value, can be seen in the Global Nursing and Health Care domain, specifically in competency 4c (*identify economic, social, political, professional, workplace, and academic conditions that can produce a strong health workforce*). Domain six, Communication and Partnerships, focuses on the core value of *collaboration*.

Discussion of Intersection of Methods

Intersection of mixed methods was crucial in the design and implementation of this study. For example, intersecting the mixed methods design with the Delphi Method provided for collection, analysis and interpretation of qualitative and quantitative data on a more comprehensive level then with the Delphi Method alone. An example of this can be seen when the researcher asked participants to provide specific comments and feedback to domain definitions and competency statements in Round Two (survey one), so that when the researcher competed the analysis and interpretation of that data, these data could be used to create the second survey sent to participants in Round Two, survey two (quantitative strand). Furthermore, both quantitative analysis and qualitative

interpretation of the data in Round Two, survey two, was needed to develop the survey sent to participants in Round Three. The collection, analysis, and interpretation of qualitative and quantitative data in the study allowed for discerning which competencies were essential for BSN education in the U.S. Fifty-two competencies identified in Round One were reduced to 44 in Round Two and further limited to 40 competencies in Round Three through the intersection of the qualitative and quantitative methods. Of the 40 competencies that reached consensus in Round Three, 24 had been modified during Round Two. The Delphi Method complemented the use of mixed methods design by allowing the researcher to elicit consensus on global health competencies from a group of experts.

In addition, the use of a multi-phase mixed methods design was advantageous, not only because it allowed for exploration of the subject of study at a comprehensive level, but also because it provided consistency and cohesiveness in establishing consensus, thereby adding to the study rigor and higher quality of the conclusions.

Study Significance

This study makes important contributions to the growing field of global health education, in particular, identifying discipline specific competencies for BSN nursing education in specific (Jogerst et al., 2015; Wilson et al., 2014). In addition, the identification of specific competencies for the BSN education in the had not been researched before as the study performed by Wilson and colleagues (Ventura et al., 2014; Warren et al., 2015; Wilson et al., 2012) focused on undergraduate nursing education in general and was conducted in different countries where undergraduate requirements may have been very dissimilar. This study can serve as a foundation for other professions to

identify competencies across disciplines. The conceptual framework created for this study and its subsequent modifications can help guide this type of global competency research in future studies about global health nursing or other heath disciplines. As competencies are further delineated and leveled in future studies, the framework can be modified for future research as well as curriculum development.

This study also addresses gaps identified in research methodologies in the majority of the global health competency studies that were reviewed by providing participants a definition of global health to make informed decisions when rating the domains and competencies. The study purposefully leveled the competencies for baccalaureate nursing education, and a novel framework was used to guide the research. A major strength of this study was the recruitment of participants who are experts in the specific field of global health as well as in BSN education and the Delphi approach used to reach consensus regarding essential competencies for students at the BSN level.

In addition, this study approached the intersection of mixed methods with a Delphi method from a methodological perspective, which reflects the most current thinking about mixed methods research (rationale for this intersection is found in Chapter 3). Furthermore, using this advanced application of mixed methods design can guide other scholars develop studies like this one and advance the field of mixed methods research (Plano Clark & Ivankova, 2016). Researchers pursing this type of study design should apply for grants in order to hire research assistants to help in the implementation of the research study as the entire enterprise is a great deal of work for just one person.

Although many of the domains and competencies identified in this study are very similar to those reported in the literature on global health competencies, several domains

and competencies were identified that had not been reported previously. For example, the domain of Global Nursing and Health Care is unique to the list of domains reviewed in the literature. By being specific to the nursing discipline, this domain can be further analyzed to determine if more competencies unique to nursing are needed or will be needed in the future. Another contribution is the incorporation of the term Planetary Health in the third domain of this study (Social and Environmental Determinants of Planetary Health) and the inclusion of the term holistic care in the domain of Cultural Competent Humanistic and Holistic Care. These findings clearly denote the nursing focus this study had from the beginning.

The 41 experts who participated in Round Three of the study reached consensus after only one survey. This consensus may have been reached because the domains and competencies integrated the most current and relevant literature, analysis of expert ratings, and expert comments. Students and faculty alike can use these competencies to prepare themselves for global health experiences and performance evaluation. Students and partners in host communities and countries can also use this list to evaluate the scope of practice in global health and the consequences of care initiatives. Lastly, these demonstrated competencies can be used to enrich the curriculum for BSN programs in the U.S. or may be used as a guideline in practice settings as well as a foundation for further research.

Study Limitations

As with all research, this study had several limitations. Selecting a group of experts is one of the key characteristics of the Delphi method. The researcher created an inclusion criteria questionnaire to recruit participants with expertise in global health and

BSN education, however, assessment of this “true expertise” could not be verified as the questionnaire was a self-assessment. Although participants in Round Two were recruited because they were identified as leaders in global nursing or global health experts based on their record of publication and their experience, the same cannot be said of participants in Round Three as it was not possible to verify the participants expertise in global health and BSN education except for the self-report. In addition, although it was a strength to have leaders in global nursing participate in Round Two, participants’ busy schedules created some delay in data collection. Another limitation was the use of two sets of participants over a 5 month period for Round Two.

Although the researcher put a great deal of effort into recruiting study participants, small sample sizes for Rounds Two and Three were two important limitations. However, there is no consensus about ideal sample sizes for Delphi studies (Akins et al., 2005). The researcher sent recruitment letters and survey links via email. Because the majority of emails were sent to participants’ work email, firewalls protecting participant email accounts may have blocked the communication sent by the researcher. In addition, multiple surveys are being constantly sent to nursing education experts creating survey burden and overload and limiting willingness to respond to email surveys.

Additional limitations have to do with bias. Polit and Beck (2012) defined bias as “any influence that distorts the results of a study and undermines validity” (p. 720). Recall bias is a type of bias when responders do not accurately remember events (Polit, 2017). Responders were asked to recall GAPFON’s definition of global health when completing the surveys in this study; however, they may not have recalled specifics of the

definition when answering questions, thereby creating some element of bias. Although this bias is expected to have created a minimal distortion of the data collected, the possibility does exist. Another type of bias that is important to mention is experimenter bias or researcher bias. This term indicates that the person conducting the study may be able to influence results either intentionally or unintentionally. In Round One the researcher was in charge of revising the list of competencies based on a literature review. As such, the results may have been inadvertently influenced. This may have also been the case when the researcher analyzed the qualitative data from survey one, Round Two. Study participants may have been less critical in their reviews in an attempt to be supportive of the efforts of this researcher as a graduate student.

In terms of transferability, these results are specific to the panel of experts selected to compete the surveys, therefore, one can only say that a group of 41 nurses with expertise in global health and baccalaureate nursing education arrived at a consensus in choosing 40 global health competencies as essential for BSN students in the United States.

Implications

Education

This study makes a major contribution to the discussion of competency-based education that strives for increasing accountability of the educational system to produce graduates ready to enter the global workforce. These competencies can provide a common language for higher education institutions, students, and industry and provide an understanding of what BSN nursing students should be able to achieve at the time of graduation. The identification of these competencies (competency framework) is one of the components of a competency based education model. The other component is

competency assessment (McClarty & Gaertner, 2015). For the newly created BSN global health competency framework to be complete, the competencies must be clearly defined; measurable; and related to knowledge, skills, or attitudes that students will need when working in their field (Johnston & Soares, 2014). Future endeavors need to be pointed toward development of performance based assessments of the competencies.

The findings from this study can provide guidance to baccalaureate nursing education programs in addressing the recommendations of *The Essentials of Baccalaureate Education for Professional Nursing Practice* (CCNE, 2013), referred to as the Essentials, that address the importance of incorporating global health in the curriculum (in particular Essentials VII, VIII, and IX). The present Essentials are grounded in the translation of current evidence that could be influenced by the findings in this study. Findings from this study can provide competency statements that can readily considered to guide the next revision of the Essentials to provide specific guidelines for curricula to prepare nurses for roles in global health. In Essential VII, concepts related to disasters, determinants of health, prevention, and collaboration are reflected under this study's domains Health Implications of Pandemics, Displacement, Wars, Disasters, and Travel and Collaboration and Partnerships. In Essential VIII, concepts related to professionalism, ethics, social justice, and professional values are directly referenced in this study under Ethical Issues, Equity, and Social Justice in Global Health. Concepts identified in Essential IX that encompass care of populations in a variety of settings, ethical values, communication, diversity, multicultural environments, and increasing globalization are reflected throughout this study's list of competencies with particular emphasis under the domain of Global Nursing and Health Care. The findings can also be

used to address recommendations of the Accreditation Commission for Education in Nursing (ACEN) Standard 4 (curriculum) that address cultural, ethnic, and socially diverse concepts, and experiences from a global perspective. Although these standards were revised as recently as 2017, there is a lack of specificity in concepts related to Global Health.

There are many ways in which nurse educators might integrate global health competencies into baccalaureate curricula. Dawson, Gakumo, Phillips, and Wilson (2016) described a process for mapping global health competencies within an existing curriculum. The competencies identified in this study might be used to guide such a mapping exercise. Faculty could use the results of the mapping to identify changes or additions that may be needed in the curriculum.

Wilson, Gakumo, and Dawson (2018) proposed a number of strategies that nursing faculty might use to integrate global health content in the curriculum. In addition to mapping the competencies, these authors suggested strategies such as offering separate global health courses, integrating global health content within existing courses, offering global service learning opportunities, developing global case studies and competitions, integrating global health into research projects, and using technology to facilitate global collaborations. The competencies identified in this study might be used to guide implementation of each of these strategies.

Instructional materials would be a tremendous asset for faculty and trainers who do not have expertise in the field, but would like to cover this content in courses or curricula. After global health competencies for interprofessional education were identified by Jogerst et al. (2015), members of the Consortium of Universities for Global

Health (CUGH, 2017) created a toolkit that provides curricular content and learning objectives to support these competencies. This toolkit includes reading materials, presentations, and study questions for each of the competencies the group identified. In addition, they recommended numerous types of teaching strategies such as lectures, guest lectures, team based learning, “flipped classroom”, case studies, and simulation. Simulation would be a very good teaching pedagogy to use when assessing student knowledge, skills, and *attitudes* in global health. In addition, it could be helpful for learners to do simulations as part of pre-departure training before they embark on global health experience locally, nationally, or globally. For example, Pitt, Gladding, and Butteris (2016) developed simulation scenarios for residents in pediatrics where emotions such as frustration, floundering, failure, and futility where elicited by the scenarios and consequently debriefed after the scenario was complete. The residents were very glad they were exposed to scenarios where they had to learn to problem solve, practice with limited resources, expand medical knowledge, and be exposed to cultural issues. Simulation scenarios can easily be developed for BSN education based on the study findings by Pitt et al. (2016).

The competencies derived in this dissertation should be investigated further in a compare and contrast format to the competencies in public health. Determination of the similarities in context and terminology could be a starting point to examine the exclusivity for each discipline. The theoretical framework (NGHCF) developed in this dissertation could also be compared to those used in public health education and practice to explore the concepts and relationships. Distinguishing between nursing and public health definitions of terms and concepts would be needed to describe the frame of

reference for each competency. Examination of the curriculum of courses in both nursing and public health could be examined relative to the domains and competencies from this study to determine opportunities for research, curriculum enrichment in global health, and future interdisciplinary educational endeavors.

Research

As noted previously, achieving consensus in this study does not mean that the "right" answer has been found. What it means is that this specific group of participants arrived at the consensus reported in Chapter 4 (Keeney et al., 2011). Further research efforts should focus on administering the survey to a larger panel of experts in order to validate the results of this study and establish transferability and generalizability. Because the purpose of the study was to revise the list of global health competencies for BSN students, additional research should aim at identifying competencies for master's and doctoral nursing students. In addition, the list of competencies obtained in this study could be used as a starting point to develop competencies for various levels of nursing education in different countries and also to develop competencies for other health professions. Furthermore, the list of global health competencies identified in this study should be validated and possibly revised at least every three to five years to ensure that they have remained relevant for this group of students.

Validation of the selected competencies from multiple perspectives other than that of this study's participants is needed. For example, it would be important to take into consideration the point of view of employers to determine which competencies they would agree are essential for new graduates. In addition, perspectives from nurses in different countries are needed in order to assess if these competencies fit within their

educational systems or if new competencies need to be created to satisfy local contexts and circumstances. Another perspective that should be assessed as well is that of the student. It would be interesting to discover the level of proficiency that students report under each competency.

Because nursing has a curriculum with extensive foundational content for professional practice, it will be important to determine which domains and associated competencies rank in order of priority. This will provide an opportunity for educational institutions and nursing faculty to introduce the subject of global health competencies by phases: competencies ranked higher would be taught first or given greater emphasis.

Practice

The identification of a set of global health competencies for BSN education is aligned with the Commission on Education of Health Professionals for the 21st century (the Commission) call for interprofessional competency based education which requires health care professionals to be prepared to address global challenges (Frenk et al., 2010). As part of this call, the Commission recommended the educational system be composed of three dimensions: institutional design, instructional design, and educational outcomes. The development of these global health competencies relates to the dimension of instructional design as this dimension deals with competency identification.

The competencies identified in this dissertation are intended to be applied and practiced at the local and global (*glocal*) level (John et al., 2017). Nurses need to be ready to face health challenges and opportunities brought by increasing interconnectedness, globalization, conflict, and climate change.

Conclusion

The intersection of a mixed methods design with a Delphi method was used to establish consensus on a revised list of global health competencies for baccalaureate nursing students in the U.S. The work of Wilson et al. (2012) laid the primary foundation for the development of the revised list of competencies, along with an extensive literature review. A model was developed to guide the study and was refined after completion of the analysis. Groups of experts in global health and BSN education validated the competencies obtained in each of the rounds. Finally, a group of nurses with expertise in global health and BSN education in the U.S. arrived at the consensus that 40 global health competencies, classified under nine domains, were essential for BSN students in the U.S. These domains and competencies provide a guide for undergraduate nursing curriculum development in global health and a framework for both clinical instructions and evaluation of global health student experiences. Findings from this study can provide guidance for nursing program accreditation standards and development of faculty expertise.

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APPENDIX A

LITERATURE REVIEW MATRICES

APPENDIX A-1

ABBREVIATED MATRIX OF INITIAL LITERATURE REVIEW

Author, Title, Journal	**Purpose or Aims**	**Study Design**	**Competency Domains**	**Sample Size and Characteristics; Recruitment Method**
Ablah, E., Biberman, D. A., Weist, E. M., Buekens, P., Bentley, M. E., Burke, D. . . . Spencer, H. C. (2014). Improving global health education: Development of a global health competency model. *American Journal of Tropical Medicine and Hygiene, 90*(3), 560-565.	Identify global health competencies for Master's in public health with a focus on global health	Modified Delphi	1. Capacity Strengthening 2. Collaborating and Partnering 3. Ethical Reasoning and Professional Practice 4. Health Equity and Social Justice 5. Program Management 6. Socio-cultural and Political Awareness 7. Strategic Analysis	Leadership group: 11 Core workgroups: around 10 Resource workgroup: around 10-20 The total number of participants was not reported in the article. Participants were practitioners and global health experts Recruitment method: ASPH newsletter and emails
Arthur, M., Battat, R., & Brewer, T. F. (2011). Teaching the basics: core competencies in global health. *Infectious Disease Clinics of North America, 25*(2), 347-358. doi:10.1016/j.idc.2011.02.013	Identify global health competencies for medical students in the U.S. and Canada	Modified Delphi Method	1. Global burden of disease 2.Health implications of travel, migration, and displacement 3. Social and economic determinants of health- 4. Population, resources and the environment 5. Globalization of health and health care 6. Healthcare in low-resource settings 7. Human rights in global health.	Not reported in article
Battat, R., Seidman, G., Chadi, N., Chanda, M. Y., Nehme, J., Hulme, J. . . . Brewer, T. F. (2010). Global health competencies and approaches in medical education: A literature review. *BMC Med Educ*, 10, 94. doi:10.1186/1472-6920-10-94	Identify global health competencies for medical students and identify educational approaches	Descriptive. Literature review	Competencies 1. Skills to better interface with different populations, cultures and healthcare systems 2. Understanding of immigrant health. 3. Primary care within diverse cultural settings. 4. Understand healthcare disparities between countries. 5. An understanding of the burden of global disease. 6. An understanding of travel medicine. 7. Develop a sense of social responsibility. 8. Appreciate contrasts in healthcare delivery systems and expectations. 9. Humanism. 10. Scientific and societal consequences of global change. 11. Evolving global governance issues. 12. Cost of global environmental change.	11 articles

			13. Taking adequate patient histories and physical examinations in resource poor settings. 14. Cost-consciousness; using physical diagnosis without high technologic support.	
Author, Title, Journal	**Purpose or Aims**	**Study Design**	**Competency Domains**	**Sample Size and Characteristics; Recruitment Method**
Benzian, H., Greenspan, J. S., Barrow, J., Hutter, J. W., Loomer, P. M., Stauf, N., & Perry, D. A. (2015). A competency matrix for global oral health. *Journal of Dental Education, 79*(4), 353-361.	"suggest preliminary recommendations for core competencies in education of health care professionals and specific groups of the public that are relevant to oral health in a global context" (p. 352) Targeted groups: Group 1. Dental students, residents/trainee specialists (or equivalent), and dentists. Group 2. Dental hygienists, dental therapists, and community health workers (or equivalent). Group 3. Health professionals such as physicians, physician assistants, nurses, nurse practitioners, and pharmacists. Group 4. Non-health professionals in the public arena such as parents, teachers, decision makers, key opinion leaders, and health and consumer advocates.	Descriptive: Recommendations from a group of experts	Knowledge: Oral diseases Risk factors and (social) determinants Skills and Abilities: Disease prevention and health promotion Disease management Advocacy Research, monitoring, and evaluation Supporting Competencies and Principles: Interprofessional/intersectoral approach Cultural and social competence Professional ethics	Experts in dental education, research, public health, and clinical practice (mostly from GOHIG-CUGH). Selection criteria: interest, relevant experience, and availability. Number of participants not mentioned in the article

Author, Title, Journal	**Purpose or Aims**	**Study Design**	**Competency Domains**	**Sample Size and Characteristics; Recruitment Method**
Hagopian, A., Spigner, C., Gorstein, J. L., Mercer, M. A., Pfeiffer, J., Frey, S. . . . Gloyd, S. (2008). Developing competencies for a graduate school curriculum in international health. *Public Health Reports, 123*(3), 408-414.	Development of international health competencies to guide curriculum development	Descriptive: Review of literature and websites, situational assessment, student and faculty survey, and consultation with experts	Competencies: 1. Identify, analyze, and challenge power structures that produce poverty, inequality, and disease. Describe the major underlying and proximate determinants of adverse health in developing countries. Apply community development skills, policy advocacy, and communication strategies to promote public health, while using human rights concepts and instruments to promote social justice. 2. Describe the burden of the most important health problems contributing to excess morbidity and mortality in developing countries, including their magnitude and distribution. Describe disparities in health status by gender, race, ethnicity, rural/urban status, and economic class. 3. Be able to assess the appropriateness of intervention strategies to address major health problems in low-resource settings, including locally determined priorities and their efficacy, cost-effectiveness, and feasibility in reaching all segments of the population. Evaluate and establish priorities to improve the health status of populations in low-resource settings, with recognition of the importance of integrated strategies. 4. Incorporate qualitative, quantitative, and operations research skills to design and apply reliable, valid, and ethically sound research to identify innovative solutions for international health problems. Demonstrate a mastery of epidemiologic and biostatistical approaches to public health issues. Read and analyze health literature critically. 5. Use collaborative and culturally relevant leadership skills to advocate for evidence-based policies and plans to solve health problems in international settings. 6. Analyze and explain the role of transnational networks and global institutions in the adoption and enforcement of international laws, conventions, agreements, and standards that affect health and safety. This should include the domains of trade, labor, food supply, the environment, pharmaceuticals, international aid, human rights, and conflict. 7. Design, manage, and evaluate programs in developing countries in close collaboration with local institutions to assure equitable access to quality health care. Use financial management techniques that promote program sustainability and cost-effectiveness of primary health-care systems. 8. Develop tailored messages, intervention methods, and delivery channels for prevention and sustainable behavior change programs. Design practical, culturally relevant, and communication programs for resource-constrained settings.	For survey phase: Survey of Students and Faculty (44 respondents - 37 students and 7 faculty members)

Author, Title, Journal	Purpose or Aims	Study Design	Competency Domains	Sample Size and Characteristics; Recruitment Method
			Consider structural interventions where community-level interventions are more appropriate than at the individual level. 9. Analyze and explain the economic, social, political, and academic conditions that can produce a strong health workforce. Address barriers to recruitment, training, and retention of competent human resources in developing countries	
Author, Title, Journal	**Purpose or Aims**	**Study Design**	**Competency Domains**	**Sample Size and Characteristics; Recruitment Method**
Houpt, E. R., Pearson, R. D., & Hall, T. L. (2007). Three domains of competency in global health education: Recommendations for all medical students. *Academic Medicine, 82*(3), 222-225. doi:10.1097/ACM.0b013e3180305c10	Determine what global health means and what medical students in the U.S. and Canada need to know about this field	Descriptive: Summary of recommendations from experts	1. Global Burden of disease 2. Traveler's Medicine 3. Immigrant Health	Authors only surveyed for competency domain 2: 132 members of the American Committee on Clinical Tropical Medicine and Travelers' Health were surveyed.
Howard, C. R., Gladding, S. P., Kiguli, S., Andrews, J. S., & John, C. C. (2011). Development of a competency-based curriculum in global child health. *Academic Medicine*, 86(4), 521-528.	To develop a competency based curriculum in global child health	Descriptive: Literature review and Recommendations from experts	1. Patient Care 2. Medical Knowledge 3. Practice based learning and improvement: 4. Interpersonal and communication skills: 5. Professionalism 6. Systems-based practice:	Researchers sought input from physicians who: (1) had experience caring for children in international settings (developing countries or caring for the immigrant population in the U.S.; (2) faculty with experience and knowledge in pediatric resident education, assessment methods, and evaluation of outcomes. Members from: Univ. of Minnesota GH pediatrics, pediatrics resident program, College of education, and pediatrics department at Makerere University in Uganda
Jogerst, K., Callender, B., Adams, V., Evert, J., Fields, E., Hall, T., . . . Wilson, L. L. (2015). Identifying interprofessional global health competencies for 21st-century health professionals. Annals of *Global Health, 81*(2),	Identification of interprofessional global health competencies.	Descriptive: Recommendation from experts based on a literature review	1. Global burden of disease 2. Globalization of health and health care 3. Social and environmental determinants of health 4. Capacity strengthening 5. Collaboration, partnering and communication 6. Ethics 7. Professional Practice 8. Health equity and social justice 9. Program management 10. Sociocultural and political awareness	Number of experts not mentioned in article. Number of articles and resources that guided these recommendations were not mentioned in article.

239-247. doi:10.1016/j.aogh.2015.03.006.			11. Strategic analysis	
Author, Title, Journal	**Purpose or Aims**	**Study Design**	**Competency Domains**	**Sample Size and Characteristics; Recruitment Method**
Kim, M. J., Woith, W., Otten, K., & McElmurry, B. J. (2006). Global nurse leaders: Lessons from the sages. *Advances in Nursing Science*, 29(1), 27-42.	" (a) identify major influencing factors that helped internationally known nurse leaders to become global leaders; (b) describe the educational and/or training experiences nurse leaders received for global nursing work; (c) compare the competencies for global executives and global nurse leaders; and (d) discuss strategies to develop global nurse leaders" (p.31)	Qualitative descriptive study	1. Open-minded and flexible 2. Cultural interest and sensitivity 3. Able to deal with complexity 4. Resilient, resourceful, optimistic, energetic 5. Honesty and integrity 6. Stable personal life and Family support from younger days that helped build self-confidence in later years 7. Value-added technical or business skills. Politically savvy The person understands political operations; is able to work in a politically charged environment/situation; can separate self from situation; knows the role they are playing and who they are representing; remains diplomatic but knows when to take a stand; is comfortable challenging others; and remains active in international nursing organizations Conviction and passion The person has a deep belief in the work that they are performing	Purposive sample. 24 nurse leaders from 10 countries. 17 individuals agreed to participate (71% response rate). Participants were known to have either foreign assignment experience or extensive leadership experience working in international settings. Recruited from WHO, ICN, International Network of Doctoral Education in Nursing, and Chief Nursing Office.
Pechak, C. M., & Black, J. D. (2015). Global health competencies for physiotherapist education in the United States. *Physiotherapy Research International*. doi:10.1002/pri.1645	Develop global health competencies physiotherapist education in the U.S.	Survey-Descriptive	Competencies reported were same as Wilson et al. (2012) except that all competencies were reported without any domains associated. In addition, four more competencies were added specifically for PT education.	188 participants completed parts or the entire survey. Recruitment: LISTSERVs Announcement on websites
Pfeiffer, J., Beschta, J., Hohl, S., Gloyd, S., Hagopian, A., & Wasserheit, J. (2013). Competency-based curricula to transform	"To define the education and training priorities for a new 21st-century, competency-based, global health	Qualitative descriptive	Knowledge: 1. Upstream socioeconomic and environmental determinants of health. 2. Systems Thinking Skills (Informed by knowledge areas above)	26 global health leaders (donors, academics, implementers)

global health: Redesign with the end in mind. *Academic Medicine, 88*(1), 131-136. doi:10.1097/ACM.0b013e318276bdf4	curriculum for the University of Washington's Department of Global Health (DGH)" p. 131		3. Analytic skills: Training in epidemiology and in monitoring and evaluation. 4. Management and leadership skills: Planning and human resource and financial management; teamwork, collaboration, and coalition building across organizations and sectors; leaders with a strategic vision to advance organizations, programs, and people with greater humility and wisdom; ability to work effectively across different cultural and organizational contexts. 5. Policy analysis and development skills: Able to translate research into policy and programs, develop policy-related skills such as stakeholder mapping, policy analysis, and advocacy, so as to catalyze change in health structures and related systems. "political savvy"	
Author, Title, Journal	**Purpose or Aims**	**Study Design**	**Competency Domains**	**Sample Size and Characteristics; Recruitment Method**
Redwood-Campbell, L., Pakes, B., Rouleau, K., MacDonald, C. J., Arya, N., Purkey, E. . . . Pottie, K. (2011). Developing a curriculum framework for global health in family medicine: Emerging principles, competencies, and educational approaches. *BMC Medical Education*, 11(1). doi:10.1186/1472-6920-11-46	Develop a global health education framework and identify competencies to guide curriculum	Descriptive: Literature review and recommendation from experts	1. Professional. 2. Communicator 3. Collaborator 4. Advocate. 5. Medical (global health) expert 6. Scholar 7. Manager	Experts consulted: 11 Number of articles from literature review was not mentioned in the article.
Rowthorn, V., & Olsen, J. (2014). All Together Now: Developing a Team Skills Competency Domain for Global Health Education. *Journal of Law, Medicine and Ethics*, 42(4), 550-563. doi:10.1111/jlme.12175	Identify team skills competencies in global health for Graduate global health programs	Descriptive: Recommendation from experts	Team Skills Competency Domain General Competency Statement for Team Skills Competency Domain: Work with individuals of other professions and use the knowledge of one's own role and those of other professions to establish shared goals and perform effectively as a team. Communicate and apply team-building values and principles to plan and execute project goals in a responsive and responsible manner that supports a team approach to global health initiatives. Team Skills Competency 1: Identify which global health issues require or could benefit from an interprofessional approach. TC2: Describe the process of team development and the roles and practices of effective teams.	42 global health and IPE experts from across multiple professions, including medicine, nursing, dentistry, pharmacy, public health, physical therapy, environmental health, epidemiology, basic and applied sciences, engineering, law, and social work. Recruitment method: Not mentioned

			TC3: Apply leadership practices that support collaborative practice and team effectiveness. TC4: Apply relationship-building values and principles of team dynamics to perform effectively in different team roles. TC5: Exhibit interprofessional values and communication skills that demonstrate respect for, and awareness of, the unique cultures, values, roles/responsibilities, and expertise represented by other professionals and groups that work in global health. TC6: Communicate with team members to clarify one's own role and responsibility and each member's role and responsibility on the team. TC7: Recognize one's limitations in skills, knowledge, attitudes, and abilities. TC8: Choose effective communication tools and techniques, including information systems and communication technologies, to facilitate discussions and interactions that enhance team function, avoiding discipline- or culturally specific terminology when appropriate. TC9: Give timely, sensitive, instructive feedback to others about their performance on the team, responding respectfully as a team member to feedback from others. TC10: Engage self and others to constructively manage disagreements about values, roles, goals, and actions using respectful language appropriate for a given difficult situation, crucial conversation, or interprofessional conflict.	
Author, Title, Journal	**Purpose or Aims**	**Study Design**	**Competency Domains**	**Sample Size and Characteristics; Recruitment Method**
Ventura, C. A. A., Mendes, I. A. C., Wilson, L. L., de Godoy, S., Tamí-Maury, I., Zárate-Grajales, R., & Salas-Segura, S. (2014). Global health competencies according to nursing faculty from Brazilian higher education institutions. *Revista Latino-Americana de Enfermagem*, 22(2), 179-186.	Assess Brazilian faculty perception about global health competencies for undergraduate nursing students in Brazil. Assess if those competencies were being taught in the curriculum	Exploratory descriptive. Quant. Cross-sectional design	Same as Wilson et al. (2012)	222 faculty members who answered the Brazilian version of the "Questionnaire on Core competencies in Global Health" No information about recruitment methods.

Author, Title, Journal	**Purpose or Aims**	**Study Design**	**Competency Domains**	**Sample Size and Characteristics; Recruitment Method**
Veras, M., et al. (2013). Reliability and validity of a new survey to assess global health competencies of health professionals. *Global Journal of Health Science 5*(1): 13-27.	Assess validity and reliability of the Global Health Competency Survey.	Cross-sectional survey	1. Confidence in level in socioeconomic position and health disparities: Language Barrier; Income and Health; Work and health; SEP and impact on health; housing and health; SEP and environmental Health; SEP and food security and Health outcome disparities. 2. Social determinants of health: Social determinants of health; Cultural competency; Access to clean water; Human rights and Global health institutions. 3. Global health skills: Listening; Patient background; Discuss sensitive issues and Identify needs. 4. Health disparities: Racial/ethnic disparities; Race and clinical decision making; Gender and access to health care. 5. Travel and Migration: Health risks and Communicable diseases.	429 students and residents from 5 universities in Ontario. Inclusion criteria: (a) must be a student from the University of Ottawa, University of Toronto, Queen's University, Western University, or McMaster University; b) must be 18 years or older; c) must be a 1st year student from a master's program in physiotherapy or occupational therapy, or in the last year of a nursing undergraduate program, or a 1st year resident in a family medicine residency program; d) must provide online informed consent. Students were recruited by e-mail through the directors or coordinators of their programs. They received a brief explanation about the study and a web link to access the online survey and consent form. Data were collected from April, 2011 until October, 2011.
Walpole, S. C., Shortall, C., van Schalkwyk, M. C., Merriel, A., Ellis, J., Obolensky, L., . . . Hall, J. (2016). Time to go global: a consultation on global health competencies for postgraduate doctors. *International Health*, ihw019.	Develop core GH competencies for post graduate doctors in the UK	Policy Delphi (3 rounds)	1. Diversity, human rights and ethics. 2. Environmental, social and economic determinants of health. 3. Global epidemiology 4. Global health governance. 5. Health systems and health professionals.	Round 1: 255 Round 2: 28 Round 3: 15 Networking and social media
Warren, N., Breman, R., Budhathoki, C., Farley, J., & Wilson, L. L. (2015). Perspectives of nursing faculty in Africa on global health nursing competencies. *Nursing Outlook.* doi:10.1016/j.outlook.2015.11.016.	The purpose was to describe perceptions of nursing faculty in Africa about global health competencies and compare those to faculty from the Americas.	nonexperimental, cross-sectional design	Same domains as in Wilson et al. (2012). Themes identified in qualitative portion of study. Findings discussed in Wilson et al. (2016)	Nonprobability voluntary convenience sampling. Recruitment publicized survey on networks and listservs Authors forwarded the survey's recruitment e-mail to their networks of health and nursing organizations and leaders in Africa. Final sample included 681 participants: 63 participants teaching in Africa; 618 nurse educators in the Americas. Snowballing also:

				Authors encouraged contacts to forward the survey link
Williams, B., Morrissey, B., Goenka, A., Magnus, D., & Allen, S. (2014). Global child health competencies for paediatricians. *The Lancet, 384*(9952), 1403-1405. doi:10.1016/S0140-6736(14)61128-4	Identify global health competencies for training pediatricians.	Modified Delphi	• Deliver effective health care to children and families from diverse ethnic, cultural, religious, socioeconomic, and educational backgrounds • Effectively manage diseases that are prevalent in the major diaspora communities • Understand the specific needs of children affected by conflict or trafficking, and child refugees, asylum seekers, and recent migrants • Be aware of alternative approaches to disease prevention and health-care delivery, particularly approaches that maximise the effectiveness of scarce resources • Have sufficient awareness of how global health issues and inequalities affect child health to be effective advocates for the improved physical and mental health of the world's children Proposed global child health competencies aligned with learning outcomes for medical undergraduates (Johnson et al. 2012) Worldwide burden of disease • Describe the worldwide disease burden in children and difficulties in its measurement • Recognise inequity in disease burdens • Prevent illness in travellers, including those with chronic disease • Manage illness in travellers and minority groups Socioeconomic and environmental determinants of child health • Describe the key social and environmental determinants of child health and wellbeing, including the effects of armed conflict • Describe the effects of inequitable access to health worldwide, and the barriers to access of health care that children and families face in the UK, including language, immigration status, and fear of stigma • Contribute to local, national, and international initiatives aimed at the reduction of inequalities in child health and wellbeing Health systems and major child survival initiatives	Sample size, characteristics, and recruitment method not addressed in article

			• Analyse differences in national policies directly affecting child health • Assess the effect of interventions to improve child survival, including vaccination • Describe the effects of the migration of health workers on health-care delivery in the UK and low-income countries Global health governance • Describe the role of WHO, the Global Alliance for Vaccines and Immunisation, and UNICEF in the protection and improvement of child health • List key goals in international development and child survival, such as the Millennium Development Goals and the post-2015 goals (Sustainable Development Goals) Child rights and ethics: child protection and vulnerable children • Apply the principles of the UN convention on the Rights of the Child to medical practice and show commitment to the protection of these rights • Assess the special health needs (considering growth and nutrition, mental health, immunisation status, imported infections, and sexual health) of children who are immigrants from low-income countries, refugees, or seeking asylum, or have been affected by armed conflict or natural disasters • Recognise potential warning signs of child trafficking, forced labour, forced marriage, and female genital mutilation, and describe the health issues that can ensue, and show commitment to work in partnership with others to address these issues Cultural diversity and child health • Provide culturally sensitive child-centred and family-centred care and support to children and families from other cultures or nations	
Author, Title, Journal	**Purpose or Aims**	**Study Design**	**Competency Domains**	**Sample Size and Characteristics; Recruitment Method**
Wilson, L., Harper, D. C., Tami-Maury, I., Zarate, R., Salas, S., Farley, J., . . .Ventura, C. (2012). Global health competencies for nurses in the Americas. *Journal of Professional Nursing, 28*(4), 213-222. doi:10.1016/j.profnurs.2011.11.021	Identification of essential nursing competencies for undergraduate students	Exploratory descriptive survey.	1. Global burden of disease 2. Health implications of migration, travel, and displacement 3. Social and environmental determinants of health 4. Globalization of health and health care 5. Health care in low resource settings 6 Health as a human right and development resource. Total number of competencies: 30	593 survey responses (542 in English, 51 in Spanish). Nonprobability voluntary convenience sampling. Nursing faculty. Email with survey sent to: (a) 492 participants at the October 2009 meeting of the Latin American Association of Nursing Schools (ALADEFE) (b) 22 members of the Pan American Nursing & Midwifery Collaborating Centers; (c) 73 members of the PAHO

				Child Health Nursing Network (d) 2,238 members from 148 countries of the Global Alliance of Nursing & Midwifery (e) 503 members from 73 countries of the Global Health Nursing & Midwifery Online listserves (f) deans or directors of 545 baccalaureate and higher degree nursing schools in the United States listed on the Web site: http://www.a2zcolleges. com/Nursing/index.html (g) 23 directors of national- level associations of nursing faculty and directors of nursing programs in Latin America identified by the PAHO Regional Advisor for Nursing. (h) survey posted in CASN and GHEC websites
Wilson, L., Moran, L., Zarate, R., Warren, N., Ventura, C. A., Tami-Maury, I., & Mendes, I. (2016). Qualitative description of global health nursing competencies by nursing faculty in Africa and the Americas. *Revista Latino-Americana de Enfermagem*, 24.	Report the qualitative analysis of comments from four surveys focused on global health competencies for undergraduate nurses.	Qualitative Descriptive. Cross-sectional.	1. Culturally Competent, Humanistic, and Holistic Care 2. Prevention, Health Promotion, and Primary Health Care 3. Multidisciplinary Work, Teamwork. 4. Communication. 5. Professional Nursing Issues in Diverse Settings. 6. Policy/Politics and Historical Context. 7. War, Disaster, Pandemics, Terrorism, and Displacement 8. Vulnerable Populations 9. Program Development, Planning, and Evaluation. 10. Leadership, Management, and Advocacy.	Non probability snowball sampling used in original studies. Across the studies 591 participants responded to the surveys. Three hundred and twenty qualitative comments were analyzed.

APPENDIX A-2

ABBREVIATED MATRIX OF LITERATURE REVIEW UPDATE

Author, Title, Journal	**Purpose or aims**	**Study Design**	**Competency Domains**	**Sample size & Characteristics Recruitment methods**
Clark, M., Raffray, M., Hendricks, K., & Gagnon, A. (2016). Global and public health core competencies for nursing education: a systematic review of essential competencies *Nurse Education Today, 40*(2016), 173-180.	To better inform the curricular content and approach to teaching/learning at the McGill Ingram School of Nursing. And to inform faculty in other schools of nursing who have already included or wish to include global health content in their curricula about global health core competencies.	Systematic review	A final list of 14 competencies resulted by combining overlapping competency categories. These were: Social justice, cultural competency, communication, collaborative partnerships, assessments & management skills, environment, disease burden & epidemiology, ethics & professionalism, determinants of health, health systems/delivery, travel & migration, key players, research, and health promotion/illness prevention.	15 articles on global health and 10 articles on public/ community health from multiple disciplines
Dawe, R., Pike, A., Kidd, M., Janakiram, P., Nicolle, E., & Allison, J. (2017). Enhanced skills in global health and health equity: guidelines for curriculum development. *Canadian Medical Education Journal, 8*(2), e48-e59.	To generate consensus on essential components of a global health/health equity enhanced skills program in family medicine	Delphi	Program Features: - Length: 12 months - Mentorship - Some aspects of research (how ethics apples in research, use of research for advocacy) - Program objectives: An understanding of the importance of sustainability in global health activities; An inclusive view of global health that includes domestic and international populations; An understanding of the role of social justice in health Development of advocacy skills - Program focus: international and domestic - Program content- Core: Social determinants of health, ethics, cultural humility, health systems, policy, advocacy, community engagement, training before and after	34 Canadian experts in global health and family medicine found by snowballing

			- Assessment: by portfolio, evaluation reports, participation and reflection essay.	

Author, Title, Journal	**Purpose or aims**	**Study Design**	**Competency Domains**	**Sample size & Characteristics Recruitment methods**
El Rayess, F., Filip, A. Douberi, A., Wilson, C., Haq, C., Debay. M.,&…Hunt. V. (2017). Family medicine global health fellowship competencies: a modified Delphi study. *Family Medicine, 49*(2), 106-113.	To develop a mission statement and core competencies for Global Health Fellowships in Family Medicine.	Modified Delphi	List of 30 core competencies under six domains: Patient care, medical knowledge, professionalism, communication and leadership, teaching, and scholarship	13 faculty experts on global health
Hyter, Y.D., Roman, T.R., Staley, B. & McPherson, B. (2017). Competencies for effective global engagement: a proposal for communication sciences and disorders. *Perspectives of the ASHA Special Interest Groups, 17*(2), 9-20.	To derive a framework for global competencies from the perspective of the communications sciences and disorders professions	Literature review	Competencies Description: *Dispositions* • Humility • Self-reflectiveness • Empathy • Inquisitiveness • Responsibility *Knowledge* • Knowledge of one's own and others' culture and world view • Globalization's consequences around the world • Relations of power between different countries and different groups of people • Impact of privilege • Differences and similarities in economic, political, cultural, and ecological realities of high-, middle-, and low-resource countries *Skills* • Self-awareness • Awareness of others • Experiences with diverse cultures • Ability to communicate in more than one language • Ability to create an environment that is culturally and globally responsive • Ability to engage in critical and dialectical thinking, and critical dialogue • Ability to engage in international conversations • Ability to develop international partnerships (communities of practices) and sustainable practices	27 articles and 8 book chapters

			Attitudes • Willingness to provide services and engage with others from a posture of reciprocity • Willingness to promote equity and social justice • Willingness to value ethical behavior	
Author, Title, Journal	**Purpose or aims**	**Study Design**	**Competency Domains**	**Sample size & Characteristics Recruitment methods**
Sawleshwarkar, S. & Negin, J. (2017). A review of global health competencies for postgraduate public health education. *Frontiers in Public Health, 5*(46), 1-12.	"To describe global health competencies and attempts to distill common competency domains to assist in curriculum development and integration in postgraduate public health education programs" (p. 1)	Literature review	List of competencies from each article and 11 competency domains distilled from articles. Domain 1: Global Burden of Disease Domain 2: Globalization of Domain 3: Social, Economic, and Environmental Determinants of Health Domain 4: Capacity Strengthening Domain 5: Ethics and Professionalism Domain 6: Communication, Collaboration, and Partnering Domain 7: Health Equity and Social Justice Domain 8: Program Management Domain 9: Sociocultural and Political Awareness Domain 10: Strategic Analysis	11 articles

APPENDIX B

INSTITUTIONAL RESEARCH BOARD APPROVALS

APPENDIX B-1

INITIAL IRB APPROVAL

Institutional Review Board for Human Use

Exemption Designation
Identification and Certification of Research
Projects Involving Human Subjects

UAB's Institutional Review Boards for Human Use (IRBs) have an approved Federalwide Assurance with the Office for Human Research Protections (OHRP). The Assurance number is FWA00005960 and it expires on November 8, 2021. The UAB IRBs are also in compliance with 21 CFR Parts 50 and 56.

Principal Investigator:	Torres, Herica M
Co-Investigator(s):	
Protocol Number:	**E161109003**
Protocol Title:	*Reaching Consensus on Essential Global Health Nursing Competencies for Baccalaureate Nursing Students in the United States: A Delphi Study*

The above project was reviewed on 12/14/16. The review was conducted in accordance with UAB's Assurance of Compliance approved by the Department of Health and Human Services. This project qualifies as an exemption as defined in 45CFR46.101(b), paragraph 2.

This project received EXEMPT review.

Date IRB Designation Issued: 12/14/16

Cari Oliver, CIP
Assistant Director, Office of the Institutional Review Board for Human Use (IRB)

Investigators please note:

Any modifications in the study methodology, protocol and/or consent form/information sheet must be submitted for review to the IRB prior to implementation.

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APPENDIX B-2

IRB APPROVAL AND AMENDMENTS TO THE PROTOCOL

IRB document	Appendix	Approval Date	Purpose
Approval of Exempt Study E161109003	H	December 14, 2016	Initial Approval
Amendment 1	I	March 28, 2017	Acknowledged in recruitment letter that participants had a role in the PAHO/WHO collaborating center. Recruitment flyer for Round Three added
Amendment 2	J	April 20, 2017	Demographic survey added Added SurveyMonkey Premier as online data capture platform instead of REDCap
Amendment 3	K	August 23, 2017	Changes in recruitment letter in Round Three (one letter instead of two). PAHO/WHO statement eliminated from Round Two recruitment letter
Amendment 4	L	September 13, 2017	Added reminder for Round Two. Specified how many reminders to be sent in Round Three. Changed the time participants had to complete Round Three surveys from 3 weeks to 2 weeks in order to keep a momentum. Included demographic questionnaire and inclusion criteria in Round Three survey one.
Amendment 5	M	November 20, 2017	Requested permission to send an additional recruitment letter for Round Three Increased number of reminders for Round Two and Three.

APPENDIX B-3

AMENDMENTS TO ROUND TWO

Project Revision/Amendment Form

Form version: June 26, 2012

In MS Word, click in the white boxes and type your text; double-click checkboxes to check/uncheck.

- **Federal regulations require IRB approval before implementing proposed changes. See Section 14 of the IRB Guidebook for Investigators for additional information.**
- **Change means any change, in content or form, to the protocol, consent form, or any supportive materials (such as the Investigator's Brochure, questionnaires, surveys, advertisements, etc.). See Item 4 for more examples.**

1. Today's Date	3/22/2017	32469

2. Principal Investigator (PI)

Name (with degree)	Herica Maria Torres Alzate, RN, MSN	Blazer ID	htorres@uab.edu
Department	School of Nursing	Division (if applicable)	
Office Address		Office Phone	
E-mail	htorres@uab.edu	Fax Number	

Contact person who should receive copies of IRB correspondence (Optional)

Name		E-Mail	
Phone		Fax Number	
Office Address (if different from PI)			

3. UAB IRB Protocol Identification

3.a. Protocol Number	e161109003-1 do not # amendments
3.b. Protocol Title	Reaching Consensus on Essential Global Health Nursing Competencies for Baccalaureate Nursing Students in the United States: A Delphi Study

3.c. Current Status of Protocol—Check ONE box at left; provide numbers and dates where applicable

- ☒ **Study has not yet begun** — **No participants, data, or specimens have been entered.**
- ☐ **In progress, open to accrual** — **Number of participants, data, or specimens entered:**
- ☐ **Enrollment temporarily suspended by sponsor**
- ☐ **Closed to accrual, but procedures continue as defined in the protocol (therapy, intervention, follow-up visits, etc.)**
  - **Date closed:**
  - **Number of participants receiving interventions:**
  - **Number of participants in long-term follow-up only:**
- ☐ **Closed to accrual, and only data analysis continues**
  - **Date closed:**
  - **Total number of participants entered:**

4. Types of Change

Check all types of change that apply, and describe the changes in Item 5.c. or 5.d. as applicable. To help avoid delay in IRB review, please ensure that you provide the required materials and/or information for each type of change checked.

- ☐ **Protocol revision (change in the IRB-approved protocol)**
  In Item 5.c., if applicable, provide sponsor's protocol version number, amendment number, update number, etc.
- ☐ **Protocol amendment (addition to the IRB-approved protocol)**
  In Item 5.c., if applicable, provide funding application document from sponsor, as well as sponsor's protocol version number, amendment number, update number, etc.
- ☐ **Add or remove personnel**
  In Item 5.c., include name, title/degree, department/division, institutional affiliation, and role(s) in research, and address whether new personnel have any conflict of interest. See "Change in Principal Investigator" in the IRB Guidebook if the principal investigator is being changed.
  - ☐ **Add graduate student(s) or postdoctoral fellow(s) working toward thesis, dissertation, or publication**
    In Item 5.c., (a) identify these individuals by name; (b) provide the working title of the thesis, dissertation, or publication; and (c) indicate whether or not the student's analysis differs in any way from the purpose of the research described in the IRB-approved HSP (e.g., a secondary analysis of data obtained under this HSP).
- ☐ **Change in source of funding; change or add funding**
  In Item 5.c., describe the change or addition in detail, include the applicable OSP proposal number(s), and provide a copy of the application as funded (or as submitted to the sponsor if pending). Note that some changes in funding may require a new IRB application.

organizations and/or individuals who have expertise in global health. Examples of these organizations are: the International Council of Nurses Education Group, the American Academy of Nursing Expert Panel on Global Nursing & Health, the Consortium of Universities for Global Health Nursing Interest Group, and Seed Global Health.

Finally, I will add the following sentence in the Phase one and two surveys: "Please be aware that some competencies may address multiple components. Future users could develop multiple objectives for different competencies."

See in attached documents:
Form Added: Flyer to recruit participants in phase 3 (1 copy attached)
Revised copy highlighting changes with tracked changes.
Revised IRB copy attached

Signature of Principal Investigator Signature on file Date________

FOR IRB USE ONLY

☐ Received & Noted ☐ Approved Expedited* ☐ To Convened IRB

Signature (Chair, Vice-Chair, Designee) Date 3/28/17

DOLA N/A

Change to Expedited Category Y / N / NA

*No change to IRB's previous determination of approval criteria at 45 CFR 46.111 or 21 CFR 56.111

in the future, please only submit changed documents, not all

☐	**Add or remove performance sites** In Item 5.c., identify the site and location, and describe the research-related procedures performed there. If adding site(s), attach notification of permission or IRB approval to perform research there. Also include copy of subcontract, if applicable. If this protocol includes acting as the Coordinating Center for a study, attach IRB approval from any non-UAB site added.
☐	**Add or change a genetic component or storage of samples and/or data component—this could include data submissions for Genome-Wide Association Studies (GWAS)** To assist you in revising or preparing your submission, please see the IRB Guidebook for Investigators or call the IRB office at 934-3789.
☐	**Suspend, re-open, or permanently close protocol to accrual of individuals, data, or samples (IRB approval to remain active)** In Item 5.c., indicate the action, provide applicable dates and reasons for action; attach supporting documentation.
☐	**Report being forwarded to IRB (e.g., DSMB, sponsor or other monitor)** In Item 5.c., include date and source of report, summarize findings, and indicate any recommendations.
☐	**Revise or amend consent, assent form(s)** Complete Item 5.d.
☐	**Addendum (new) cohsent form** Complete Item 5.d.
☒	**Add or revise recruitment materials** Complete Item 5.d.
☒	**Other (e.g., investigator brochure)** Indicate the type of change in the space below, and provide details in Item 5.c. or 5.d. as applicable. Include a copy of all affected documents, with revisions highlighted as applicable.

▶ Editorial changes

5. Description and Rationale

In Item 5.a. and 5.b, check Yes **or** No **and see instructions for** Yes **responses.**
In Item 5.c. and 5.d, describe—and explain the reason for—the change(s) noted in Item 4.

☐Yes ☐No **5.a. Are any of the participants enrolled as normal, healthy controls?**
If yes, describe in detail in Item 5.c. how this change will affect those participants.

☐Yes ☐No **5.b. Does the change affect subject participation, such as procedures, risks, costs, location of services, etc.?**
If yes, FAP-designated units complete a FAP submission and send to fap@uab.edu. Identify the FAP-designated unit in Item 5.c.
For more details on the UAB FAP, see www.uab.edu/cto.

5.c. Protocol Changes: In the space below, briefly describe—and explain the reason for—all change(s) to the protocol.

▶

5.d. Consent and Recruitment Changes: In the space below,
(a) describe all changes to IRB-approved forms or recruitment materials and the reasons for them;
(b) describe the reasons for the addition of any materials (e.g., addendum consent, recruitment); and
(c) indicate either how and when you will reconsent enrolled participants or why reconsenting is not necessary (not applicable for recruitment materials).

Also, indicate the number of forms changed or added. For new forms, provide 1 copy. For revised documents, provide 3 copies:
- **a copy of the currently approved document (showing the IRB approval stamp, if applicable)**
- **a revised copy highlighting all proposed changes with "tracked" changes**
- **a revised copy for the IRB approval stamp.**

▶ I made some slight editorial corrections in the original IRB. The original IRB mentioned Appendices K, L, and M, but Appendix K was actually a duplicate of Appendix H, and Appendices L and M were duplicates of Appendices I and J. I will also be making two slight changes to the recruitment methods.

(1) I will be adding the sentence "I am contacting you because of your role in a PAHO/WHO Nursing and Midwifery Collaborating Center, and also because of your expertise in global health and global health nursing" to the first email to be sent in phase one (revised document). The idea is to acknowledge the fact that that these letters are being sent to the potential participants because of their roles in the Collaborating Centers.

. (2) I will use a flyer (new form) to aid in recruiting participants for phase three. The flyer will be sent to

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1. Today's Date	4/14/2017

2. Principal Investigator (PI)

Name (with degree)	Herica Maria Torres Alzate, RN, MSN	**Blazer ID**	htorres@uab.edu
Department	School of Nursing	**Division (if applicable)**	
Office Address		**Office Phone**	
E-mail	htorres@uab.edu	**Fax Number**	

Contact person who should receive copies of IRB correspondence (Optional)

Name		**E-Mail**	
Phone		**Fax Number**	
Office Address (if different from PI)			

3. UAB IRB Protocol Identification

3.a. Protocol Number	e161109003
3.b. Protocol Title	**Reaching Consensus on Essential Global Health Nursing Competencies for Baccalaureate Nursing Students in the United States: A Delphi Study**

3.c. Current Status of Protocol—Check ONE box at left; provide numbers and dates where applicable

- ☒ **Study has not yet begun** — **No participants, data, or specimens have been entered.**
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- ☐ **Closed to accrual, but procedures continue as defined in the protocol (therapy, intervention, follow-up visits, etc.)**
  Date closed: **Number of participants receiving interventions:** **Number of participants in long-term follow-up only:**
- ☐ **Closed to accrual, and only data analysis continues**
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4. Types of Change

Check all types of change that apply, and describe the changes in Item 5.c. or 5.d. as applicable. To help avoid delay in IRB review, please ensure that you provide the required materials and/or information for each type of change checked.

- ☐ **Protocol revision (change in the IRB-approved protocol)**
  In Item 5.c., if applicable, provide sponsor's protocol version number, amendment number, update number, etc.
- ☒ **Protocol amendment (addition to the IRB-approved protocol)**
  In Item 5.c., if applicable, provide funding application document from sponsor, as well as sponsor's protocol version number, amendment number, update number, etc.
- ☐ **Add or remove personnel**
  In Item 5.c., include name, title/degree, department/division, institutional affiliation, and role(s) in research, and address whether new personnel have any conflict of interest. See "Change in Principal Investigator" in the IRB Guidebook if the principal investigator is being changed.
  - ☐ **Add graduate student(s) or postdoctoral fellow(s) working toward thesis, dissertation, or publication**
    In Item 5.c., (a) identify these individuals by name; (b) provide the working title of the thesis, dissertation, or publication; and (c) indicate whether or not the student's analysis differs in any way from the purpose of the research described in the IRB-approved HSP (e.g., a secondary analysis of data obtained under this HSP).
- ☐ **Change in source of funding; change or add funding**
  In Item 5.c., describe the change or addition in detail, include the applicable OSP proposal number(s), and provide a copy of the application as funded (or as submitted to the sponsor if pending). Note that some changes in funding may require a new IRB application.

☐	**Add or remove performance sites** In Item 5.c., identify the site and location, and describe the research-related procedures performed there. If adding site(s), attach notification of permission or IRB approval to perform research there. Also include copy of subcontract, if applicable. If this protocol includes acting as the Coordinating Center for a study, attach IRB approval from any non-UAB site added.
☐	**Add or change a genetic component or storage of samples and/or data component—this could include data submissions for Genome-Wide Association Studies (GWAS)** To assist you in revising or preparing your submission, please see the IRB Guidebook for Investigators or call the IRB office at 934-3789.
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☐	**Revise or amend consent, assent form(s)** Complete Item 5.d.
☐	**Addendum (new) consent form** Complete Item 5.d.
☐	**Add or revise recruitment materials** Complete Item 5.d.
☒	**Other (e.g., investigator brochure)** Indicate the type of change in the space below, and provide details in Item 5.c. or 5.d. as applicable. Include a copy of all affected documents, with revisions highlighted as applicable.

▶ Demographic survey added (see document attached)
Instead of RedCap, I will be using SurveyMonkey to administer and manage surveys.

5. Description and Rationale

In Item 5.a. and 5.b, check Yes or No and see instructions for Yes responses.
In Item 5.c. and 5.d, describe—and explain the reason for—the change(s) noted in Item 4.

☐Yes ☐No	**5.a. Are any of the participants enrolled as normal, healthy controls?** If yes, describe in detail in Item 5.c. how this change will affect those participants.
☐Yes ☐No	**5.b. Does the change affect subject participation, such as procedures, risks, costs, location of services, etc.?** If yes, FAP-designated units complete a FAP submission and send to fap@uab.edu. Identify the FAP-designated unit in Item 5.c. For more details on the UAB FAP, see www.uab.edu/cto.

5.c. Protocol Changes: In the space below, briefly describe—and explain the reason for—all change(s) to the protocol.

▶ I added the demographic survey in order to report an accurate demographic description of the sample. I had to change data capturing systems from RedCap to SurveyMonkey. I recently learned that I need to have my study go through my employers' Human Research and Protection office in order for me to be able to use RedCap. Because this process may take longer than expected, I decided to use SurveyMonkey instead.

5.d. Consent and Recruitment Changes: In the space below,
(a) describe all changes to IRB-approved forms or recruitment materials and the reasons for them;
(b) describe the reasons for the addition of any materials (e.g., addendum consent, recruitment); and
(c) indicate either how and when you will reconsent enrolled participants or why reconsenting is not necessary (not applicable for recruitment materials).

Also, indicate the number of forms changed or added. For new forms, provide 1 copy. For revised documents, provide 3 copies:
- **a copy of the currently approved document (showing the IRB approval stamp, if applicable)**
- **a revised copy highlighting all proposed changes with "tracked" changes**
- **a revised copy for the IRB approval stamp.**

▶

Signature of Principal Investigator [signature] Date 4/19/17

FOR IRB USE ONLY

☐ Received & Noted ☐ Approved ~~Expedited*~~ Exempt ☐ To Convened IRB

_______________________________ 4/20/17

Signature (Chair, Vice-Chair, Designee) Date

DOLA NA

Change to Expedited Category Y / (N) / NA

*No change to IRB's previous determination of approval criteria at 45 CFR 46.111 or 21 CFR 56.111

APPENDIX B-4

RECRUITMENT LETTER ROUND TWO

Dear ________,

I am a doctoral student in the School of Nursing at the University of Alabama at Birmingham. My dissertation research will be a Delphi survey designed to seek consensus on essential global health competencies for baccalaureate nursing students in the United States. The title of my study is: *"Reaching Consensus on Essential Global Health Nursing Competencies for Baccalaureate Nursing Students in the United States: A Delphi Study"*. The purpose of the study is to "*establish content validity through reaching consensus on global health competencies for Baccalaureate degree nursing students in the United States*".

I am contacting you because of your expertise in global health and global nursing, to ask whether you would participate in the second phase of this study to provide input on a proposed list of global health competency domains and competencies. Your participation is confidential, voluntary, and study data will be used for research purposes. There are no known risks associated with participation in this study. There will be no costs or payments associated with your participation, but your participation will contribute to developing a better understanding about essential global health competencies for baccalaureate nursing students in the United States.

During the first phase of the study I will revise a list of global health competencies and domains from work previously conducted and published by my dissertation co-chair, Dr. Lynda Wilson, and her colleagues. (See, for example, Wilson, L., Harper, D. C., Tami-Maury, I., Zarate, R., Salas, S., Farley, J., . . . Ventura, C. (2012). Global health competencies for nurses in the Americas. *Journal of Professional Nursing, 28*(4), 213-222.)

I am asking whether you would be one of six global health nursing experts who participate in the second phase of the study by completing two online surveys. The first survey will ask participants to provide feedback about definitions of proposed global health competency domains and competencies. The second survey will ask participants to rate each domain and competency and provide feedback about the clarity of the competency list that will be used in the final Delphi survey to be conducted in Phase 3 of the study. I anticipate that your participation will require a total of 3-4 hours.

The criteria for participating in this study are: (a) age older than 25 years; (b) English proficient; (c) expertise in global health nursing; (d) 3 years or more of experience in baccalaureate nursing education; (e) hold at least a baccalaureate nursing degree; and (f) access to the internet.

Expertise in global health nursing will be determined by positive responses to at least three of the following questions. The questions refer to a definition of global health that was published by members of the Global Advisory Panel on the Advancement of Nursing

(GAPFON) (see Wilson, L., et al. (2016). 'Global health' and 'global nursing': proposed definitions from The Global Advisory Panel on the Future of Nursing. *Journal of Advanced Nursing,* 72(7), 1629-1540):

"Global health refers to an area for practice, study and research that places a priority on improving health, achieving equity in health for all people (Koplan et al. 2009) and ensuring health-promoting and sustainable sociocultural, political and economic systems (Janes & Corbett 2009). Global health implies planetary health which equals human, animal, environmental and ecosystem health (Kahn et al. 2014) and it emphasizes transnational health issues, determinants and solutions; involves many disciplines within and beyond the health sciences and promotes interdependence and interdisciplinary collaboration; and is a synthesis of population-based prevention with individual holistic care (Koplan et al. 2009)." (Wilson, Mendes, et al., 2016, p. 8).

If you are interested in participating in this study, please answer the following questions when you send your reply in order to confirm that you meet the study inclusion criteria:

1. Are you older than 25 years? Y__ N__
2. Are you English proficient? Y__ N__
3. Do you have 3 years or more of experience in baccalaureate nursing education? Y__ N__
4. Do you hold at a minimum a baccalaureate nursing degree? Y__ N__
5. Do you have access to the internet? Y__ N__
6. Do you have expertise in global health nursing (indicated by yes responses to at least three of the following questions).

   a) Do you understand the GAFPON definition of global health? Y__ N__

   b) Do you recognize that global health is different from international health? Y__ N__

   c) Have you been involved in activities that promote global health research, education, and/or practice as defined by GAPFON? Y__ N__

   d) Have you presented or written about global health in national or international events? Y__ N__

   e) Have you collaborated with others in research, education, and/or practice related to global health as defined by GAPFON? Y__ N__

   f) Do you identify yourself as an informed individual in global health as defined by GAPFON? Y__ N__

If you have any questions, concerns, or comments about this study, you may contact me, Herica Torres, and I will be glad to answer any of your questions. My phone number is (251) 382 7059 and my email is htorres@uab.edu. This study has been approved by the Institutional Review Board (IRB) of the University of Alabama at Birmingham (UAB). Your completion of the two online surveys will indicate your consent to participate in this study. Your responses will be confidential, and no names or other identifying information will be linked to individual participants in reports, publications or presentations that result from this study. You are free to withdraw from this study at any time. All survey responses will be stored on the researcher's password protected computer, and original data will be destroyed 3 years after the study findings are published. If you have questions about your rights as a research participant, or concerns or complaints about the research, you may contact the UAB Office of the IRB (OIRB) at (205) 934-3789 or toll free at 1-855-860-3789. Regular hours for the OIRB are 8:00 a.m. to 5:00 p.m. CT, Monday through Friday. You may also call this number in the event the research staff cannot be reached or you wish to talk to someone else.

_____ I will be willing to participate in Phase 2 of the study (name and email) ______________ ______I am not able to participate in Phase 2 of the study (name and email) ________________

Thank you so much for your valuable time.

Sincerely,

Herica M. Torres, RN, MSN

PhD Student, The University of Alabama at Birmingham School of Nursing

APPENDIX B-5

RECRUITMENT STRATEGIES FOR ROUND THREE

Recruitment Site and Method	Date of Initial Contact	Number of Participants Enrolled Based on This Site
Consortium of Universities for Global Health – 50 flyers randomly distributed at annual meeting	April 2017	2
Global Health Deliver Online – flyer posted on website	May 2017	1
181 emails sent to nursing faculty with global health expertise identified from websites, publications, or personal contacts of co-chairs	October-December 2017	Unknown
Flyer posted on LinkedIn Global Public Health Site	December 2017	Unknown
Flyer posted on Global Alliance of Nursing and Midwifery Site	December 2017	9
Personal LinkedIn contacts	November 2017	0
Other groups contacted: • National Association for Rural Health Clinics • Global Nursing Caucus • International Nurses Association • American Association of Occupational Health Nurses Global Practice • American College of Nurse Midwives Global Outreach Group • International Council of Nurses Education Network	June-October 2017	Unknown
	Total Recruited for Round Three	57

APPENDIX B-6

RECRUITMENT LETTER ROUND THREE

Dear _______

I am a doctoral student in the School of Nursing at the University of Alabama at Birmingham. My dissertation research will be a Delphi survey designed to seek consensus on essential global health competencies for baccalaureate nursing students in the United States. The title of my study is: *"Reaching Consensus on Essential Global Health Nursing Competencies for Baccalaureate Nursing Students in the United States: A Delphi Study"*. The purpose of the study is to "*establish content validity through reaching consensus on global health competencies for Baccalaureate degree nursing students in the United States*".

I am contacting you because of your expertise in global health and global nursing, to ask whether you would participate in a two-round Delphi survey to rate a list of proposed essential global health competencies. Your participation is confidential, voluntary, and study data will be used for research purposes. There are no known risks associated with participation in this study. There will be no costs or payments associated with your participation, but your participation will contribute to developing a better understanding about essential global health competencies for baccalaureate nursing students in the United States.

If you are interested in learning more about participating in this study, please continue reading below my signature. If you are not interested in learning more about the study, no response is needed. Thank you in advance for your consideration of my invitation.

Sincerely,

Herica M. Torres, RN, MSN

PhD Student, The University of Alabama at Birmingham School of Nursing

Further information about the study:

For this two-round Delphi survey, I plan to recruit 30-50 nurse educators. During the first round you will be presented with a list of global health competency domains and competencies and asked to rate the extent to which you believe that each competency is essential using a 5-point Likert scale. Competencies that are rated as essential by more than 70% of participants in round one will be retained in the final list of competencies. During the second round, you will be provided with a list of the competencies that were retained from round one, and also asked to re-rate the remaining competencies. It is anticipated that your participation in each of the two rounds will take about 20-30 minutes.

The criteria for participating in this study are: (a) age older than 25 years; (b) English proficient; (c) expertise in global health nursing; (d) 3 years or more of experience in baccalaureate nursing education; (e) hold at least a baccalaureate nursing degree; and (f) access to the internet.

Expertise in global health nursing will be determined by positive responses to at least three of the following questions. The questions refer to a definition of global health that was published by members of the Global Advisory Panel on the Advancement of Nursing (GAPFON) (see Wilson, L., et al. (2016). 'Global health' and 'global nursing': proposed definitions from The Global Advisory Panel on the Future of Nursing. *Journal of Advanced Nursing,* 72(7), 1629-1540):

"Global health refers to an area for practice, study and research that places a priority on improving health, achieving equity in health for all people (Koplan et al. 2009) and ensuring health-promoting and sustainable sociocultural, political and economic systems (Janes & Corbett 2009). Global health implies planetary health which equals human, animal, environmental and ecosystem health (Kahn et al. 2014) and it emphasizes transnational health issues, determinants and solutions; involves many disciplines within and beyond the health sciences and promotes interdependence and interdisciplinary collaboration; and is a synthesis of population-based prevention with individual holistic care (Koplan et al. 2009)." (Wilson, Mendes, et al., 2016, p. 8).

Please indicate whether you are interested in participating in the study by answering the following question:

Are you interested in participating in the study? ____Yes ______No

If you are interested in participating in the study, please answer the following questions to confirm that you meet the study inclusion criteria, and return your response to me by email:

1. Are you older than 25 years? Yes__ No__
2. Are you English proficient? Yes__ No__
3. Do you have 3 years or more of experience in baccalaureate nursing education in the United States? Yes__ No__
4. Do you hold at a minimum a baccalaureate nursing degree? Yes__ No__
5. Do you have access to the internet? Yes__ No__
6. Do you have expertise in global health nursing (indicated by yes responses to at least three of the following questions)?
    a) Do you understand the GAFPON definition of global health? Yes__ No__
    b) Do you recognize that global health is different from international health?
    c) Yes__ No__
    d) Have you been involved in activities that promote global health research, education, and/or practice as defined by GAFPON? Yes__ No__
    e) Have you presented or written about global health in national or international events? Yes__ No__
    f) Have you collaborated with others in research, education, and/or practice related to global health as defined by GAFPON? Yes__ No__
    g) Do you identify yourself as an informed individual in global health as defined by GAFPON? Yes__ No__

Name: ______________________
Electronic signature _______________
Email ___________________________

If you have any questions, concerns, or comments about this study, you may contact me, Herica Torres, and I will be glad to answer any of your questions. My phone number is (251) 382 7059 and my email is htorres@uab.edu. This study has been approved by the Institutional Review Board (IRB) of the University of Alabama at Birmingham (UAB). Your completion of the two online surveys will indicate your consent to participate in this study. Your responses will be confidential, and no names or other identifying information will be linked to individual participants in reports, publications or presentations that result from this study. You are free to withdraw from this study at any time. All survey responses will be stored on the researcher's password protected computer, and original data will be destroyed 3 years after the study findings are published. If you have questions about your rights as a research participant, or concerns or complaints about the research, you may contact the UAB Office of the IRB (OIRB) at (205) 934-3789 or toll free at 1-855-860-3789. Regular hours for the OIRB are 8:00 a.m. to 5:00 p.m. CT, Monday through Friday. You may also call this number in the event the research staff cannot be reached or you wish to talk to someone else.

Please feel free to send this letter or information about this study to anyone you think might be interested in participating in this project.

Thank you so much for your valuable time.

Sincerely,

Herica M. Torres, RN, MSN
htorres@uab.edu
PhD Student, The University of Alabama at Birmingham School of Nursing

APPENDIX C

DEFINITION OF DOMAINS AND COMPETENCIES, DELPHI ROUND ONE

1. Global Burden of Disease

This domain encompasses a basic understanding of major causes of morbidity, disability, and mortality and their variations between age, sex, ethnicity, and socioeconomic status within and across countries (1, 2)

a. Asses the major causes of morbidity, disability, and mortality around the world and how the risk of disease varies with regions (3)
b. Describe major public health efforts to reduce disparities in global health (such as Sustainable Development Goals and Global Fund to Fight AIDS, TB, and Malaria) (3).

2. Health Implications of Pandemics, Displacement, Wars, Disasters, and Travel

This domain refers to health issues associated to pandemics, displacement, wars, disaster, and travel of populations across the globe. Displacement occurs when individuals leave their homes either to go to other parts of the country or across nations as a result of a natural or man-made event (4)

a. Explain the health risks posed by international travel or foreign birth (3)
b. Analyze the effects of displacement, wars, and migration on health of refugees and immigrants (5)
c. Explain how travel or foreign birth places a patient at risk for unusual diseases or unusual presentation of common diseases and make an appropriate assessment or referral (3)
d. Identify world regions and/or travel activities associated with increased risk for life-threatening diseases including HIV/AIDS, malaria, and multidrug-resistant tuberculosis (3).
e. Describe basic principles of nursing roles in disasters including helping communities to prepare for and respond to disasters (6).
f. Analyze how travel and trade contribute to the spread of communicable and chronic diseases (3)

3. Social and Environmental Determinants of Planetary Health

This domain "focuses on an understanding that personal, social, economic, and environmental factors are important determinants of health, that health is more than the absence of disease"(2) and that planetary health "is rooted in understanding the interdependencies of humans and natural systems" (7).

a. Explain how social and economic conditions such as poverty, education, and lifestyles affect health and access to health care (3)
b. List major social determinants of health and their impact on differences in life expectancy between and within countries (3).
c. Comment on the impact of low income, education, and communication factors on access to and quality of health care (3).
d. Asses the relationship between access to clean water, sanitation, food, and air quality on individual and population health (3).

e. Summarize the relationship between environmental degradation and human health (3).

4. Global Nursing and Health Care

This domain focuses on understanding how globalization affects health, health systems, and the delivery of health and nursing care (2). Global nursing "is the use of evidence-based nursing process to promote sustainable planetary health and equity for all people" (8).

a. Analyze how global trends in health care practice, commerce and culture, multinational agreements, and multinational organizations contribute to the quality and availability of health and health care locally and globally (3).
b. Describe different national models or health systems for provision of health care and their respective effects on health and health care expenditure (3)
c. Analyze general trends and influences in the global availability and movement of health care workers (3).
d. Compare and contrast national and global health care worker availability and shortages (3).
e. Describe the most common patterns of health care worker migration and its impact on health care availability in the country that the health care worker leaves and the country to which he or she migrates (3)
f. Analyze the economic, social, political, and academic conditions that can produce a strong health workforce (9)
g. Provide examples of barriers to health and health care locally and globally (3)
h. Adapt clinical skills and practice in a variety of settings (3).
i. Perform interventions and integrated strategies that have been demonstrated to substantially improve individual and/or population health (e.g., immunizations, essential drugs, maternal child health programs) (3).
j. Display integrity, regard, and respect for others in all aspects of global nursing practice (2).
k. Adapt clinical or discipline-specific skills and practice in varied settings (3).
l. Discuss the role and impact of nurses globally (10).

5. Culturally Competent, Humanistic, and Holistic Care

This domain addresses the concepts of culturally competent, humanistic, and holistic care as applied to global health and global nursing. Cultural competence refers to "the attitudes, knowledge and skills necessary to provide quality care to diverse populations" (11). Holistic nursing care refers to practice that has "healing the whole person as its goal" (12). Humanistic nursing care is "concerned with contributing to the dignity, happiness, and well-being of persons with whom (nurses) interact" (13).

a. Provide culturally competent, humanistic, and holistic care and support for clients from diverse population groups (5).
b. Explain how cultural context influences perceptions of health and disease. 3
c. Elicit individual health concerns in a culturally sensitive manner. 3

d. Act respectfully according to what is appropriate in the culture and the situation, including gestures, expressions, and behaviors. 14

6. Collaboration and Partnerships

This domain relates to collaborating and partnering, which refers to the ability to select, recruit, and work with a diverse range of global health stakeholders to advance research, policy, and practice goals, and to foster open dialogue and effective communication with partners and within a team" (2).

a. Describe the process of team development and the roles and practices of effective teams (15).
b. Apply leadership practices that support collaborative practice and team effectiveness (15)
c. Apply relationship-building values and principles of team dynamics to perform effectively in different team roles (15).
d. Exhibit interprofessional values and communication skills that demonstrate respect for, and awareness of, the unique cultures, values, roles/responsibilities, and expertise represented by other professionals and groups that work in global health (15).
e. Recognize one's limitations in skills, knowledge, attitudes, and abilities (15).
f. Engage self and others to constructively manage disagreements about values, roles, goals, and actions using respectful language appropriate for a given difficult situation, crucial conversation, or interprofessional conflict (15).

7. Communication

Communication is a dynamic process that involves the symbolic exchange of shared meaning (16).

a. Communicate effectively with patients and families, including using a translator when necessary (3).
b. Participate in designing practical and culturally relevant communication programs for a variety of settings (9).
c. Communicate with team members to clarify one's own role and responsibility and each member's role and responsibility on the team (15).
d. Choose effective communication tools and techniques, including information systems and communication technologies, to facilitate discussions and interactions that enhance team function, avoiding discipline- or culturally specific terminology when appropriate (15).
e. Give timely, sensitive, instructive feedback to others about their performance on the team, responding respectfully as a team member to feedback from others (15).
f. Communicate effectively to promote global and planetary health.

8. Leadership, Management, and Advocacy

This domain refers to knowledge, skills, and attitudes nurses need to demonstrate in terms of leadership (use of personal traits to constructively and ethically influence

patients, families, and staff), management (activities needed to plan, organize, motivate, and control the human and material resources to achieve an specific outcome), and advocacy (proactively speaking for another to ensure certain needs or wishes are met) (17).

a. Apply concepts of community development, policy, and advocacy to promote planetary health (9).
b. Advocate for the improved physical and mental health of vulnerable populations (5).
c. Participate in the development, implementation, and evaluation of strategies to address major health problems in varied settings, incorporating locally determined priorities and assessing their efficacy and cost-effectiveness (9).
d. Discuss priority setting, health care rationing, and healthcare funding for health and health-related research (3).
e. Analyze the role of policy development and enactment in addressing health inequities (10).

9. Ethical Issues, Equity, and Social Justice in Global Health

This domain incorporates competencies related to ethics, equity, and social justice in global health. Ethics refers the use of moral principles to guide decisions and actions. Ethical principles include beneficence, do no harm, respect for autonomy, fairness, truthfulness, and justice. "Health equity and social justice is the framework for analyzing strategies to address health disparities across socially, demographically, or geographically defined populations" (2).

a. Examine the relationship between health, human rights and global inequities (2).
b. Describe the role of organizations and agreements that address human rights in health care and health research (3).
c. Describe the role of WHO in linking health and human rights, the Universal Declaration of Human Rights, International Ethical Guidelines for Biomedical Research Involving Human Subjects (2002), Declaration of Helsinki (2008) (3).
d. Apply social justice and human rights principles in addressing global health problems (2).
e. Demonstrate a commitment to social responsibility (2).
f. Analyze the implications of historic global interrelationships between colonization and health equity (10).

APPENDIX D

DELPHI ROUND TWO SURVEY ONE

Reaching Consensus on Global Health Nursing Competencies for Baccalaureate Nursing Education in the United States - Preliminary Content Validation

Thank you very much for your email indicating interest in learning more about my dissertation research entitled "Reaching Consensus on Essential Global Health Nursing Competencies for Baccalaureate Nursing Students in the United States: A Delphi Study". During this second phase I am asking you and five other global health nursing experts to complete two online surveys. The following survey is the first of these two surveys. In this survey you will have an opportunity to provide feedback about definitions of proposed global health competency domains and competencies. I anticipate that it will take no more than 1 - 2 hours to complete this survey.

This study has been approved by the Institutional Review Board (IRB) of the University of Alabama at Birmingham (UAB). Your completion of the survey indicates your consent to participate in this study. Your responses will be confidential, and no names or other identifying information will be linked to individual participants in reports, publications or presentations that result from this study. You are free to withdraw from this study at any time. All survey responses will be stored on the researcher's password protected computer, and original data will be destroyed 3 years after the study findings are published.
If you have questions about your rights as a research participant, or concerns or complaints about the research, you may contact the UAB Office of the IRB (OIRB) at (205) 934-3789 or toll free at 1- 855-860-3789. Regular hours for the OIRB are 8:00 a.m. to 5:00 p.m. CT, Monday through Friday. You may also call this number in the event the research staff cannot be reached or you wish to talk to someone else. If you have questions about the survey itself, you may contact me at htorres@uab.edu.

Thank you again for participating in this study!! Please complete the survey within 3 weeks.
Sincerely,

Herica Torres, RN, MSN PhD student.
University of Alabama at Birmingham School of Nursing

Reaching Consensus on Global Health Nursing Competencies for Baccalaureate Nursing Education in the United States - Preliminary Content Validation
Demographics

Select your age group

What is your gender

M
F

Please indicate your educational credentials (check all that apply)

Bachelor of Science in Nursing
Bachelor's degree in field other than nursing Master of Science in Nursing
Master's degree in field other than nursing PhD
Doctor of Nursing Practice
Other

How many years of experience do you have in baccalaureate nursing education (combined experience)?

3 - 5 years
6 - 10 years
11 - 15 years
16 - 20 years
More than 21 years

Please check the types of global health experience that you have had (Check all that apply)

Research
Education
Practice

What is your experience in global health (use GAPFON definition) in years (combined experience)?

1 - 5 years
6 - 10 years
11 - 15 years
16 - 20 years
More than 21 years

What is your current job title?

Reaching Consensus on Global Health Nursing Competencies for Baccalaureate Nursing Education in the United States - Preliminary Content Validation
Instructions

This survey includes 50 competencies within nine global health domains that have been developed for inclusion in the Delphi Survey to identify essential global health competencies for baccalaureate nursing students. You are being asked to review these competencies and domains prior to the sending them to the Delphi survey participants in the next phase of the study.

The first section includes the definitions of each of the nine domains. In this section, you will be able to accept the definition of the domain as is, accept it with changes (you will be allowed to add changes in a text box), reject, or consider an alternative (you will be allowed to add changes in a text box). Please have GAPFON's definition of global health in mind when providing your input (see definition below).
In the second section of the survey, you will have an opportunity to provide similar feedback for each of the 50 proposed competencies. The numbers that are included within parentheses in the definitions of domains and competencies refer to references supporting these domains or competencies. The list of references is included at the end of the survey for your information.

GAPFON Definition of Global Health
“Global health refers to an area for practice, study and research that places a priority on improving health, achieving equity in health for all people (Koplan et al. 2009) and ensuring health-promoting and sustainable sociocultural, political and economic systems (Janes & Corbett 2009). Global health implies planetary health which equals human, animal, environmental and ecosystem health (Kahn et al. 2014) and it emphasizes transnational health issues, determinants and solutions; involves many disciplines within and beyond the health sciences and promotes interdependence and interdisciplinary collaboration; and is a synthesis of population-based prevention with individual holistic care (Koplan et al. 2009).” (Wilson, Mendes, et al., 2016, p. 8).

Reaching Consensus on Global Health Nursing Competencies for Baccalaureate Nursing Education in the United States - Preliminary Content Validation
Section 1

Domain Definitions

1. Global Burden of Disease

This domain encompasses a basic understandings of major causes of morbidity, disability, and mortality and their variations between age, sex, ethnicity, and socioeconomic status within and across countries (1,2).\

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate definition:

---

2. Health Implications of Pandemics, Displacement, Wars, Disasters, and Travel

This domain refers to health issues associated to pandemics, displacement, wars, disaster, and travel of populations across the globe. Displacement occurs when individuals leave their homes either to go to other parts of the country or across nations as a result of a natural or man-made event (4).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate definition:

---

3. Social and Environmental Determinants of Planetary Health

This domain "focuses on an understanding that personal, social, economic, and environmental factors are important determinants of health, that health is more than the absence of disease" (2) and that planetary health "is rooted in understanding the interdependencies of humans and natural systems (7).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate definition:

---

4. Global Nursing and Health Care

This domain focuses on understanding how globalization affects health, health systems, and the delivery of health and nursing care (2). Global nursing "is the use of evidence-based nursing process to promote sustainable planetary health and equity for all people (8)."

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate definition

---

5. Culturally Competent, Humanistic, and Holistic Care

This domain addresses the concepts of culturally competent, humanistic, and holistic care as applied to global health and global nursing. Cultural competence refers to "the attitudes, knowledge and skills necessary to provide quality care to diverse populations (11)." Holistic nursing care refers to practice that

has "healing the whole person as its goal (12)." Humanistic nursing care is "concerned with contributing to the dignity, happiness, and well-being of persons with whom (nurses) interact (13)."

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate definition:

---

6. Collaboration and Partnerships

This domain relates to collaborating and partnering, which refers to the ability to select, recruit, and work with a diverse range of global health stakeholders to advance research, policy, and practice goals, and to foster open dialogue and effective communication with partners and within a team (2)."

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate definition:

---

7. Communication

Communication is a dynamic process that involves the symbolic exchange of shared meaning (16).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate definition:

---

8. Leadership, Management, and Advocacy

This domain refers to knowledge, skills, and attitudes nurses need to demonstrate in terms of leadership (use of personal traits to constructively and ethically influence patients, families, and staff), management (activities needed to plan, organize, motivate, and control the human and material resources to achieve an specific outcome), and advocacy (proactively speaking for another to ensure certain needs or wishes are met) (17).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate definition:

---

9. Ethical Issues, Equity, and Social Justice in Global Health

This domain incorporates competencies related to ethics, equity, and social justice in global health. Ethics refers the use of moral principles to guide decisions and actions. Ethical principles include beneficence, do no harm, respect for autonomy, fairness, truthfulness, and justice. "Health equity and social justice is the framework for analyzing strategies to address health disparities across socially, demographically, or geographically defined populations (2)."

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate definition:

Reaching Consensus on Global Health Nursing Competencies for Baccalaureate Nursing Education in the United States - Preliminary Content Validation

Section 2 Competencies

The following global health competencies have been identified as the knowledge, skills, and/or attitudes, baccalaureate nursing education need to possess at graduation.
Please complete the following to determine which competencies you consider as "essential" for baccalaureate nursing education in the U.S.

You will be able accept the competencies, accept them with changes (you will be allowed to add changes in a text box), reject, or consider an alternative (you will be allowed to add changes in a text box). Please have GAPFON's definition of global health in mind when providing your input (see definition below). Please be aware that some competencies may address multiple components.
Future users could develop multiple objectives for different competencies.

GAPFON Definition of Global Health
“Global health refers to an area for practice, study and research that places a priority on improving health, achieving equity in health for all people (Koplan et al. 2009) and ensuring health-promoting and sustainable sociocultural, political and economic systems (Janes & Corbett 2009). Global health implies planetary health which equals human, animal, environmental and ecosystem health (Kahn et al. 2014) and it emphasizes transnational health issues, determinants and solutions; involves many disciplines within and beyond the health sciences and promotes interdependence and interdisciplinary collaboration; and is a synthesis of population-based prevention with individual holistic care (Koplan et al. 2009).” (Wilson, Mendes, et al., 2016, p. 8).

Reaching Consensus on Global Health Nursing Competencies for Baccalaureate Nursing Education in the United States - Preliminary Content Validation
Section 2 Competencies

1. Global Burden of Disease

This domain encompasses a basic understandings of major causes of morbidity, disability, and mortality and their variations between age, sex, ethnicity, and socioeconomic status within and across countries (1,2).

Competencies:

1 a) Asses the major causes of morbidity, disability, and mortality around the world and how the risk of disease varies with regions (3).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate competency definition

---

1 b) Describe major public health efforts to reduce disparities in global health (such as Sustainable Development Goals and Global Fund to Fight AIDS, TB, and Malaria) (3).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate competency definition

---

If you think more competencies are needed in this domain, please enter those in box below

---

2. Health Implications of Pandemics, Displacement, Wars, Disasters, and Travel

This domain refers to health issues associated to pandemics, displacement, wars, disaster, and travel of populations across the globe. Displacement occurs when individuals leave their homes either to go to other parts of the country or across nations as a result of a natural or man-made event (4).

Competencies:

2 a) Explain the health risks posed by international travel or foreign birth (3).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate competency definition

---

2 b) Analyze the effects of displacement, wars, and migration on health of refugees and immigrants (5).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate competency definition

---

2 c) Explain how travel or foreign birth places a patient at risk for unusual diseases or unusual presentation of common diseases and make an appropriate assessment or referral (3).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate competency definition

2 d) Identify world regions and/or travel activities associated with increased risk for life-threatening diseases including HIV/AIDS, malaria, and multidrug-resistant tuberculosis (3).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate competency definition

2 e) Describe basic principles of nursing roles in disasters including helping communities to prepare for and respond to disasters (6).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate competency definition

2 f) Analyze how travel and trade contribute to the spread of communicable and chronic diseases (3).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate competency definition

If you think more competencies are needed in this domain, please enter those in box below

3. Social and Environmental Determinants of Planetary Health

This domain "focuses on an understanding that personal, social, economic, and environmental factors are important determinants of health, that health is more than the absence of disease" 2 and that planetary health "is rooted in understanding the interdependencies of humans and natural systems" (7).

Competencies:

3 a) Explain how social and economic conditions such as poverty, education, and lifestyles affect health and access to health care (3).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate competency definition

3 b) List major social determinants of health and their impact on differences in life expectancy between and within countries (3).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate competency definition

3 c) Comment on the impact of low income, education, and communication factors on access to and quality of health care (3).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate competency definition

3 d) Asses the relationship between access to clean water, sanitation, food, and air quality on individual and population health (3).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate competency definition

3 e) Summarize the relationship between environmental degradation and human health (3).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate competency definition

If you think more competencies are needed in this domain, please enter those in box below

4. Global Nursing and Health Care

This domain focuses on understanding how globalization affects health, health systems, and the delivery of health and nursing care (2). Global nursing "is the use of evidence-based nursing process to promote sustainable planetary health and equity for all people (8)."

Competencies:

4 a) Analyze how global trends in health care practice, commerce and culture, multinational agreements, and multinational organizations contribute to the quality and availability of health and health care locally and globally (3).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate competency definition

4 b) Describe different national models or health systems for provision of health care and their respective effects on health and health care expenditure (3).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate competency definition

4 c) Analyze general trends and influences in the global availability and movement of health care workers (3).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate competency definition

---

4 d) Compare and contrast national and global health care worker availability and shortages (3).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate competency definition

---

4 e) Describe the most common patterns of health care worker migration and its impact on health care availability in the country that the health care worker leaves and the country to which he or she migrates (3).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate competency definition

---

4 f) Analyze the economic, social, political, and academic conditions that can produce a strong health workforce (9).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate competency definition

---

4 g) Provide examples of barriers to health and health care locally and globally (3).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate competency definition

---

4 h) Adapt clinical skills and practice in a variety of settings (3).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate competency definition

---

4 i) Perform interventions and integrated strategies that have been demonstrated to substantially improve individual and/or population health (e.g., immunizations, essential drugs, maternal child health programs) (3).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate competency definition

---

4 j) Display integrity, regard, and respect for others in all aspects of global nursing practice (2).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate competency definition

---

4 k) Adapt clinical or discipline-specific skills and practice in varied settings (3).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate competency definition

---

4 l) Discuss the role and impact of nurses globally (10).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate competency definition

---

If you think more competencies are needed in this domain, please enter those in box below:

---

5. Culturally Competent, Humanistic, and Holistic Care

This domain addresses the concepts of culturally competent, humanistic, and holistic care as applied to global health and global nursing. Cultural competence refers to "the attitudes, knowledge and skills necessary to provide quality care to diverse populations" (11). Holistic nursing care refers to practice that has "healing the whole person as its goal" (12). Humanistic nursing care is "concerned with contributing to the dignity, happiness, and well-being of persons with whom (nurses) interact" (13).

Competencies:

5 a) Provide culturally competent, humanistic, and holistic care and support for clients from diverse population groups (5).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate competency definition

---

5 b) Explain how cultural context influences perceptions of health and disease (3).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate competency definition

---

5 c) Elicit individual health concerns in a culturally sensitive manner (3).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate competency definition

---

5 d) Act respectfully according to what is appropriate in the culture and the situation, including gestures, expressions, and behaviors (14).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate competency definition

---

If you think more competencies are needed in this domain, please enter those in box below

---

6. Collaboration and Partnerships

This domain relates to collaborating and partnering, which refers to the ability to select, recruit, and work with a diverse range of global health stakeholders to advance research, policy, and practice goals, and to foster open dialogue and effective communication with partners and within a team" (2).

Competencies:

6 a) Describe the process of team development and the roles and practices of effective teams (15).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate competency definition

---

6 b) Apply leadership practices that support collaborative practice and team effectiveness (15).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate competency definition

---

6 c) Apply relationship-building values and principles of team dynamics to perform effectively in different team roles (15).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate competency definition

---

6 d) Exhibit interprofessional values and communication skills that demonstrate respect for, and awareness of, the unique cultures, values, roles/responsibilities, and expertise represented by other professionals and groups that work in global health (15).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate competency definition

---

6 e) Recognize one's limitations in skills, knowledge, attitudes, and abilities (15).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate competency definition

---

6 f) Engage self and others to constructively manage disagreements about values, roles, goals, and actions using respectful language appropriate for a given difficult situation, crucial conversation, or interprofessional conflict (15).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate competency definition

If you think more competencies are needed in this domain, please enter those in box below

7. Communication

Communication is a dynamic process that involves the symbolic exchange of shared meaning (16).

Competencies:

7 a) Communicate effectively with patients and families, including using a translator when necessary (3).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate competency definition

7 b) Participate in designing practical and culturally relevant communication programs for a variety of settings (9).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate competency definition

7 c) Communicate with team members to clarify one's own role and responsibility and each member's role and responsibility on the team (15).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate competency definition

7 d) Choose effective communication tools and techniques, including information systems and communication technologies, to facilitate discussions and interactions that enhance team function, avoiding discipline- or culturally specific terminology when appropriate (15).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate competency definition

7 e) Give timely, sensitive, instructive feedback to others about their performance on the team, responding respectfully as a team member to feedback from others (15).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate competency definition

7 f) Communicate effectively to promote global and planetary health.

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate competency definition

---

If you think more competencies are needed in this domain, please enter those in box below

---

8. Leadership, Management, and Advocacy

This domain refers to knowledge, skills, and attitudes nurses need to demonstrate in terms of leadership (use of personal traits to constructively and ethically influence patients, families, and staff), management (activities needed to plan, organize, motivate, and control the human and material resources to achieve an specific outcome), and advocacy (proactively speaking for another to ensure certain needs or wishes are met) (17).

Competencies:

8 a) Apply concepts of community development, policy, and advocacy to promote planetary health (9).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate competency definition

---

8 b) Advocate for the improved physical and mental health of vulnerable populations (5).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate competency definition

---

8 c) Participate in the development, implementation, and evaluation of strategies to address major health problems in varied settings, incorporating locally determined priorities and assessing their efficacy and cost- effectiveness (9).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate competency definition

---

8 d) Discuss priority setting, health care rationing, and healthcare funding for health and health-related research (3).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate competency definition

---

8 e) Analyze the role of policy development and enactment in addressing health inequities (10)

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate competency definition

---

If you think more competencies are needed in this domain, please enter those in box below

---

9. Ethical Issues, Equity, and Social Justice in Global Health

This domain incorporates competencies related to ethics, equity, and social justice in global health. Ethics refers the use of moral principles to guide decisions and actions. Ethical principles include beneficence, do no harm, respect for autonomy, fairness, truthfulness, and justice. "Health equity and social justice is the framework for analyzing strategies to address health disparities across socially, demographically, or geographically defined populations" (2).

Competencies:

9 a) Examine the relationship between health, human rights and global inequities (2).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate competency definition

---

9 b) Describe the role of organizations and agreements that address human rights in health care and health research (3).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate competency definition

---

9 c) Describe the role of WHO in linking health and human rights, the Universal Declaration of Human Rights, International Ethical Guidelines for Biomedical Research Involving Human Subjects (2002), Declaration of Helsinki (2008) (3).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate competency definition

---

9 d) Apply social justice and human rights principles in addressing global health problems (2).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate competency definition

---

9 e) Demonstrate a commitment to social responsibility (2).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate competency definition

---

9 f) Analyze the implications of historic global interrelationships between colonization and health equity (10).

Accept Accept with changes Reject Consider an alternative

Please enter changes to the definition or enter alternate competency definition

---

If you think more competencies are needed in this domain, please enter those in box below

Reaching Consensus on Global Health Nursing Competencies for Baccalaureate Nursing Education in the United States - Preliminary Content Validation

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APPENDIX E

DELPHI ROUND TWO SURVEY TWO

Thank you very much for completing the first survey and for your continued interest in this research study!! This is the last survey you will need to complete. In this survey, I will ask that you rate the global health domains and competencies that you provided feedback for. Once you have rated the domains and competencies, I will ask you to provide feedback about the construction of the survey. I anticipate that it will take no more than 30 minutes to complete this survey.

This study has been approved by the Institutional Review Board (IRB) of the University of Alabama at Birmingham (UAB). Your completion of the survey indicates your consent to participate in this study. Your responses will be confidential, and no names or other identifying information will be linked to individual participants in reports, publications or presentations that result from this study. You are free to withdraw from this study at any time. All survey responses will be stored on the researcher's password protected computer, and original data will be destroyed 3 years after the study findings are published.
If you have questions about your rights as a research participant, or concerns or complaints about the research, you may contact the UAB Office of the IRB (OIRB) at (205) 934-3789 or toll free at 1-855-860-3789. Regular hours for the OIRB are 8:00 a.m. to 5:00 p.m. CT, Monday through Friday. You may also call this number in the event the research staff cannot be reached or you wish to talk to someone else. If you have questions about the survey itself, you may contact me at htorres@uab.edu.

Thank you again for participating in this study!!
Please complete the survey by November 10.

Sincerely,

Herica Torres, RN, MSN
PhD student.
University of Alabama at Birmingham
School of Nursing

Instructions
This survey includes 44 competencies within nine global health domains that you helped develop. You are being asked to rate these competencies and domains prior to the sending them to the Delphi survey participants in the next phase of the study.

The first section of the survey includes the definitions of each of the nine domains. In this section, please rate the extent to which you think that each domain is essential for baccalaureate students in the U.S., using a 5-point likert scale (1 = strongly disagree; 2 = disagree; 3 = neither agree nor disagree; 4 = agree ; 5 = strongly agree)
In the second section of this survey, you will be asked to rate all 44 competencies as you think they are essential for baccalaureate nursing students in the U.S. You will do this by answering a five-point likert scale questionnaire: 1 = strongly disagree; 2 = disagree; 3 = neither agree nor disagree; 4 = agree ; 5 = strongly agree.
The third section you will be asked to answer a questionnaire about the construction of the survey.
Please have GAPFON's definition of global health in mind when providing your input (see definition below). The numbers that are included within parentheses in the definitions of domains and competencies refer to references supporting these domains or competencies. The list of references is included at the end of the survey for your information.

GAPFON Definition of Global Health
“Global health refers to an area for practice, study and research that places a priority on improving health, achieving equity in health for all people (Koplan et al. 2009) and ensuring health-promoting and sustainable sociocultural, political and economic systems (Janes & Corbett 2009). Global health implies planetary health which equals human, animal, environmental and ecosystem health (Kahn et al. 2014) and it emphasizes transnational health issues, determinants and solutions; involves many disciplines within and beyond the health sciences and promotes interdependence and interdisciplinary collaboration; and is a synthesis of population-based prevention with individual holistic care (Koplan et al. 2009).” (Wilson, Mendes, et al., 2016, p. 8).

Domain Definitions

1. Global Burden of Disease

This domain encompasses a basic understandings of major causes of morbidity, disability, and mortality and the variations associated with age, sex, ethnicity, socioeconomic status within and across countries and the disproportionate representation in countries and regions (1, 2).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

2. Health Implications of Pandemics, Displacement, Wars, Disasters, and Travel

This domain refers to health issues associated with pandemics, displacement, wars, disaster, and travel of populations across the globe. Displacement occurs when individuals are forced to leave their homes either to go to other parts of the country or across nations as a result of a natural or man-made event (4).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

3. Social and Environmental Determinants of Planetary Health

This domain "focuses on an understanding that factors, such as, personal, social, economic, and environmental influences are important determinants of health, that health is more than the absence of disease" (2) and that planetary health "is rooted in understanding the interdependencies of humans and natural systems" (7).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

4. Global Nursing and Health Care

This domain focuses on understanding how globalization affects health, health systems, and the delivery of health and nursing care in all countries and regions (2). Global nursing is the use of evidence-based nursing process to promote sustainable planetary health and equity for all people (8).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

5. Culturally Competent, Humanistic, and Holistic Care

This domain addresses client centered care and encompasses the concepts of culturally competent, humanistic, and holistic care as applied to global health and global nursing. Cultural competence refers to "the attitudes, knowledge and skills necessary to provide quality care to diverse populations (11)". Holistic nursing care refers to practice with the goal of healing the whole person (12). Humanistic nursing care is "concerned with contributing to the dignity, happiness, and well-being of persons with whom (nurses) interact (13)."

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

6. Collaboration and Partnerships

This domain relates to reciprocal and egalitarian collaborations and partnerships, as a means to select, recruit, and work with a diverse range of global health stakeholders to advance research, policy, and practice goals, and to foster open dialogue and effective communication with partners and within a team (2)."

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

7. Communication

Communication is a dynamic process that involves the synchronous and asynchronous exchange of shared meaning in which everyone has an equal voice and is actively heard (16).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

8. Leadership, Management, and Advocacy

This domain refers to knowledge, skills, and attitudes nurses need to demonstrate leadership at all levels of the health system (use of personal traits to constructively and ethically influence patients, families, and staff), management (activities needed to plan, organize, motivate, and control the human and material resources to achieve an specific outcome), and advocacy (proactively speaking for another to ensure certain needs or wishes are met) (17).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

9. Ethical Issues, Equity, and Social Justice in Global Health

This domain incorporates competencies related to ethics, equity, and social justice in global health. Ethics refers to the use of moral principles to guide decisions and actions. Ethical principles include beneficence, do no harm, respect for autonomy, fairness, truthfulness, and justice. "Health equity and social justice is the framework for analyzing strategies to address health disparities across populations defined by geography, demographics, or social considerations" (2).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

Rating the Competencies

The following global health competencies have been identified as the knowledge, skills, and/or attitudes, baccalaureate nursing students in the U.S. need to possess at graduation.
Please rate the extent to which you believe that each competency is essential for baccalaureate nursing students in the U.S.
Please have GAPFON's definition of global health in mind when providing your input (see definition below). Please be aware that some competencies may address multiple components. Future users could develop multiple objectives for different competencies.

GAPFON Definition of Global Health
“Global health refers to an area for practice, study and research that places a priority on improving health, achieving equity in health for all people (Koplan et al. 2009) and ensuring health-promoting and sustainable sociocultural, political and economic systems (Janes & Corbett 2009). Global health implies planetary health which equals human, animal, environmental and ecosystem health (Kahn et al. 2014) and it emphasizes transnational health issues, determinants and solutions; involves many disciplines within and beyond the health sciences and promotes interdependence and interdisciplinary collaboration; and is a synthesis of population-based prevention with individual holistic care (Koplan et al. 2009).” (Wilson, Mendes, et al., 2016, p. 8).

1. Global Burden of Disease

This domain encompasses a basic understandings of major causes of morbidity, disability, and mortality and the variations associated with age, sex, ethnicity, socioeconomic status within and across countries and the disproportionate representation in countries and regions(1, 2).

Competencies:

1. a) Describe the major causes of morbidity, disability, and mortality around the world and how the risk of disease varies with regions (3).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

1. b) Describe major public health efforts to reduce disparities in global health (such as Sustainable Development Goals and Global Fund to Fight AIDS, TB, and Malaria) (3).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

2. Health Implications of Pandemics, Displacement, Wars, Disasters, and Travel

This domain refers to health issues associated with pandemics, displacement, wars, disaster, and travel of populations across the globe. Displacement occurs when individuals are forced to leave their homes either to go to other parts of the country or across nations as a result of a natural or man-made event (4).

Competencies:

2. a) Explain the health risks for populations as a result of international travel (3).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

2. b) Analyze the effects of displacement and migration on individual and population health (5).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

2. c) Describe basic principles of nursing roles in disasters including helping communities to prepare for and respond to disasters (6).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

3. Social and Environmental Determinants of Planetary Health

This domain "focuses on an understanding that factors, such as, personal, social, economic, and environmental influences are important determinants of health, that health is more than the absence of disease" (2) and that planetary health "is rooted in understanding the interdependencies of humans and natural systems" (7).

Competencies:

3. a) Explain how social and economic conditions such as poverty, race, education, and lifestyles affect access to health care (3).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

3. b) List major socio-economic and cultural determinants of health and their impact on differences in life expectancy between and within countries (3).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

3. c) Describe the impact of environmental factors such as clean water, sanitation, food, and air quality on individual and population health (3).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

3. d) Describe the relationship between environmental degradation and human health (3).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

4. Global Nursing and Health Care

This domain focuses on understanding how globalization affects health, health systems, and the delivery of health and nursing care in all countries and regions (2). Global nursing is the use of evidence-based nursing process to promote sustainable planetary health and equity for all people (8).

Competencies:

4 a) Analyze how global trends in health care practice, commerce, multinational agreements, and multinational organizations contribute to the quality and availability of health and health care locally and globally (3).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

4 b) Describe different national models or health systems for provision of health care and their respective effects on health outcomes, and health care expenditure (3).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

4 c) Analyze general trends and influences in the global availability and movement of health care workers (3).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

4. d) Describe differences and similarities in national and global health care worker availability and shortages (3).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

4. e) Describe the patterns and impact of health care worker migration on health care in the country that the health care worker leaves and the country to which he or she migrates (3).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

4. f) Identify the economic, social, political, professional, workplace, and academic conditions that can produce a strong health workforce (9).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

4. g) Identify barriers to health care access locally and globally (3).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

4. h) Carry out interventions and integrated strategies that have been demonstrated to be sustainable and to substantially improve individual and/or community health (e.g., immunizations, essential drugs, maternal child health programs) (3).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

4. i) Display integrity, regard, and respect for others in all aspects of global nursing practice (2).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

4. j) Adapt clinical or discipline-specific skills and practice in varied settings (3).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

4. k) Discuss roles and contributions of nurses to health care in different global regions (10).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

5. Culturally Competent, Humanistic, and Holistic Care

This domain addresses client centered care and encompasses the concepts of culturally competent, humanistic, and holistic care as applied to global health and global nursing. Cultural competence refers to "the attitudes, knowledge and skills necessary to provide quality care to diverse populations (11)". Holistic nursing care refers to practice that with the goal of healing the whole person (12). Humanistic nursing care is "concerned with contributing to the dignity, happiness, and well-being of persons with whom (nurses) interact" (13).

Competencies:

5. a) Provide culturally competent, humanistic, and holistic care and support for clients from diverse population groups (5).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

5. b) Explain how cultural context influences perceptions of health and disease (3).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

5. c) Elicit individual health concerns in a culturally sensitive manner (3).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

5. d) Act respectfully according to what is appropriate in the culture and the situation (14).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

5. e) Discuss the concept of cultural humility.

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

6. Collaboration and Partnerships

This domain relates to reciprocal and egalitarian collaborations and partnerships, as a means to select, recruit, and work with a diverse range of global health stakeholders to advance research, policy, and practice goals, and to foster open dialogue and effective communication with partners and within a team (2)."
Competencies:

6. a) Describe roles of key members of health care teams (15).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

6. b) Demonstrate collaboration and leadership skills including negotiation, communication, team-building, and conflict management (15).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

6. c) Apply relationship-building practices to perform effectively as a member of an interprofessional team (15).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

6. d) Exhibit interprofessional values and communication skills that demonstrate respect for, and awareness of, the unique cultures, values, roles/responsibilities, and expertise represented by other professionals and groups that work in global health (15).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

6. e) Recognize one's skills, knowledge, attitudes, and abilities, both strengths and areas for growth (15).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

6. f) Engage self and others to constructively manage disagreements about values, roles, goals, and actions using respectful language appropriate for a given difficult situation, crucial conversation, or interprofessional conflict (15).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

7. Communication

Communication is a dynamic process that involves the synchronous and asynchronous exchange of shared meaning in which everyone has an equal voice and is actively heard (16).

Competencies:

7. a) Communicate effectively when confronted with language barriers using translators when necessary (3).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

7. b) With input from the community, participate in designing practical and culturally relevant health information for a variety of settings (9).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

7. c) Communicate with team members to clarify one's own role and responsibility and each member's role and responsibility on the team (15).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

7. d) Choose effective communication tools and techniques, including information systems and communication technologies, to facilitate discussions and interactions that enhance team function, avoiding discipline or culturally specific terminology when appropriate (15).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

8. Leadership, Management, and Advocacy

This domain refers to knowledge, skills, and attitudes nurses need to demonstrate leadership at all levels of the health system (use of personal traits to constructively and ethically influence patients, families, and staff), management (activities needed to plan, organize, motivate, and control the human and material resources to achieve an specific outcome), and advocacy (proactively speaking for another to ensure certain needs or wishes are met) (17).

Competencies:
8. a) Apply concepts of community engagement, development, policy, and advocacy to promote planetary health (9).
Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

8. b) Advocate for improving the health of vulnerable populations (5).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

8. c) Participate in the development, implementation, and evaluation of strategies to address major health problems in varied settings, incorporating locally determined priorities and assessing their efficacy and cost-effectiveness (9).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

8. d) Discuss priority setting, health care rationing, and healthcare funding for health and health-related research (3).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

9. Ethical Issues, Equity, and Social Justice in Global Health

This domain incorporates competencies related to ethics, equity, and social justice in global health. Ethics refers to the use of moral principles to guide decisions and actions. Ethical principles include beneficence, do no harm, respect for autonomy, fairness, truthfulness, and justice. "Health equity and social justice is the framework for analyzing strategies to address health disparities across populations defined by geography, demographics, or social considerations" (2).

Competencies:

9. a) Examine the relationship between health, human rights and global inequities (2).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

9. b) Describe the role of organizations and governing bodies that address human rights in health care and health research (3).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

9. c) Describe the role and challenges of the World Health Organization (WHO) in linking health and human rights, the Universal Declaration of Human Rights, International Ethical Guidelines for Biomedical Research Involving Human Subjects (2002), Declaration of Helsinki (2008) (3).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

9. d) Apply social justice and human rights principles in addressing global health problems (2).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

9. e) Demonstrate a commitment to social justice and social responsibility (2).

Strongly disagree Disagree Neither Agree nor Disagree Agree
Strongly Agree Strongly disagree

Survey Construction Questionnaire

How long did it take you to complete the survey in minutes?
Do you consider the time it took you to complete the survey a reasonable amount of time?
Yes__ No___
Comments
Did you find difficulties logging onto the survey or using the survey link?
Yes__ No__
Comments
What did you think about the general appearance of the survey?
Is there anything you would like to see changed in the survey?

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17) Yoder-Wise, P. S. (2015). *Leading and managing in nursing* (6th ed.). St Louis, MO: Elsevier.

APPENDIX F

REMINDER TO COMPLETE SURVEY

Dear: _____

Re: Reaching Consensus on Essential Global Health Nursing Competencies for Baccalaureate Nursing Students in the United States: A Delphi Study

Thank you so much for your willingness in participating in this study. I greatly appreciate it!
This is a friendly reminder for you to complete the survey that was sent on_______.
Please complete the survey by________ using the link below:

Let me know if you have any questions!
Sincerely,

Herica Torres, RN, MSN
PhD student.
University of Alabama at Birmingham
School of Nursing

APPENDIX G

DELPHI ROUND THREE SURVEY

Reaching Consensus on Global Health Nursing Competencies for Baccalaureate Nursing Education in the United States - Rating the Domains and Competencies

Delphi Round 3

Thank you very much for your willingness to participate in my dissertation research entitled "Reaching Consensus on Essential Global Health Nursing Competencies for Baccalaureate Nursing Students in the United States: A Delphi Study". During this phase I am asking you and other global health nursing experts to complete two online surveys. The following survey is the first of these two surveys. I anticipate that it will take no more than 30 minutes to complete this survey. I will send you the second survey approximately 3 weeks after the first survey has been sent.

This study has been approved by the Institutional Review Board (IRB) of the University of Alabama at Birmingham (UAB). Your completion of the survey indicates your consent to participate in this study. Your responses will be confidential, and no names or other identifying information will be linked to individual participants in reports, publications or presentations that result from this study. You are free to withdraw from this study at any time. All survey responses will be stored on the researcher's password protected computer, and original data will be destroyed 3 years after the study findings are published.
If you have questions about your rights as a research participant, or concerns or complaints about the research, you may contact the UAB Office of the IRB (OIRB) at (205) 934-3789 or toll free at 1-855-860-3789. Regular hours for the OIRB are 8:00 a.m. to 5:00 p.m. CT, Monday through Friday. You may also call this number in the event the research staff cannot be reached or you wish to talk to someone else. If you have questions about the survey itself, you may contact me at htorres@uab.edu.

Thank you again for participating in this study!!

Please complete the survey within by December 20

Sincerely,

Herica Torres, RN, MSN
PhD student.
University of Alabama at Birmingham
School of Nursing

Demographics

Select your age group
25 - 35 years
36 - 45 years
46 - 55 years
56 - 65 years
Older than 65 years

What is your gender?
M__ F__

Please indicate your educational credentials (check all that apply)

Bachelor of Science in Nursing
Bachelor's degree in field other than nursing
Master of Science in Nursing
PhD
Doctor or Nursing Practice
Other (please specify)

How many years of experience do you have in baccalaureate nursing education in the U.S. (combined experience)
3 - 5 years
6 - 10 years
11 - 15 years
16 - 20 years
More than 21 years

Please check the types of global health experience that you have had (Check all that apply)
Research
Education
Practice

What is you experience in global health (use GAPFON definition below) in years (combined experience).

GAPFON definition of global health:
"Global health refers to an area for practice, study and research that places a priority on improving health, achieving equity in health for all people (Koplan et al. 2009) and ensuring health-promoting and sustainable sociocultural, political and economic systems (Janes & Corbett 2009). Global health implies planetary health which equals human, animal, environmental and ecosystem health (Kahn et al. 2014) and it emphasizes transnational health issues, determinants and solutions; involves many disciplines within and beyond the health sciences and promotes interdependence and interdisciplinary collaboration; and is a synthesis of population-based prevention with individual holistic care (Koplan et al. 2009)." (Wilson, Mendes, et al., 2016, p. 8).

1 - 5 years
6 - 10 years
11 - 15 years
16 - 20 years
More than 21 years

What is your current job title?

Rating the Competencies

The following global health competencies have been identified as the knowledge, skills, and/or attitudes, baccalaureate nursing students in the U.S. need to possess at graduation. These competencies are clustered into nine global health domains. The definitions of each of the domains are provided. The numbers that are included within parentheses in the definitions of domains and competencies refer to references supporting these domains or competencies. The list of references is included at the end of the survey for your information.

Instructions:
Please rate the extent to which you believe that each competency is essential for baccalaureate nursing students in the U.S.
Please have GAPFON's definition of global health in mind when providing your input (see definition below). Please be aware that some competencies may address multiple components. Future users could develop multiple objectives for different competencies.

GAPFON Definition of Global Health
"Global health refers to an area for practice, study and research that places a priority on improving health, achieving equity in health for all people (Koplan et al. 2009) and ensuring health-promoting and sustainable sociocultural, political and economic systems (Janes & Corbett 2009). Global health implies planetary health which equals human, animal, environmental and ecosystem health (Kahn et al. 2014) and it emphasizes transnational health issues, determinants and solutions; involves many disciplines within and beyond the health sciences and promotes interdependence and interdisciplinary collaboration; and is a synthesis of population-based prevention with individual holistic care (Koplan et al. 2009)." (Wilson, Mendes, et al., 2016, p. 8).

1. Global Burden of Disease

This domain encompasses a basic understandings of major causes of morbidity, disability, and mortality and the variations associated with age, sex, ethnicity, socioeconomic status within and across countries and the disproportionate representation in countries and regions (1, 2).

Competencies:

1. a) Describe the major causes of morbidity, disability, and mortality around the world and how the risk of disease varies with regions (3).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

1. b) Describe major public health efforts to reduce disparities in global health (such as Sustainable Development Goals and Global Fund to Fight AIDS, TB, and Malaria) (3).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

2. Health Implications of Pandemics, Displacement, Wars, Disasters, and Travel

This domain refers to health issues associated with pandemics, displacement, wars, disaster, and travel of populations across the globe. Displacement occurs when individuals are forced to leave their homes either to go to other parts of the country or across nations as a result of a natural or man-made event (4).

Competencies:

2. a) Explain the health risks for populations as a result of international travel (3).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

2. b) Analyze the effects of displacement and migration on individual and population health (5).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

2. c) Describe basic principles of nursing roles in disasters including helping communities to prepare for and respond to disasters (6).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

3. Social and Environmental Determinants of Planetary Health

This domain "focuses on an understanding that factors, such as, personal, social, economic, and environmental influences are important determinants of health that health is more than the absence of disease" (2) and that planetary health "is rooted in understanding the interdependencies of humans and natural systems" (7).

Competencies:

3. a) Explain how social and economic conditions such as poverty, race, education, and lifestyles affect access to health care (3).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

3. b) List major socio-economic and cultural determinants of health and their impact on differences in life expectancy between and within countries (3).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

3. c) Describe the impact of environmental factors such as clean water, sanitation, food, and air quality on individual and population health (3).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

3. d) Describe the relationship between environmental degradation and human health (3).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

4. Global Nursing and Health Care

This domain focuses on understanding how globalization affects health, health systems, and the delivery of health and nursing care in all countries and regions (2). Global nursing is the use of evidence-based nursing process to promote sustainable planetary health and equity for all people (8).

Competencies:

4 a) Analyze how global trends in health care practice, commerce, multinational agreements, and multinational organizations contribute to the quality and availability of health and health care locally and globally (3).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

4 b) Describe different national models or health systems for provision of health care and their respective effects on health outcomes, and health care expenditure (3).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

4. c) Identify the economic, social, political, professional, workplace, and academic conditions that can produce a strong health workforce (9).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

4. d) Identify barriers to health care access locally and globally (3).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

4. e) Carry out interventions and integrated strategies that have been demonstrated to be sustainable and to substantially improve individual and/or community health (e.g., immunizations, essential drugs, maternal child health programs) (3).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

4. f) Display integrity, regard, and respect for others in all aspects of global nursing practice (2).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

4. g) Adapt clinical or discipline-specific skills and practice in varied settings (3).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

4. h) Discuss roles and contributions of nurses to health care in different global regions (10).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

5. Culturally Competent, Humanistic, and Holistic Care

This domain addresses client centered care and encompasses the concepts of culturally competent, humanistic, and holistic care as applied to global health and global nursing. Cultural competence refers to "the attitudes, knowledge and skills necessary to provide quality care to diverse populations (11)". Holistic nursing care refers to practice with the goal of healing the whole person (12). Humanistic nursing care is "concerned with contributing to the dignity, happiness, and well-being of persons with whom (nurses) interact (13)."

Competencies:

5. a) Provide culturally competent, humanistic, and holistic care and support for clients from diverse population groups (5).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

5. b) Explain how cultural context influences perceptions of health and disease (3).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

5. c) Elicit individual health concerns in a culturally sensitive manner (3).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

5. d) Act respectfully according to what is appropriate in the culture and the situation (14).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

6. Collaboration and Partnerships

This domain relates to reciprocal and egalitarian collaborations and partnerships, as a means to select, recruit, and work with a diverse range of global health stakeholders to advance research, policy, and practice goals, and to foster open dialogue and effective communication with partners and within a team (2)."
Competencies:

6. a) Describe roles of key members of health care teams (15).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

6. b) Demonstrate collaboration and leadership skills including negotiation, communication, team-building, and conflict management (15).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

6. c) Apply relationship-building practices to perform effectively as a member of an interprofessional team (15).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

6. d) Exhibit interprofessional values and communication skills that demonstrate respect for, and awareness of, the unique cultures, values, roles/responsibilities, and expertise represented by other professionals and groups that work in global health (15).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

6. e) Recognize one's skills, knowledge, attitudes, and abilities, both strengths and areas for growth (15).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

6. f) Engage self and others to constructively manage disagreements about values, roles, goals, and actions using respectful language appropriate for a given difficult situation, crucial conversation, or interprofessional conflict (15).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

7. Communication

Communication is a dynamic process that involves the synchronous and asynchronous exchange of shared meaning in which everyone has an equal voice and is actively heard (16).

Competencies:

7. a) Communicate effectively when confronted with language barriers using translators when necessary (3).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

7. b) With input from the community, participate in designing practical and culturally relevant health information for a variety of settings (9).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

7. c) Communicate with team members to clarify one's own role and responsibility and each member's role and responsibility on the team (15).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

7. d) Choose effective communication tools and techniques, including information systems and communication technologies, to facilitate discussions and interactions that enhance team function, avoiding discipline or culturally specific terminology when appropriate (15).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

8. Leadership, Management, and Advocacy

This domain refers to knowledge, skills, and attitudes nurses need to demonstrate leadership at all levels of the health system (use of personal traits to constructively and ethically influence patients, families, and staff), management (activities needed to plan, organize, motivate, and control the human and material resources to achieve an specific outcome), and advocacy (proactively speaking for another to ensure certain needs or wishes are met) (17).

Competencies:

8. a) Apply concepts of community engagement, development, policy, and advocacy to promote planetary health (9).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

8. b) Advocate for improving the health of vulnerable populations (5).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

8. c) Participate in the development, implementation, and evaluation of strategies to address major health problems in varied settings, incorporating locally determined priorities and assessing their efficacy and cost-effectiveness (9).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

8. d) Discuss priority setting, health care rationing, and healthcare funding for health and health-related research (3).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

9. Ethical Issues, Equity, and Social Justice in Global Health

This domain incorporates competencies related to ethics, equity, and social justice in global health. Ethics refers to the use of moral principles to guide decisions and actions. Ethical principles include beneficence, do no harm, respect for autonomy, fairness, truthfulness, and justice. "Health equity and social justice is the framework for analyzing strategies to address health disparities across populations defined by geography, demographics, or social considerations" (2).

Competencies:

9. a) Examine the relationship between health, human rights and global inequities (2).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

9. b) Describe the role of organizations and governing bodies that address human rights in health care and health research (3).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

9. c) Describe the role and challenges of the World Health Organization (WHO) in linking health and human rights, the Universal Declaration of Human Rights, International Ethical Guidelines for Biomedical Research Involving Human Subjects (2002), Declaration of Helsinki (2008) (3).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

9. d) Apply social justice and human rights principles in addressing global health problems (2).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

9. e) Demonstrate a commitment to social justice and social responsibility (2).

Strongly disagree Disagree Neither Agree nor Disagree Agree Strongly Agree Strongly disagree

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APPENDIX H

LIST OF REFERENCES USED TO DEVELOP DOMAIN DEFINITIONS AND COMPETENCY STATEMENTS

1. Skolnik, R. (2015). *Global health 101*. Burlington, MA: Jones & Bartlett Publishers.
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APPENDIX I

DELPHI ROUND THREE DATA ANALYSIS

Domains and Competencies	SD		D		NA/ND		A		SA		N	M	Percentage of Agreement
	n	%	n	%	n	%	n	%	n	%			%
1. ***Global Burden of Disease***													
1a. Describe the major causes of morbidity, disability, and mortality around the world and how the risk of disease varies with regions (3).	2	4.88					8	19.51	31	75.61	41	4.6	95.1
1b. Describe major public health efforts to reduce disparities in global health (such as Sustainable Development Goals and Global Fund to Fight AIDS, TB, and Malaria) (3).	2	4.88					13	31.71	26	63.41	41	4.48	95.1
2. ***Health Implications of Pandemics, Displacement, Wars, Disasters, and Travel***													
2a. Explain the health risks for populations as a result of international travel (3).	2	4.88	2	4.88	4	9.76	19	46.34	14	34.15	41	4	80.5
2b. Analyze the effects of displacement and migration on individual and population health (5).	2	4.88					16	39.02	23	56.10	41	4.41	95.1
2c. Describe basic principles of nursing roles in disasters including helping communities to prepare for and respond to disasters (6).	2	4.88			2	4.88	13	31.71	24	58.54	41	4.39	90.3
3***. Social and Environmental Determinants of Planetary Health***													
3a. Explain how social and economic conditions such as poverty, race, education, and lifestyles affect access to health care (3).	1	2.44					9	21.95	31	75.61	41	4.68	97.6
3b. List major socio-economic and cultural determinants of health and their impact on differences in life expectancy between and within countries (3).	1	2.5			1	2.5	11	27.5	27	67.5	*40*	4.57	95
3c. Describe the impact of environmental factors such as clean water, sanitation,	1	2.44					5	12.2	35	85.37	41	4.78	97.6

food, and air quality on individual and population health (3).												
3d. Describe the relationship between environmental degradation and human health (3).	1	2.44					15	36.59	25	60.98	41	4.53	97.6
4. ***Global Nursing and Health Care***													
4a. Analyze how global trends in health care practice, commerce, multinational agreements, and multinational organizations contribute to the quality and availability of health and health care locally and globally (3).	1	2.44	2	4.88	7	17.07	17	41.46	14	34.15	41	4	75.6
4b. Describe different national models or health systems for provision of health care and their respective effects on health outcomes, and health care expenditure (3).	1	2.44	2	4.88	4	9.76	19	46.34	15	36.59	41	4.09	82.9
4c. Identify the economic, social, political, professional, workplace, and academic conditions that can produce a strong health workforce (9).	1	2.44	2	4.88	3	7.32	22	53.66	13	31.71	41	4.07	85.4
4d. Identify barriers to health care access locally and globally (3).	1	2.56	1	2.56			7	17.95	30	76.92	*39*	4.64	94.87
4e. Carry out interventions and integrated strategies that have been demonstrated to be sustainable and to substantially improve individual and/or community health (e.g., immunizations, essential drugs, maternal child health programs) (3).	2	5	1	2.5	3	7.5	14	36	20	50	*40*	4.22	85
4f. Display integrity, regard, and respect for others in all aspects of global nursing practice (2).	1	2.44					8	19.51	32	78.05	41	4.7	97.6
4g. Adapt clinical or discipline-specific skills and practice in varied settings (3).	2	4.88	1	2.44	5	12.2	13	31.71	20	48.78	41	4.17	80.5

4h. Discuss roles and contributions of nurses to health care in different global regions (10).	1	2.44			6	14.63	13	31.71	21	51.22	41	4.29	83
5. ***Culturally Competent, Humanistic, and Holistic Care***													
5a. Provide culturally competent, humanistic, and holistic care and support for clients from diverse population groups (5).	1	2.44			1	2.44	9	21.95	30	73.17	41	4.63	95
5b. Explain how cultural context influences perceptions of health and disease (3).	1	2.44	1	2.44			11	26.83	28	68.29	41	4.56	95
5c. Elicit individual health concerns in a culturally sensitive manner (3).	1	2.44			1	2.44	10	24.39	29	70.73	41	4.6	95
5d. Act respectfully according to what is appropriate in the culture and the situation (14).	1	2.5			1	2.5	5	12.5	33	82.5	*40*	4.72	95
6. ***Collaboration and Partnerships***													
6a. Describe roles of key members of health care teams (15).	1	2.5	1	2.5	3	7.5	17	42.5	18	45	*40*	4.25	87.5
6b. Demonstrate collaboration and leadership skills including negotiation, communication, team-building, and conflict management (15).	1	2.44	1	2.44	4	9.76	17	41.46	18	43.9	41	4.21	85.3
6c. Apply relationship-building practices to perform effectively as a member of an interprofessional team (15).	1	2.5			4	10	13	32.5	22	55	*40*	4.37	87.5
6d. Exhibit interprofessional values and communication skills that demonstrate respect for, and awareness of, the unique cultures, values, roles/responsibilities, and expertise represented by other professionals and groups that work in global health (15).	1	2.44			3	7.32	11	26.83	26	63.41	41	4.48	90.2

6e. Recognize one's skills, knowledge, attitudes, and abilities, both strengths and areas for growth (15).	1	2.44	1	2.44	3	7.32	8	19.51	28	68.29	41	4.48	87.8
6f. Engage self and others to constructively manage disagreements about values, roles, goals, and actions using respectful language appropriate for a given difficult situation, crucial conversation, or interprofessional conflict (15).	1	2.5			4	10	12	30	23	57.5	40	4.4	87.5
7. *Communication*													
7a. Communicate effectively when confronted with language barriers using translators when necessary (3).	1	2.44			1	2.44	10	24.39	29	70.73	41	4.6	95.1
7b. With input from the community, participate in designing practical and culturally relevant health information for a variety of settings (9).	1	2.44			3	7.32	13	31.71	24	58.54	41	4.43	90.2
7c. Communicate with team members to clarify one's own role and responsibility and each member's role and responsibility on the team (15).	1	2.44			4	9.76	8	19.51	28	68.29	41	4.51	87.8
7d. Choose effective communication tools and techniques, including information systems and communication technologies, to facilitate discussions and interactions that enhance team function, avoiding discipline or culturally specific terminology when appropriate (15).	1	2.44			5	12.2	11	26.83	24	58.54	41	4.39	85.3
8. *Leadership, Management, and Advocacy*													
8a. Apply concepts of community engagement, development, policy, and advocacy to promote planetary health (9).	1	2.44	1	2.44	5	12.2	18	43.9	16	39.02	41	4.14	82.9

8b. Advocate for improving the health of vulnerable populations (5).	1	2.44			1	2.44	6	14.63	33	80.49	41	4.7	95.1
8c. Participate in the development, implementation, and evaluation of strategies to address major health problems in varied settings, incorporating locally determined priorities and assessing their efficacy and cost-effectiveness (9).	1	2.44	1	2.44	2	4.88	14	34.15	23	56.1	41	4.39	90.2
8d. Discuss priority setting, health care rationing, and healthcare funding for health and health-related research (3).	2	4.88	2	4.88	5	12.2	19	46.34	13	31.71	41	3.95	78
9. *Ethical Issues, Equity, and Social Justice in Global Health*													
9a. Examine the relationship between health, human rights and global inequities (2	2	4.88			3	7.32	5	12.2	31	75.61	41	4.53	87.8
9b. Describe the role of organizations and governing bodies that address human rights in health care and health research (3).	1	2.44			6	14.63	19	46.34	15	36.59	41	4.14	82.9
9c. Describe the role and challenges of the World Health Organization (WHO) in linking health and human rights, the Universal Declaration of Human Rights, International Ethical Guidelines for Biomedical Research Involving Human Subjects (2002), Declaration of Helsinki (2008) (3).	1	2.44			7	17.07	14	34.15	19	46.34	41	4.21	80.5
9d. Apply social justice and human rights principles in addressing global health problems (2).	1	2.44			1	2.44	11	26.83	28	68.29	41	4.58	95.1
9e. Demonstrate a commitment to social justice and social responsibility (2).	1	2.44	2	4.88	3	7.32	11	26.83	24	58.54	41	4.34	85.4