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The Influence of Culture on the Use of Healthcare Services by Refugees in Southcentral Kentucky: A Mixed Study

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THE INFLUENCE OF CULTURE ON THE USE OF HEALTHCARE SERVICES BY REFUGEES IN SOUTHCENTRAL KENTUCKY: A MIXED STUDY

A Dissertation Presented to
The Faculty of the Educational Leadership Doctoral Program
Western Kentucky University
Bowling Green, Kentucky

In Partial Fulfillment
Of the Requirements for the Degree
Doctor of Education

By
Chika Nneka Ejike

May 2017
THE INFLUENCE OF CULTURE ON THE USE OF HEALTHCARE SERVICES BY REFUGEES IN SOUTHCENTRAL KENTUCKY: A MIXED STUDY

Date Recommended: Nov 8, 2016

Randall Capps, Dissertation Co-Chair
Grace Larrey, Dissertation Co-Chair

David Ciochetty, Committee Member

Dean, Graduate School: 2/23/17
DEDICATION

This dissertation is dedicated to

God

(my Heavenly Father),

Author of All Wisdom and Knowledge

Professor U.B.C.O. Ejike (deceased) and Dame. Mary Ejike

(my parents and academicians par excellence),

Who instilled in me the value of hard work, dedication, and perseverance.

Dr. Chinedu Ejike (M.D.), Engr. Nwachukwu Ejike, Ogochukwu Ejike, and Engr. Chidi

Ejike

(my siblings),

Who have been so supportive, encouraging, and understanding all the way.

Thank You!
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THE INFLUENCE OF CULTURE ON THE USE OF HEALTHCARE SERVICES BY REFUGEES IN SOUTHCENTRAL KENTUCKY: A MIXED STUDY

Chika Nneka Ejike
May 2017

Directed by: Randall C. Capps, Grace Larkey, and David Ciochetty

Educational Leadership Doctoral Program
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The world as a global village has become a ubiquitous trope in the popular discourse, and Bowling Green, Kentucky, with its substantial immigrant population, may be considered an exemplar of this idealized community. It has become an ideal location for research regarding the challenges faced by immigrants. Due to the diverse cultural identities of the refugee/immigrant population, it is particularly well suited for studies into complex culturally dependent healthcare utilization patterns.

The central research question for the study was as follows: What are the healthcare-seeking behavioral patterns (as influenced by culture) among refugees at their nearest healthcare facilities? This mixed study addressed four research questions, which were analyzed by survey and interview results. A survey was administered to refugees who fit the study criteria and have lived in south central Kentucky for six years; 110 responded. Descriptive statistics and psychometric work (factor analysis, Cronbach’s alpha, and inter-scale correlations) were conducted. ANOVA, t-tests, and simultaneous correlations were used to determine significant relationships inherent within each research question.

Research Question 1 used ANOVA due to the ethnic groups and languages that were categorized into groups. With Research Questions 2 and 4, t-tests were conducted with added correlation, while Research Question 3 used a combination of ANOVA and t-tests. The analysis explores the relationships between Predisposing Factors, Enabling
Factors, Need-Related Factors, and Cultural Competency of Services and utilization of healthcare services.

A purposeful sample of four refugees individually completed interviews that were approximately 50 minutes in length. They shared experiences and insights from their own cultural points of view. The implications of the overall results from the study are discussed.
CHAPTER I: STATEMENT OF THE PROBLEM

Introduction

The world as a global village has become a ubiquitous trope in the popular discourse. Southcentral Kentucky, with its substantial refugee population, may be an exemplar of this idealized community. Consequently, the immigrant population in the United States is on the rise; refugees and resident aliens are not excluded. Recently, an African immigrant from Liberia was presented as a patient in the emergency room of a hospital in Dallas, Texas. Despite acute clinical findings of ill health and the ongoing global scare of Ebola, he was sent home and later met his fate—death. Questions still loom, e.g., Did the patient present late? Did he hint he may have the deadly disease? Were the healthcare professionals equipped/trained to give needed assistance? More so, was the health facility culturally competent to give aid to an immigrant with a “foreign” infectious disease? This case and many more shed light on the culture of the healthcare system in the country, particularly with the increasing diverse immigrant population.

The ongoing immigration debate has been motivated more by concern about the possible deleterious effects of immigration on the American society, its political arena, and the economy than by the health and well-being of the immigrants. Refugee migration, access to healthcare, and physical health are related in complex ways that work to the disadvantage of these immigrants (Leclere, Jensen, & Biddlecom, 1994). Leclere et al. (1994) believed the process of migration involves varying degrees of economic, social, and environmental dislocation, all of which affect the health and well-being of migrants in the period following migration. Despite the increased interest in immigrants' use of welfare and social services, and in the future of the American
healthcare system, surprisingly little is known, especially on a national level, about the healthcare utilization patterns of immigrants or their participation in government funded insurance programs. Moreover, obviously, there are reasons to expect differences in healthcare utilization among refugees from developing countries due to the strong impact of culture on health.

Immigrant culture poses a challenge in seeking help. In order to understand cultural underpinnings of health and the utilization of health services among these refugees, it is essential to note that decisions relating to healthcare use are bound by a social context. The use of formal healthcare, however, is constrained by the lack of knowledge, limited resources and access to care, as well as cultural differences in illness and help-seeking behavior (Leclere et al., 1994). Immigrants may have higher morbidity due to differences in disease prevalence at the place of origin, the psychological and physical stress of moving, and the adaptation to new social and physical environments. Once in the host country, these refugees more likely live in poverty and face substantial economic barriers relative to access and utilization of medical care.

**Background**

The 1965 amendments to the Immigration and Nationality Act, which changed the pace and composition of immigration to the United States, will have continuing ramifications for many years. According to Leclere et al. (1994), the increased volume of immigration from developing countries has renewed the debate over the social and economic impact of immigration on the United States. The legislation raised the overall ceiling on immigration, stressed family reunification in the preference category system for entry, and instituted a more equitable worldwide distribution of visas. During the 20th
century, the majority of the immigrants coming into the United States were from regions of the world including Cuba, Caribbean, Eastern Europe, the former Soviet Union, Africa, and the Middle East. (Vergara, Miller, Martin, & Cookson, 2003).

According to Vergara et al. (2003), these new refugees typically are identified and offered a health assessment early in their resettlement process by Refugee Health Programs (RHP). Over the last decade these health assessments have evolved, but studies reviewed by Vergara still show that these immigrants have limited access to publicly funded healthcare programs such as Medicaid, Medicare and Women, Infant and Children Nutrition Program (WIC), which should improve utilization of services. Hence, it is important to understand better the role of refugee culture in health service use and that immigrant culture poses a challenge to seeking help.

Problem Defined

Refugees are individuals who have been forced to flee their country of origin due to fear of persecution due to racial, religious, or social group identification and those who have refugee status in the U.S. (Barnes & Almasy, 2005). Unlike other immigrants, refugees do not leave their home country by choice and cannot or will not return to that country. The majority of studies conducted with regard to immigrants and refugees have attempted to focus on the process of assimilation and acculturation into the American culture, rather than the way they access, utilize, or are hindered from utilizing medical services. Various researchers have shown that limited information exists on refugees’ knowledge of healthy behaviors, how much they engage in such behaviors, or whether they have desire to learn healthier habits when needed. Thus, researchers continue to
search for explanatory factors related to health behaviors and to test interventions for refugee minority groups in the U.S.

Researchers have identified a growing body of knowledge surrounding the influence of culture on health behavior and healthcare utilization practices (Ivanov & Buck, 2002). Occasionally it is falsely assumed that once these refugees are in the U.S., they access and evaluate the services based only on their experiences with the U.S. healthcare system. Ivanov and Buck (2002) admitted that immigrants access the healthcare system according to their patterns of utilization and experiences in their home countries. The value that each unique culture places on health and wellness also emigrates with them. Therefore, one can presume that not all immigrants access and utilize healthcare services in the same manner.

Refugees and Service Utilization

A low level of healthcare utilization often has been regarded as an important indicator of better health. However, this assumption overlooks the fact that a low level of utilization of health services may result in poorer health status for those in need of healthcare (Surood, 2008). This is true for refugees. With the growing refugee population, the need for more research is evident. To date, few studies have examined the healthcare utilization patterns of refugees in the U.S. However, reports on healthcare utilization by immigrants are inconsistent. Fenta, Hyman, and Noh (2007) claimed that some researchers have suggested that immigrants as a whole underutilize healthcare services compared to native born residents, while others indicated otherwise. Also, immigrants, particularly refugees, may have a different perspective on health than
residents, which may point to an obvious cultural distance between the caregiver and the recipient.

**Cultural Patterns in Health-Seeking Behaviors**

Refugees experience more cultural and linguistic barriers related to accessing healthcare services in the U.S. Fenta et al. (2007) explained that often immigrants receive culturally inappropriate care or experience multiple barriers to care. Moreover, the consequent utilization of healthcare services also is limited due to differences in cultural perceptions of illness, health-seeking behavior, and inaccessibility to services. Therefore, a need emerges to understand the way foreign culture influences the utilization of healthcare services in order to improve service delivery, affordability, accessibility, and life outcomes that include morbidity and mortality rates.

The effects of cultural determinants on health status and health service utilization among refugees are often overlooked in research. Therefore, further research on the impact of culture on the health of these immigrants would assist providers, practitioners, and policymakers in the formulation of programs and services that are more culturally acceptable, appropriate, and accessible (Surood, 2008). According to Ivanov and Buck (2002), policies related to refugees and immigrants should take into consideration the barriers to accessing healthcare services that various immigrant groups experience.

**Culturally Competent Healthcare Services**

Based on previous studies, researchers have opined that acculturation and immigrants’ level of education influence their use of healthcare services. However, other scholars have suggested that acculturation levels are inconsistent predictors of utilization of healthcare services (Ivanov & Buck, 2002). Limited empirical research exists on the
patterns of healthcare utilization by refugees (Fenta et al., 2007). However, Ivanov and Buck (2002) quickly added that the few studies that have focused on the utilization of healthcare services stress the importance of providing culturally competent healthcare to improve health outcomes. Therefore, the challenge to healthcare providers is to identify both health and illness behaviors as defined by the refugee culture of interest in order to improve delivery of healthcare services to the particular culture. Also, ample evidence can be found that immigrants often receive culturally inappropriate care or experience multiple barriers to care. Furthermore, literature reviewed on healthcare utilization patterns has revealed that, in general, ethno-visible minorities are less likely to utilize health services and encounter more barriers in accessing the services than the mainstream population (Surood, 2008).

**Purpose of the Study**

This research focuses on understanding the healthcare utilization patterns of refugees. As earlier noted, the United States is a melting pot, one that retains cultural richness from various populations (Ivanov & Buck, 2002). As the U.S. immigration quotas increase, more research is needed on specific immigrant populations to learn about their unique cultural patterns of healthcare utilization. The importance of understanding the concept also is evident by the less than sufficient scholarly work about this group. According to Surood (2008), obvious reasons exist to expect differences in healthcare utilization among refugees due to the impact of culture on health. Hence, immigrant culture poses a challenge in seeking help.

This study helps to better understand the role of culture in health service use. In addition, it provides insight into and data about the refugee community in Bowling
Green, Kentucky, and similar rural areas. The study examines useful information about the expectations or needs of refugees as being consumers in the healthcare system of the U.S. and highlights cultural patterns in their knowledge of preventive health and health-seeking behaviors. This research delineates immigrants’ perspectives on healthcare and health education.

Furthermore, to serve more appropriately this category of immigrants (refugees), it is essential to understand the unique cultural beliefs and values that influence their utilization of healthcare services, their health status and health outcomes. Thus, understanding the dynamics between culture and health is essential. Culture guides and influences various aspects of life, including health. To get detailed perceptions on the influence of culture, the researcher incorporated a qualitative research, narrative inquiry genre with individual interviews to obtain information.

A mixed study of both quantitative and qualitative research designs was applied to collect data; surveys were distributed across 110 participants. Individual interviews also were conducted with four refugees’ representative of the refugee population in Bowling Green. This allowed the researcher not only to collect thoughts on cultural diverse health-seeking behaviors via questionnaires but also to integrate further in-depth understanding, feelings, reflections, and clarity on the research questions and the topic during interviews.

Participants completed informed consent documents. Likert-type scale structured questionnaires were translated in various immigrant languages for those who do not understand English. A 50-minute interview was conducted to allow participants to express themselves and the researcher to observe the socio-cultural non-verbal cues. Questions were structured based on three main factors from the modified version of the
Andersen-Newman theoretical framework that influences health service use: Predisposing, Enabling, and Need-Related Factors. These questions were structured to elicit cultural patterns. The central research question of this study was: What are the health-seeking behavior patterns among refugees at their nearest local health facilities?

**Research Questions**

A modified version of Anderson-Newman’s (1973) model of health service utilization was used as the theoretical framework. The purpose of the framework was to identity conditions and perceptions that either facilitate or prevent utilization of healthcare services. Hence, the influence of culture was viewed as refugee cultural characteristics, perceived barriers, and perceptions on health status with regards to utilization of healthcare services. The study’s research questions follow:

**Research Question 1:** What is the extent of relationship between Frequency of Use of Healthcare Services and the refugee cultural markers or Predisposing Factors of Native Language, Nationality, and Religion?

**Research Question 2:** What is the extent of relationship between Frequency of Use of Healthcare Services and barriers as identified by refugees that include the Enabling Factors of Number of Years in the U.S.; Have Health Insurance; Educational Level; Available Transportation; Make an Appointment; and Friendly Environment (professionals and services rendered)?

**Research Question 3:** What is the extent of relationship between Frequency of Use of Healthcare Services and refugees’ perceived needs, i.e., the Need-Related Factors of Gender and Age?
Research Question 4: To what extent does a relationship exist between services available at a healthcare facility and the Frequency of Use of Healthcare Services, i.e. Cultural Competency of Services, e.g. Interpreters and Medical Professionals Understand Patient’s Condition?

Figure 1. Schematic representation of the relationship between the variables.

Significance of the Study

Understanding the cultural underpinnings of health and the use of health services is essential in order to work effectively in health settings. Considering the extent of ethnic diversity in the American population, surprisingly few empirical investigations exist on service use among refugees. Researchers also know little about the extent to which the healthcare system addresses the needs of these individuals. To shed more light on the healthcare needs of these new minority immigrants, this study reports on the culturally associated patterns in healthcare utilization.

First, the intersection of healthcare and immigration policy appears to work in variance with refugees. Moreover, insufficient research has been conducted at the national level regarding the utilization patterns of this population and the ways by which
they could be provided with low cost access to the healthcare system. According to Kiss, Pim, Hemmelgarn, and Quan (2013), such information could assist with the development of future health services and program planning to support refugee health and well-being.

Second, building an equitable evidence base in this area is needed and is an important step in determining whether refugees have adequate access to healthcare services. This study examined reasons these services are used, whether they are underutilized, and whether there is a cultural role if refugees claimed to have access to care. Third, the previously stated knowledge may assist with the development of future health services and program planning to support refugee health and well-being.

**Limitations**

A limitation of this study is that the sample of refugees is only representative of the general refugee population in southcentral Kentucky. Hence, there is inadequate generalization and transferability with the study. Also, potential candidates may have been excluded if these refugees have no form of health insurance as the sample included only those who had health insurance policies.

Furthermore, as the study focused on the way in which refugees seek and use formal medical care, another limitation is the study’s inability to compare the use of Western healthcare services to informal alternatives to medical care. Moreover, researchers have suggested that refugees experience the greatest barriers in accessing Western or preventive healthcare services.

Researchers also have portrayed the substantial effect of legal status, service use, and interactions with service providers (e.g., physicians) by refugees. This study overlooks the issue of legal status (e.g., refugee versus asylum-seeker versus resident
alien) which could be used in future research to identify to what extent one’s duration of stay is due to legal status and how much of this status helps in reducing fear encountered in contacting a physician or utilizing services at their local health facilities.

**Summary**

The U.S. has one of the most sophisticated and technologically advanced medical care systems in the world. Nevertheless, it excludes many individuals because of financial, physical, cultural, and cognitive barriers to physician care. This study examined the cultural factors that play a cogent role in the way in which refugees utilize healthcare services. It also examined other challenges such as financial constraints and lack of health insurance faced by refugees in the process of service utilization.

A mixed study of both quantitative and qualitative research designs was applied to collect data; surveys were distributed among participants, and interviews were conducted with refugees’ representative of the immigrant population in Bowling Green. Moreover, selecting only a few individuals for both the sample size and recorded interviews limits generalization and transferability of the results.

This study focused on understanding the healthcare utilization patterns of refugees. Inadequate scholarly work about this group of immigrants has made it important to understand the proposed concept. The importance of understanding the topic is also evident by the less than sufficient scholarly work regarding this group of immigrants. The central research question of this study was: What are the cultural health-seeking behavioral patterns among refugees at their local healthcare facilities?
CHAPTER II: REVIEW OF THE LITERATURE

Introduction

Immigration reform has become a contentious issue in the political arena of this nation. A review of the current immigration acts has been in the news since the last decade and these laws are being structured to reflect the needs of the American economy. The refugees and asylum-seekers who come from various war-stricken countries to the U.S. as their last hope often end up feeling destitute. Most are ineligible for social services or medical benefits, so they must rely on family members, friends, or charities for help until resources or forbearance runs out (Frelic & Jacek, 2013). For many asylum-seekers who are accustomed to providing for themselves, depending on others for help is particularly traumatizing. It then becomes obvious that there are reasons to expect differences in health service use among refugees, particularly from developing countries, due to the strong impact of culture on health. Hence, immigrant culture poses as a challenge to seeking help. To work effectively in healthcare settings, health providers must understand that culture plays a role in the way in which health services are utilized by refugees (Green, 2004).

This study helps to understand better the role of culture in health service use. In addition, the research provides useful information about the expectations or needs of refugees as consumers in the healthcare system of this country and helps to highlight cultural patterns in their knowledge of preventive health and help-seeking behaviors. The researcher delineates the immigrants’ views of healthcare and health education from their different foreign perspectives. The central research question for this study was: What are
the cultural health-seeking behavioral patterns among refugees at their local healthcare facilities?

Information was obtained mainly from Pro-Quest databases through the Western Kentucky University (WKU) e-library site. Search keywords used include health services refugees, healthcare utilization immigrant, and immigrant healthcare services. A host of empirical articles in peer-reviewed journals and dissertations contained varied information on the topic. Data from the various materials were tailored to the research topic and study design. Google Scholar was useful in retrieving complete full text of required materials.

Researchers have identified that the use of formal healthcare is constrained by the lack of awareness, knowledge, limited resources and access to care, and, ultimately cultural differences in illness and help-seeking behaviors. Most refugees also have limited access to publicly-funded programs. The chapter covers the following areas: Definition of Refugee and Asylum-Seeker, Cultural Health Beliefs and Behaviors, Public Healthcare Services, Influence of Culture on Healthcare Service Utilization, and a concluding Summary.

**Definition of Refugee and Asylum-Seeker**

Steinbock (1998) interpreted “refugee” as a term that developed in the years immediately following World War II and was first embodied in the 1951 Geneva Convention relating to the Status of Refugees. This has formed the focal point of the international response to forced migration over the past decades. Steinbock asserted the Refugee Convention (1951 Geneva Convention) definition is currently adhered to by 132 nations worldwide as the most widely accepted international norm that has sufficiently
penetrated the public’s consciousness. Among these countries is the United States, which adopted the refugee definition as the basis of asylum eligibility in the Refugee Act of 1980.

According to Drywood (2014), refugees are individuals who have fled persecution in their country of origin and sought asylum (that is, refugee status) in one of the developed countries, e.g., the U.S. or one of the Member States of the European Union. They are also referred to as asylum-seekers. Drywood’s legal term of "refugee" and its definition (in the sense of the 1951 Geneva Convention) differs considerably from its everyday meaning. The Geneva Convention defined refugees as those who fled their country of origin because of fear of persecution for the following reasons: religion, race, nationality, political affiliation, and membership of a social group. Drywood submitted that, in article 1A of the Geneva Convention, refugees are also defined with reference to four main characteristics:

1. They are outside their country of origin;
2. They are unwilling to seek protection or return back to their country;
3. Their inability to return to their country of origin is based on a well-founded fear of being persecuted or killed;
4. The fear of persecution is based on religion, gender, or political opinions.

The refugee definition was conceived with a desire to avoid repetition of the atrocities evident during World War II. Hence, by providing tangible redress from certain basic human rights violations, the Refugee Convention and 1967 Protocol are, in effect, two of the foremost international human rights instruments (Steinbock, 1998). Refugee and asylum provisions of immigration law are the embodiment of this impulse.
(Steinbock, 1998, p. 1). To date, despite ongoing suggestions, the major refugee-receiving nations have resisted pressure to abandon the Convention's definition.

**Historic Background (Laws and Acts)**

In his thesis, Abrams (2009) suggested most histories of immigration law are histories of restriction. This is hardly surprising as, beginning in 1875, Congress passed increasingly draconian acts, mostly targeting Chinese immigrants, which ultimately led to the outright exclusion of nearly all Asian immigrants. In the 1920s, Congress enacted quotas aimed at keeping the U.S. population primarily white, with an emphasis on immigrants from northern and western Europe. Throughout history in general, immigration law has focused not only on excluding, but also on deporting immigrants deemed undesirable. Abrams insisted that, in addition to focusing on exclusion, immigration law history also has been preoccupied with federal law subsequent to 1875. However, immigration was widespread and actively encouraged at all levels of government in the mid-19th century. Individuals from Europe flooded the East Coast of the United States, partly because of the revolutions of 1848 and the Irish Famine of 1845-1849. Prior to 1875, restrictive immigration laws existed, but they were promulgated by states rather than the federal government. Moreover, they were very different from current federal immigration statutes, so they were not always identified by scholars as "immigration law."

Sutherland (2010) identified the U.S. as a nation of immigrants. Individuals came to the U.S. in search of freedom and security and to pursue the American dream: to work hard and to create a better future for their families and communities. She also noted that citizens of the U.S. share an immigrant history but may not share an understanding of the
way immigration has been defined and legislated. Prior to 1921, there were essentially no laws restricting immigration. Quotas were established in 1921, but a comprehensive set of immigration laws did not exist until the Immigration and Nationality Act of 1952.

The 1980 Refugee Act (Public Law 96-212) incorporating the 1951 U.N. Refugee Convention and its 1967 Protocol, defined a refugee or asylum-seeker as one who is unwilling to return to his or her country out of a "well-founded fear" of persecution "on account of race, religion, nationality, membership in a particular social group, or political opinion." A formal infrastructure of federal and state agencies and private charities functioning as federal contractors helps intending refugees to initiate requests for "status," which arranges transportation to the U.S. and navigates the maze of health, welfare, and other services available to refugees upon arrival in the United States (Barnett, 2002).

Barnett (2002) observed that most refugees to the U.S. in the 1980s and 1990s arrived under broadly designated categories without necessarily meeting persecution standards set forth in the 1980 Act. Acceptance rates of asylum petitions, such as the designation "refugee," reflected cold war priorities. Asylum seekers from “enemy” territories were much more likely to be welcomed than those fleeing countries that were allies. Thus, refugee-sending countries became asylee-sending (“asylee” from the word “asylum”) countries as well.

Until well into the second half of the 20th century, immigration into the U.S. was largely from Europe, the continent from which the founders of the U.S. had come. However, in recent decades this pattern has been reversed in order to favor non-European immigrants (Barnett, 2002). Barnett reported that international resolutions have obligated
the U.S. and other participating countries to accept "asylum-seekers," or refugees (asylum seeking, serves global humanitarian goals), essentially depriving these countries of control over their immigration and future demographic composition. The annual average refugee immigration to the U.S., according to Barnett, was slightly more than 100,000 individuals per year through the 1990s, more than all other refugee host nations combined with the exception of permanent resettlement. Approximately 20,000 Cubans arrive each year with refugee-type privileges. When considering refugees, who have "temporarily" resettled outside their home country, poorer countries such as Iran and those in Africa bear a disproportionate impact from transnational refugee flows.

**Recent Immigration Trends**

The main source of refugees and asylum seekers is shifting from former communist countries to Africa and the Middle East, as "international burden sharing" and "diversity" become watchwords of the program. Refugees are now far more likely to be resettled to the U.S. from refugee camps upon the recommendation of the United Nations High Commissioner for Refugees (UNHCR). The U.S. sends "circuit riders" to refugee camps around the world seeking candidates to come to America as refugees. Some of the circuit riders have reportedly caused riots at camps among refugees attempting to apply for the U.S. refugee program (Barnett, 2002).

Immigration is a powerful engine for bringing skills, workers, and ideas to the U.S. (Giovanni, 2013). The country has the opportunity for substantial immigration reform every four to five decades. Thus, the economic and political gains from "getting the immigration system right" will be large and long-lasting. Giovanni added that there much larger economic gains would result if the immigration system were reorganized.
Immigration has accounted for three-quarters of U.S. population growth during the
decade. The U.S. Census Bureau data found that 13.1 million new immigrants have
arrived in the last 10 years; approximately 8.2 million births to immigrant women have
occurred during the past decade. The U.S. Census Bureau report of 2010 indicated that
the numerical increase of 27.3 million this decade is exceeded by only two other decades
in American history (U.S. Census Bureau, 2010). Currently, nearly 75,000 individuals
seek asylum annually. In a dozen interviews with aides to Senate sponsors of the bill,
officials at the Immigration and Naturalization Service, the Executive Office of
Immigration Review, and refugee NGOs, none would hazard a guess as to the impact of
the bill on this number. Most have agreed the Refugee Protection Act would result in an
increase in both the number of those who seek asylum and are granted asylum (Barnett,
2002).

**Immigrants and Refugees**

According to Morris, Popper, Rodwell, and Brodine (2009), the United Nations
High Commissioner for Refugees (UNHCR) in the year 2006 reported that approximately
33 million displaced individuals exist worldwide. Among the 9 million refugees resettled
that year, the U.S. hosted 844,000. In their study on healthcare barriers of refugees’ post-
resettlement, these researchers identified with the UNHCR definition of refugees as
individuals who have been forcibly displaced outside their native countries and come
from a history of hardship, including war, famine, and violence.

**Refugee population.** Refugees are a subset of immigrants, i.e., not all
immigrants are refugees. Refugees often are faced with a variety of acute and chronic
diseases resulting from difficult conditions in refugee camps and incomplete medical care
prior to resettlement. Whether these conditions persist post-resettlement or new ones emerge is not fully understood, as health of resettled refugees is seldom assessed in the years after arrival in a host country (Morris et al., 2009).

Another definition of refugee used in a study by Barnes & Almasy, (2005) is as follows: those who have been forced to flee their country of origin due to fear of persecution because of racial, religious, or social group identification and those who have refugee status in the U.S. Unlike other immigrants, refugees do not leave their home country out of choice and cannot or will not return to that country.

Morris et al. (2009) examined refugees resettled in the U.S. who had only eight months to become economically independent before U.S. government assistance terminated and then became subject to standard eligibility requirements of Medicaid (i.e., joint Federal-State health insurance program for low-income families). They noted a few studies have examined refugee utilization of healthcare services after governmental assistance has ended and how this may relate to post-resettlement health conditions. Although refugees are generally resettled to nations with economic opportunities and health resources that are advanced in comparison to that of refugee camps, it remains uncertain whether they are fully able to utilize the resources available to them upon resettlement. Additionally, these researchers emphasized that refugee health conditions emerging in the years’ post-resettlement are understudied. Therefore, increased understanding of health needs and potential barriers to accessing healthcare by resettled refugees is a critical priority for better allocation of sparse healthcare funds and improving refugee health.
Immigrant population. Immigrants are identified as persons living in the U.S. who were not American citizens at birth. These include naturalized American citizens, legal permanent residents (green card holders), illegal aliens, and those on long-term temporary visas, such as foreign students or guest workers, who respond to the American Community Survey (ACS) collected by the Census Bureau. The ACS has become one of the primary sources of data on the size and growth of the nation's immigrant (or foreign-born) population. It excludes those born abroad of American parents or those born in outlying territories of the U.S. (Camarota, 2011).

The nation's immigrant population has doubled since 1990, nearly tripled since 1980, and quadrupled since 1970. In his report, Camarota (2011) noted that the New Center for Immigration Studies' analysis of Census Bureau data showed that the nation's immigrant population reached 40 million in 2010, the highest number in American history. Of those, 13.9 million arrived in 2000 or later, making it the highest decade of immigration to date.

The overall immigrant population grew 28% between 2000 and 2010; however, it grew at more than twice the national rate in Alabama (92%), South Carolina (88%), Tennessee (82%), Arkansas (79%), Kentucky (75%), North Carolina (67%), South Dakota (65%), Georgia (63%), Indiana (61%), Nevada (61%), Delaware (60%), Virginia (60%), and Oklahoma (57%). Latin America continues to dominate immigration. Countries from this region accounted for 58% of the growth in the immigrant population from 2000 to 2010. Camarota stated that immigration is driven in part by social networks of friends and family who provide information about conditions in the U.S. and often
help new immigrants after they arrive. As the population grows, it creates momentum for more immigration.

**Diversity of Refugees in the United States**

Some case studies on refugee diversity in the U.S. (e.g., Zhou & Haines, 1999) have been crafted to capture the complex processes of refugee flight and resettlement through comparative analyses from political, sociological, anthropological, and historical approaches. Zhou and Haines (1999) informed the reader of the varied origins and experiences of 12 major national-origin groups of refugees: Afghans, Cambodians, Cubans, Eastern Europeans, Ethiopians/Eritreans/Africans, Haitians, Iranians, Laotians, Southeast Asian Chinese, Soviet Jews, and Vietnamese. Contemporary refugees have been more numerous and diverse in national origins, mostly from Africa, the Caribbean, Central America, Southeast Asia, and the former Soviet Union. As Zhou and Haines noted, refugees from different countries generally share certain macro-structural conditions of exit and reception and certain common experiences, e.g., living in refugee camps prior to resettlement.

Despite common experiences, the refugee label conceals vast inter-group and intra-group differences. Some refugee groups were resettled into the U.S. directly from their home countries, such as the Soviet Jews, while others, such as the Vietnamese and Cambodians, endured lengthy, stressful periods in overseas refugee camps waiting to be resettled. Also, socioeconomic and demographic characteristics of refugees differ at both group and individual levels. While most groups fled in family units, others fled individually, such as the Africans, who are mostly male adults. These inter- and intra-
group differences have broad implications for the varied outcomes of adaptation by these refugees in the U.S.

**Cultural Health Beliefs, Behaviors, and Acculturation**

Culture generally is said to comprise shared ideas, meanings, and values; it is socially constructed and learned rather than genetically created and transmitted and includes patterns of behavior guided by common ideas, meanings, and values (Institute of Medicine, 2002). Recently, the Institute of Medicine called for healthcare organizations, specifically the National Cancer Institute, to begin gathering data on ethnic and cultural categories rather than racial categories.

**Cultural Health Beliefs**

Lim, Gonzalez, Wang-Letzkus, and Ashing-Giwa (2009) referred to cultural health beliefs as ways in which individuals perceive illness, how they explain pain, how they define quality care, and how they select their caregiver. These researchers believed that unique cultural perceptions and experiences about disease and illness also have implications on the patterns individuals perceive and engage in changing their lifestyles and behaviors. Despite the importance of cultural factors on health behaviors among ethnic minority populations, minimal research exists on the influence of acculturation, cultural health beliefs, treatment-related decisions, and doctor-patient relationships on these behaviors.

**Acculturation**

Trust in Western medicine appears to be influenced by acculturation level, indicating that greater levels of acculturation are related to greater trust in modern medicine (Lim et al., 2009). Research has found that acculturation is strongly related to an individual’s ability to use healthcare resources and overall quality of life, suggesting
that more acculturated individuals feel less despondent from the demands of the illness and exhibit a better health status.

Refugees typically have been studied less frequently than other immigrant groups. Relatively little research has been published about refugees and their health concerns (Helweg-larsen & Stancioff, 2008). Acculturation involves the way refugees and immigrants assimilate into the American lifestyle, as compared to the degree to which they maintain their country of origin’s lifestyle. Explanations from various researchers of the psychological consequences of the acculturation process have emphasized cultural differences, defining acculturation as the process of cultural change resulting from contact between groups with distinctive cultures. Moreover, some form of structural confusion, cultural conflict, and cultural alienation occurs in the acculturation process that disturb the desire for consistency and continuity of one’s belief system (Oh, Koeke, & Sales, 2002).

Over the years, studies such as Oh et al. (2002) have pointed to two modes of acculturative adaptation used by immigrants and refugees: assimilation and integration. These researchers asserted that these two strategies produce effective adaptation in most circumstances. Rodriguez-Reimann, Nicassio, Reimann, Gallegos, and Olmedo (2004) suggested that acculturation is a complex set of intercultural interactions through which persons work to acquire the customs of another culture and yet retain norms held by their culture of origin. Numerous elements, including language use, generational status, pattern of associations, preferences for health services, food, media sources, and socioeconomic status, have been used to assess acculturation. Rodriguez-Reimann et al. also linked acculturation with both negative and positive influences on health among minority
populations, of which immigrants and refugees are included. Conversely, higher acculturation has been linked with more knowledge about health service utilization. Overall, such results suggest that acculturation reduces barriers to healthcare information and access but may erode some cultural attitudes and practices that facilitate positive health outcomes.

**Global Concepts on Health Beliefs**

Smith (2012) studied the cultural beliefs and health self-management of Afro-Caribbean women with Type 2 diabetes through a cognitive anthropological view of culture as the shared beliefs and knowledge of a group. A cultural model or structure was described as an individual’s reasoning about the environment through an organized set of words or concepts (cognitive schema) drawn from one or more cultural domains shared by the social group. Smith noted that what distinguishes the individual’s understanding of a cultural structure from mere general knowledge is that this understanding is shared to a certain degree among others in the group. However, the individual’s ability to act in accordance with the cultural model or structure may be constrained at times due to structural barriers such as language or limited financial resources.

In a study conducted by Murguia, Peterson, and Zea (2003) on Latino immigrants’ cultural values and health beliefs, it was discovered that many segments of this population hold a worldview that illness and health are strongly influenced by spiritual and religious factors that may ultimately affect health outcomes. Many of their beliefs originated from the pre-Columbian era. Murguia et al. identified the Mayans as having developed a complex medicine system that could be compared with that of the Chinese. The Mayan system viewed human beings as an integral and interactive part of
both their society and nature. Thus, health is attributed to the equilibrium between forces of nature; illness is attributed to the disequilibrium of these forces.

Ethno-medical approaches, such as the use of spiritual folk healers and folk remedies are influenced by their spiritual and cosmogenic worldviews that ultimately influence health outcomes (Murguia et al., 2003). Health providers also may fail to recognize or accept the many ethno-medical approaches available to treat general illnesses and those specific to this population. Furthermore, indigenous healers share the religious beliefs, values, symbols, and language of the community they serve. Many Latinos, immigrants, and refugees would prefer spiritual healers rather than a physician to treat culture-bound syndromes, as it is their belief that the physician does not possess the knowledge or the understanding to treat the syndromes. These researchers also pointed out health beliefs from other neo-colonial histories: “Spiritism” from a combination of European (French) and Afro-Caribbean traditions; “Santeria” derived from folk Catholicism and West African (Yoruba) traditions; and Curanderismo from folk Catholicism and India traditions.

Phillips (2005) explored pregnancy related health practices of women of African descent in three distinct communities that share historical origins in the cultures of West Africa. Acculturation theory—acculturation considered to include the degree to which members of the minority group endorse the dominant culture's assumptions, values, and beliefs—was used as a framework for the exploration and comparison of the beliefs and practices reported by women whose communities have had different historical experiences with migration and acculturation. However, the theory failed to consider the effects of the new culture's contribution to the dominant culture (e.g., the African culture
in the area of medical care in the U.S.). According to Phillips, the theory of acculturation alone cannot explain differences in patterns of cultural retention among immigrants. The study also delved into practices that support a woman's health during pregnancy and the postpartum period as examples of traditional West African based behaviors that may have been influenced by migration and acculturation. A comparison of their reports showed most frequent and detailed reports of spiritually related beliefs among the Sierra Leonean women.

**Help-Seeking Behaviors**

Many studies exist in various fields (e.g., medicine, psychology, and religion) on help-seeking patterns among individuals and ethnic groups. Liat and Young (2005) introduced the term “locus of control” to describe the expectations of individuals regarding their level of control over a situation. They suggested that an internal locus of control represents an individual's belief that positive events are due to one’s own behaviors or skills. An external locus of control represents reinforcements that are controlled by forces other than one's self, such as fate, God, or “powerful” others, and occurs independently of one's actions. Findings support the notion that ethnic groups or individual who have ancestral roots or ties to the African race are more prone to have an external locus of control compared to Caucasians regarding help-seeking behaviors.

Using the bicultural model, Pang, Jordan-Marsh, Silverstein, and Cody (2003) defined health-seeking behaviors as those actions that address health-related symptoms, including seeking help from healthcare facilities and using alternative resources to abate symptoms of an ailment. These health resources can be differentiated into two groups:
1. Conventional Western medical services, such as clinical services provided by physicians and nurses in hospitals, clinics, and pharmacies

2. Nontraditional and informal types of healthcare, such as acupuncture, herbal medicine, Tai Qi exercise, nutritional diet, home remedies, and reading and watching health programs in the media.

The researchers posited that structural and cultural factors may contribute to the differences observed among ethnicities in health-seeking behaviors. Structural factors refer to accessibility, affordability, and availability of services, including lack of knowledge about services, lack of health insurance, and other financial resources, as well as lack of transportation. Cultural factors include English-language pro-efficiency, health beliefs, and acceptance of health services.

**Public Health Services**

Since the healthcare reform initiatives of the early 1990s, the United States has begun a debate over the proper role of the public sector in its healthcare system (Seiden & Sing, 2008). Private coverage is produced through employers or non-group insurance plans, whereas public coverage includes Medicaid for low-income groups, Medicare for the elderly and disabled, VA affairs, SCHIP (State Children’s Health Insurance Program), and workers’ compensation.

Individual states are currently discussing how (or whether) to implement the Medicaid expansion to nondisabled adults earning less than 133% of the federal poverty level, a key aspect of the Patient Protection and Affordable Care Act (DiPietro & Klingenaier, 2013). Providers and administrators in the health sector not only share a common set of patients, they also share important public health goals. Such goals include
increasing community safety, reducing recidivism rates and healthcare costs, improving patients’ health status, and increasing the community’s capacity to deliver needed medical and behavioral health services to improve overall individual and public health. According to DiPietro and Klingenmaier, decisions that directly influence these goals are occurring. They emphasized the necessity for healthcare providers to actively inform and influence the outcomes of a changing environment in healthcare access and delivery.

**Access to Healthcare Services**

Economic migrations are linked to the differences between countries in terms of income and quality of life. These international migrations comprise population flows from lower-income countries to higher-income countries and place the immigrant within a completely new social, cultural, working, and living environment which, at times, leads to a situation of social segregation. Recent studies in the field of immigration and health have considered that inequalities in social and economic factors between individuals in the host country determine the differences in morbidity attended and the use of health services between immigrants and the native population (Saurina, Vall-llosera, & Saez, 2012). They added that once immigrants are integrated into their new environment, they tend to identify with and to adopt the behavior of the native population; however, certain restrictions related to education, employment, culture, communication, or legislation generate different behaviors in morbidity and use of health services.

This study examines the issues of access to primary healthcare using the five dimensions of access identified by Penchansky and William (1981):

1. **Availability** – the relationship between the volume and type of existing services compared with client needs.
2. Accessibility – the relationship between the location of supply and the location of clients, taking into account client transportation resources and travel time, distance, and cost.

3. Affordability – the relationship between the cost of health services and the clients’ income, ability to pay, and existing health insurance.

4. Accommodation – the relationship between the manner in which health services are provided and both clients’ ability to accommodate those factors and perception of their cultural appropriateness.

5. Acceptability – the relationship between clients’ attitudes about personal and practice characteristics of providers and the actual characteristics of existing providers, as well as provider attitudes about acceptable personal characteristics of clients.

Considering the attention that is placed on access to healthcare services, the degree of ambiguity in defining it is surprising (Sibley & Weiner, 2011). In the U.S., access often is synonymous with having a health insurance policy. This falsely implies that, once everyone has insurance, some degree of equality will exist in the utilization of healthcare services. In countries, such as Canada that operate a Universal Health Insurance coverage, access to health services is defined differently. Sibley and Weiner (2011) identified the Canada Health Act as listing access as one of its five main tenants, stating that “persons must have reasonable and uniform access to insured health services, free of financial or other barriers. No one may be discriminated against on the basis of such factors as income, age, and health status (p. 2). This is in contrast to what is obtainable in the U.S.
Andersen, Rice, and Kominski (2001) have operationalized a definition of access to be used in health services research: “the actual use of personal health services and everything that facilitates or impedes the use of personal health services” (p. 3). This definition consists of two components: the use of health services and everything that facilitates or impedes its use. The Health Behavior Model, the conceptual framework for this study, hinges on this definition.

**Equitable Healthcare**

An important concept in the evaluation of access is equity. Healthcare services are equitably distributed when health status and demographic indicators of health status are the strongest predictors of who uses healthcare (Aday, 1993). When evaluating the degree of equity, indicators of need are considered; in an equitable system, those with equal need have equal utilization rates (horizontal equity) and those with less need have lower utilization rates (vertical equity) (Krasnik, 1996).

The implementation of primary healthcare (PHC) may well be one of the most significant systemic and ideological health reforms of modern times, according to Carey, Wakeman, Humphreys, Buykx, and Lindeman (2013). Countries with stronger PHC systems have demonstrably more efficient, effective, and equitable healthcare. Primary healthcare can be considered a philosophy, an approach to the delivery and development of services and first contact health services. If access to PHC services is to be improved, it is important to identify the nature of first contact services; in other words, the PHC services that may be considered essential or “core” within a health system, and, therefore, readily available at times of need (Carey et al., 2013). At the same time, political and
economic reasons may exist as to the reason policymakers do not commit to a defined set of core PHC services.

**Barriers to Health Service Use**

According to the 2009 U.S. Census, one in eight residents is foreign born. Moreover, the number of immigrants living in the U.S. is expected to grow to 19%, or one in five, by the year 2050. To date, research has indicated that immigrants face significant challenges in regard to healthcare access (Wafula & Snipes, 2014). Such challenges include lack of health insurance, lack of interpreters, discrimination based on race or accent, and lack of understanding on the part of doctors regarding immigrant or cultural perspectives on illness. However, although studies have identified these challenges a dearth of information exists on how healthcare barriers reduce access to care for foreign-born individuals living in the U.S. Thus, it is important to learn more about the barriers to healthcare faced by immigrants, as they are likely to have important implications for the overall health of this population (Wafula & Snipes, 2014).

Most research on refugees’ access to healthcare has been conducted outside the U.S. in Europe and Australia. Mirza et al. (2014) collectively identified several healthcare barriers from the perspectives of refugee patients and healthcare providers to include:

1. For patients, reported barriers include lack of language supports, difficulties with accessing specialty care, unfamiliarity with referral procedures, limited information on where to find services, confusion about the roles of different health professionals, and overall difficulties with navigating the healthcare system.
2. For healthcare providers, barriers reported include lack of funding and supports to meet the language and cultural needs of refugee patients, uncertainty about refugees’ entitlements to healthcare, uncertainty about continuity of care, and difficulties with making appropriate referrals.

Mirza et al. (2014) pointed to existing research that has highlighted several healthcare barriers for refugees; these findings cannot be uncritically applied to the U.S. in which healthcare and refugee resettlement systems are distinct from other developed countries. In the U.S., few studies have examined refugees’ access to healthcare. The handful of existing studies have identified similar barriers as previously listed while emphasizing additional barriers posed by lack of universal health insurance coverage and bureaucratic complexities within the U.S. healthcare system.

Children and adults with limited English proficiency (LEP) experience difficulties in accessing mainstream healthcare services (Ponce, Ku, Cunningham, & Brown, 2006). Language barriers can reduce the quality of care, while the use of trained interpreters can improve access, quality, and patient satisfaction. This issue of language barrier has been observed to affect many Medicare and Medicaid beneficiaries.

A related study conducted in Australia by Murray and Skull (2005) also indicated that refugees and asylum seekers face a number of barriers in accessing healthcare and improved health status: language difficulties, financial need and unemployment, cultural differences, legal barriers, and a health workforce with generally low awareness of issues specific to refugees. An adequate understanding of these “hurdles to health” is a prerequisite for health providers and service managers if they are to tailor healthcare and services appropriately. The researchers enumerated the hurdles as follows:
1. **Hurdle 1: economics and employment** – unemployment is common among newly arrived refugees and those who attain employment are often employed in low paying jobs. Also, perceived or actual cost of healthcare limits access for refugee and migrant patients.

2. **Hurdle 2: cultural difference** – the existence of diverse beliefs related to health, wellness, and illness influence health-seeking behaviors, including attitudes to preventive and curative care, attitudes to providers, and expectations of the healthcare system. Hence, a lack of healthcare providers from culturally and linguistically diverse groups further limits the incorporation of cultural understandings into available healthcare.

3. **Hurdle 3: language difficulties** – provision of translated materials and translated services are fundamental to responsive health service delivery. Communication skills affect knowledge of disease, compliance and satisfaction with health treatment, and access to healthcare.

4. **Hurdle 4: an under-trained workforce** – training of health personnel in issues specific to refugee health has been recognized as a priority in refugee healthcare. An adequately equipped workforce is aware of the health and welfare needs of this group. Establishing trust requires providers to be equipped to deal with issues of trauma, torture, and persecution, which most refugees have endured prior to arrival.

5. **Hurdle 5: legal barriers** – individuals may be afraid to register or to access the healthcare system if they are unauthorized or illegal immigrants or have
suffered traumatic experiences in the healthcare system, hence fearing deportation.

6. Hurdle 6: the impact of current Australian policies – current policies reduce the capacity of refugees and asylum seekers to access healthcare.

Despite the outlined hurdles (which are faced by refugees and asylum seekers in the U.S.), a significant reduction in these hurdles can be achieved by provision of services, resources, and organizations that can help providers manage refugee healthcare.

**Alternatives to Health Service Use**

Complementary and Alternative Medicine (CAM) in the U.S. has increased dramatically during the past few years (Pagán & Pauly, 2005). The percentage of adults who reported using at least one CAM therapy during the past decade has increased considerably. The most common CAM modalities include prayer for one's own health, natural products, deep-breathing exercises, meditation, chiropractic care, yoga, massage, and diet-based therapies. The number of visits to practitioners of alternative therapies is currently higher than the number of visits to U.S. primary care physicians. Pagán and Pauly (2005) proposed several hypotheses to explain the reason CAM use has become prevalent. Patient dissatisfaction with conventional treatment may have led to increased CAM use because of the perceived ineffectiveness of modern medicine and a lack of trust in the healthcare system (this “issue” of lack of trust, as seen in hurdle 4, also may be a compelling factor for the use of CAM by refugees and immigrants). It may also be a result of the need for individual empowerment and personal control over healthcare use or a congruence between CAM and the personal beliefs, spirituality, and values of patients, as seen among refugees and immigrants.
The increasing use of CAM has occurred at the same time that conventional healthcare has been thought to have improved in effectiveness, while simultaneously becoming much more expensive (Pagán & Pauly, 2005). These researchers emphasized the obvious with cost concerns, which are particularly relevant for low-income uninsured adults with chronic health conditions that require ongoing healthcare treatment. Most refugees find themselves in this category. The World Health Organization (WHO)\(^1\) recently released guidelines to promote the proper use of CAM and to reduce its potential risks. Adverse CAM effects may be a source of concern among individuals in this population because they would be more likely to delay or to postpone healthcare because of cost or to use CAM without supervision.

Pagán and Pauly (2005) attributed the increased use of CAM therapies in recent years to an ongoing increase in the size of the population relying on CAM rather than to increases in the average use of CAM among users of these therapies. However, the conventional wisdom is that most adults use CAM because these therapies are consistent with their own values and beliefs about health, not because they are dissatisfied with conventional medical care. With regard to health beliefs and values, culture plays a significant role. Moreover, absent from the CAM literature, as observed by Pagán and Pauly, is the view that the increasing use of nonconventional healthcare can in large part be a reflection of the growing relative cost of conventional therapies compared with the cost of CAM and the consequent lack of access to conventional healthcare.

\(^1\) Develop quality standards and treatment guidelines to ensure uniformity within a particular health system. Standardize training and knowledge requirements for practitioners to promote the credibility of traditional or alternative practices and enhance consumer trust. Foster collaboration between conventional and traditional or complementary care providers to improve results of treatment but to promote health sector reform. Organize traditional or alternative medicine practitioners to provide better structures for self-control mechanisms.
The popularity of alternative and complementary medicine (CAM) has affected all components of the healthcare system, including palliative care (Zappa & Cassileth, 2003). This is evident on many levels. Within the government, action reflects public interest in and the concomitant growth of support for CAM. On the academic front, many medical and nursing schools in North America now offer elective courses in CAM; the number of research articles about complementary medicine in major medical journals has consistently increased. There also has been an increase in the use of CAM therapies in conventional healthcare institutions; e.g., unconventional cancer medicine is highly visible and available to the general public (Zappa & Cassileth, 2003).

Zappa and Cassileth (2003) and Pagán and Pauly (2005) identified complementary therapies as addressing the body, mind, and spirit, attempting to control symptoms and to enhance quality of life for patients and families. Complementary medicine embodies principles of palliative care and are offered as part of efforts to develop programs of symptom control and to ease the physical, psychosocial, and spiritual effects associated with illness. Zappa and Cassileth provided examples of complementary therapies that are effective in dealing with symptoms, such as diarrhea, that can be treated with peppermint tea, applesauce, dried raspberry leaves, or the seeds from the herb fenugreek. Nausea can be subsided by acupressure, acupuncture, ginger (ginger ale or cookies are good if made with real ginger), or cinnamon or peppermint tea. Herbal teas, walnuts, and fennel are beneficial in treating heartburn; and psyllium seed, buckthorn bark, cascara, or puréed rhubarb is helpful in treating constipation. Aromatherapy and valerian tea are helpful for those suffering from anxiety, stress, or insomnia. Refugees and immigrants tend to gravitate toward CAM therapies familiar to
them and away from conventional medical treatments to which most often they do not have adequate access.

**Influence of Culture on Health Service Use**

Culture is complex and multifaceted and, increasingly, healthcare professionals, including social workers, recognize its importance and influence on health behavior (Simon, 2006). Simon referred to culture as the "stuff" of which human paradigms are made. It (culture) provides their content: the identity, beliefs, values, and behaviors. Culture often serves as the lens through which life is viewed and lived. Although culture's meaning is expanding, its historical correlation with race and ethnicity continue to contemporarily shape medical practice, policy, and research. Further adding that cultural beliefs—ideas and thoughts derived from one's culture—are important considerations to health behavior at the individual, family, social network, and system levels. Socioeconomic status, through education, income, and other variables, determines many resource access issues that may affect health behavior.

**Cultural Competency**

In a cross-sectional study by Leong, Weiland, and Dent (2010), cultural background was viewed as shaping health outcomes by influencing perceptions of illness, attitudes toward healthcare providers, and most important, patient behavior. Clinicians’ cultural beliefs also may influence service provision to patients from other cultures. Hence, a mismatch between clinician and patient beliefs may result in suboptimal health outcomes. A clear understanding of a patient's health-related cultural beliefs is, therefore, integral to a patient-centered approach to healthcare. Leong et al. believed that a patient-centered approach involves physician-patient communication and interaction at a
personal level, which produces individualized care adapted to the unique needs and expectations of the patient.

Although “cultural competence” as understood today involves understanding patients' unique social and cultural contexts, appreciating patient individuality is congruent with patient-centeredness. When cultural competence is achieved, patient-centered orientation is maintained, fostering a patient-provider partnership and effective communication with particular attention to language and literacy (Leong, Weiland, & Dent, 2010).

Cultural beliefs matter in healthcare use, but it is a complex story. With regard to Latino immigrants, arriving in the U.S. requires a negotiation of the cultural knowledge about disease and prevention with which they arrived, the predominant popular cultural knowledge, and knowledge promoted by physicians (Chavez, McMullin, Mishra, & Hubbell, 2001). These competing and overlapping issues also promote specific help-seeking behaviors, such as the need to access preventive medical services. Chavez et al. (2001) noted that it often is assumed that acquiring knowledge similar to physicians' knowledge about health promotion and disease prevention will increase the well-being of any population. However, there is an overemphasis on the role of culture—the cultural explanation—for understanding politically sensitive issues such as the utilization of medical services. During the 1950s and 1960s, cultural beliefs such as fatalism, lack of future orientation, and ingrained cultural values were used in a simple and naive way to explain behavior, an approach that has been criticized, and rightly so, as "blaming the victims" for their disadvantaged social status (Chavez et al., 2001).
Theoretical Frameworks

Several theoretical models explain health-related behavior and identify salient variables in the performance of health behaviors (Simon, 2006). The Health Belief Model, Theory of Reasoned Action, and Social Cognitive Theory are the most widely used models, and each has been used to explain health screening behaviors. Although the theories differ, three common core constructs are identified as key determinants of health behavior: (1) attitudes, (2) perceived norms, and (3) personal agency (Institute of Medicine, 2002). However, according to Simon (2006), the key determinants share the criticisms of traditional health behavior theories from which they are derived. These criticisms focus on their overemphasis on logical and critical thinking in health behavior and lack of attention to the “sociocultural” determinants of health behavior. Thus, the cultural explanatory models (CEMs) complement the more traditional models and address the sociocultural factors affecting screening/preventive health behaviors.

Stemming from cultural beliefs and values, CEMs are constantly changing. This model recognizes that healthcare providers and consumers may have different cultural explanations of health and illness.

To measure the extent to which cultural beliefs are shared, the cultural consensus model was developed (Smith, 2012). This model statistically measures the level of agreement among individuals and weighs the individuals’ cultural knowledge based on their responses to the overall group. Unlike medical knowledge tests that measure the biomedical right or correct answers, cultural consensus analysis measures the “culturally” right or correct answer. However, the cultural consensus model has been criticized as an
“idealistic” approach to studying culture, as it measures the frequency of cultural beliefs and patterns of agreement without reliability and meaning or interpretation (Smith, 2012).

**Andersen-Newman Utilization Model**

Healthcare utilization is influenced by multiple individual and contextual factors; thus, a reasonable starting point for analyzing healthcare utilization and costs is to define a theoretical framework (Heider et al., 2014). Several explanatory frameworks identify predictors of healthcare utilization as previously highlighted. One of the most comprehensive and widely used frameworks is the behavioral model developed by Ronald Andersen in 1968 and later revised by Ronald Andersen and John Newman in 1973 (Phillips, Morrison, Andersen, & Aday, 1998). Heider et al. (2004) noted that the model has been discussed and refined over the years and that it assumes individuals’ use of services is a function of their predisposition to use services (predisposing factors), factors that support or impede use (enabling factors), as well as their need for healthcare (illness level). Predisposing variables pertain to socio-demographic (e.g. education, marital status) and belief characteristics (e.g. values concerning health and illnesses measurable in consequence such as smoking behavior, alcohol consumption, or body mass index). While enabling factors are those that support or impede healthcare service use (e.g. income, type of health insurance). (p. 2)

The Andersen-Newman theoretical model on health service utilization illustrates patients’ illness level (representing the need factor), which is considered the major determinant of healthcare utilization. Illness level as perceived by an individual or group is culture-centric or based on one’s health beliefs or help-seeking behaviors to which they
are accustomed (Heider et al., 2014). Again, since the time that the behavioral model was first developed in 1968, it has been extensively critiqued and revised; however, its use for examining the context within which utilization occurs has not been reviewed.

Phillips, Morrison, Anderson and Aday (1998) considered the variables proposed in the behavioral model of health service utilization. The model and most frequently used framework for analyzing patient utilization of healthcare services is the behavioral model developed by Andersen, Aday, and others. Since the time that the behavioral model was first developed in 1968, it has been extensively critiqued and revised. However, its use for examining the context within which utilization occurs has not been reviewed.

**Empirical Studies**

Reforms to the immigration law certainly would change the face and rate of migratory activities to the U.S., with continued economic and health implications into the next decade. Over the years, there has been a steady increase in the immigrant population of refugees from war-torn developing countries. The cumbersome process of being displaced from one’s environment has a wide range of impacts on the health and physical well-being of the immigrant. Moreover, the consequent utilization of healthcare services is limited due to the language barrier, differences in cultural perceptions of illness and health seeking behavior, and inaccessibility of services. Therefore, a growing need emerges to understand the way in which a foreign culture influences the utilization of healthcare services in order to improve service delivery, affordability, accessibility, and life outcomes, which include morbidity and mortality rates.

The cultural views of immigrants toward healthcare and healthcare practices stem from past experiences in their countries of origin (Ivanov & Buck, 2002). The authors
noted that the majority of studies have centered more on the process of acculturation and assimilation into the American lifestyle as against the influence of a foreign culture and its barriers to accessing healthcare services. In addition, the few studies on the utilization of healthcare services have emphasized the relevance of providing culturally competent services in order to improve health outcomes. Hence, in their qualitative study, Ivanov and Buck (2002) sought to identify the influence of the Russian culture on how Russian refugee women accessed the healthcare services in the U.S.

Ivanov and Buck (2002) recruited 31 Russian immigrant females, ages 20 to 75 years, most of whom had lived in the U.S. for nine months to eight years and attended a single Russian-speaking church in central Virginia. The participants were divided into three distinct age groups: child-bearing, middle-aged, and elderly. During focus group sessions, open-ended questions were used to gather general knowledge about these women’s views of the American healthcare system. A second set of questions, centered around Andersen’s framework for the study of access to medical care, included six dimensions of patient satisfaction: convenience, coordination, cost of services, courtesy of personnel, healthcare information received, and overall quality of healthcare. Each session was recorded and lasted approximately one hour. Information gleaned was later translated to English for further data analysis.

Ivanov and Buck’s (2002) findings showed that the majority of the women spoke little English, worked fulltime, and had some form of health insurance coverage. Eight themes were identified from the set of questions asked during the interviews: access behavior, provider gender, trust, cost, continuity of care, health beliefs, locus of control, and lack of culturally congruent care. The women were opposed to self-managing their
illnesses in the U.S. compared to relying heavily on their previous physicians for referral and health education services. Language barrier and limited translators were mitigating factors to the utilization of U.S. healthcare services. The women also visited family practice physicians for most of their healthcare needs, similar to what they had done prior to coming to the U.S. Thus, the researchers affirmed that immigrant health-seeking behaviors were certainly culture specific. However, due to the limited number of participants and a single culture type used, generalizations could not be made to other immigrants from varying cultural backgrounds. Also, the qualitative nature of the study introduced some aspects of research bias or subjectivity, as well as selection bias during sampling.

Fenta et al. (2007) compared immigrants from European countries to those in the Ivanov and Buck (2002) study. They claimed that immigrants from non-European countries experienced more cultural and linguistic barriers to accessing the healthcare services of their host country. The authors suggested that it could be due to different ethnic perceptions on health and optimal care. Ethiopia was one of the major sources of African immigrants for both Canada and the U.S. Despite the ethnically diverse culture in Toronto, the researchers were surprised that little empirical work had been conducted on services used by Ethiopian refugees in North America. Hence, the purpose of their study was to identify reasons Ethiopian immigrants utilized healthcare services that were at their disposal.

The same conceptual model of healthcare utilization as that used in the Ivanov and Buck (2002) study was applied in Fenta et al.’s (2007) mixed cross-sectional epidemiological study. Based on the model, three distinct domains were identified that
contributed to health service use: (a) Predisposing Factors, e.g., age or gender; (b) Enabling Factors including social networks or financial resources; and (c) Need-Related Factors that consisted of self-perceptions and evaluations of health conditions. These factors were assumed to be not only independent variables but also representative of inherent cultural affiliations. The data collection spanned 12 months during which the researchers could select a total of 432 adult refugees ranging in age from 18 years upward (mean age = 35.3 years), with more males responding than females. Questionnaires and structured interviews also were used and translated to the immigrants’ language of choice. Multiple data analysis methods to examine factors associated with health service utilization were applied. Approximately 85% of the participants reported seeking health services from a family physician, similar to that which was observed by Ivanov and Buck (2002). Females were noted to seek out healthcare services from mainstream healthcare providers or family physicians more than their male counterparts, and language posed a barrier to effective utilization of these services.

Although the Fenta et al. (2007) study was the first health survey conducted on Ethiopian refugees in Canada, it was fraught with limitations. The process of identifying Ethiopian Muslim names from non-Ethiopian Muslims in telephone directories was a challenge, which caused possible confusion, hence losing potential study participants and also introducing sampling errors. The information on perception of health was inadequate, which was also a strong indicator of healthcare utilization.

Both Ivanov and Buck (2002) and Fenta et al. (2007) identified how European and non-European immigrants utilized healthcare services in two North American countries, i.e., the U.S. and Canada. Ivanov and Buck (2002) focused on cultural patterns
in Russian speaking women, whereas Fenta et al. (2007) centered on Ethiopian refugees. Immigrants relocating to Canada encountered a larger knowledge gap because of their inability to speak English or French, as compared to those in the U.S. Economic status was seen by Fenta et al. to be a major barrier to healthcare utilization, particularly among U.S. immigrants, as compared to those in Canada who benefited from the universal medical coverage provided by the Canadian health system.

Healthcare utilization was operationalized as visits to healthcare facilities or health professionals for consultation, diagnosis, or treatment (Fenta et al., 2007). The independent variable was culture or ethnic patterns. In order to measure culture, both Ivanov and Buck (2002) and Fenta et al. (2007) used the same conceptual model that highlighted three main constructs contributing to healthcare utilization: Predisposing, Enabling, and Need-Related Factors. The researchers in the two studies used face-to-face interviews. In the Fenta et al. study, both male and female refugees were individually interviewed, while Ivanov and Buck conducted focus group interviews with women. Also, Fenta et al. collected data over a 12-month period, leaving room for possible data loss or feedback errors; but this was not the case with Ivanov and Buck, who employed a one-hour focus group interview to collect required information.

Ivanov and Buck (2002) and Fenta et al. (2007) measured the influence of a foreign culture on healthcare utilization through various factors, e.g., age, gender, cost of services, culturally congruent care, and language proficiency. Ivanov and Buck (2002) focused more on social factors such as locus of control, cultural health beliefs, and perception of trust in provider, whereas Fenta et al. (2007) focused on somatic factors.
such as chronic illness and mental disorders. Both studies thereby highlighted different ways of viewing culture and its influence.

Sample size was the main limitation for both Ivanov and Buck (2002) and Fenta et al. (2007) studies; thus, few generalizations could be made. Furthermore, the issue of transcribing from one language to another also made room for errors. Although Fenta et al. (2007) had a larger sample size, the sample size for Ivanov and Buck (2002), though small, was within the limits and requirements for a qualitative study.

The extent to which immigrants use healthcare facilities depends upon their cultural inclination. To assume that, once immigrants relocate to a host country, they access and utilize services based only on their experiences in that country would be false. Rather, as observed in the previous two studies, refugees used services based on their experiences in their native countries. Hence, the value that each culture places on health and wellness also emigrates with them (Ivanov & Buck, 2002). All immigrants did not utilize such facilities equally. As immigration quotas increase across countries, especially in the U.S. and Canada, more research is needed to study cultural patterns among immigrants and healthcare utilization in order to improve healthcare delivery, services, and outcomes.

**Summary**

Healthcare service utilization can be approached through various means. Some disciplinary approaches include (1) Sociocultural – in which social relationships, economic status, and health beliefs are determinants; (2) Socio-demographic – in which population characteristics, such as age, gender, occupation, and ethnicity are determinants; (3) Social-psychological – in which beliefs and knowledge are
determinants; (4) Organizational – in which the healthcare system itself is considered; and (5) Social systems care – in which the various approaches are combined by considering healthcare itself as a system with many components. Utilization can be approached through multiple variables. Popular variables include predisposing and enabling variables, as well as need factors, as seen with the Andersen-Newman theoretical framework. Predisposing variables include age, gender, attitudes, and place of residence; and enabling variables include income, education, transportation availability, and health insurance status.

Though some studies have shown that utilization differences exist between genders, with females utilizing more healthcare services than males, community plays a role in access to healthcare services. In support of some research work that has been conducted, lack of health insurance serves as a major barrier to healthcare access and utilization, particularly especially in the U.S. as compared with studies conducted in countries such as Australia and Canada that boast of a universal healthcare system.

Need factor, one of the constructs of the Andersen-Newman’s model on health service utilization, can be explained as the amount of healthcare perceived as necessary by the immigrant in order to maintain an acceptable quality of life, and this behavior is culture-centric. In addition, that which patients value medically will reflect in the way in which they use healthcare services. Within some cultural groups, females prefer fellow females as care providers; other groups prefer alternatives to orthodox medicine. Some value a stable or continued relationship with their physician with an emphasis on personalized care as compared to others who prefer immediate/urgent care by whomever is present, least expensive, and fastest.
By considering the various components of healthcare service utilization, it is evident that the various multifaceted healthcare barriers and access challenges still remain relevant to recent healthcare research. In particular, issues involving primary care availability and healthcare utilization by lower socioeconomic populations, of which refugees form a large majority, remain important areas of research. What is less evident in current research work is the subject matter of information awareness to potential healthcare seekers in order to address healthcare utilization issues.

Awareness may not be as relevant for the general non-immigrant population; however, for immigrant, refugee populations and community health services, awareness about healthcare services may be an important variable of utilization that requires more attention. The current study applied the availability, accessibility, and utilization approaches to understanding healthcare access and use by refugees in Bowling Green, Kentucky. The study used these approaches with the undertone of earlier research considerations for patient awareness of healthcare services, which in turn is culture-centric.

The information and suggested variables that have been discussed in this chapter lead to the central research question for this study: What are the cultural health-seeking behavioral patterns among refugees at their local healthcare facilities? The study’s research questions follow:

**Research Question 1:** What is the extent of relationship between Frequency of Use of Healthcare Services and the refugee cultural markers or Predisposing Factors of Native Language, Nationality, and Religion?
**Research Question 2:** What is the extent of relationship between Frequency of Use of Healthcare Services and barriers as identified by refugees that include the Enabling Factors of Number of Years in the U.S.; Have Health Insurance; Educational Level; Available Transportation; Make an Appointment; and Friendly Environment (professionals and services rendered)?

**Research Question 3:** What is the extent of relationship between Frequency of Use of Healthcare Services and refugees’ perceived needs, i.e., the Need-Related Factors of Gender and Age?

**Research Question 4:** To what extent does a relationship exist between services available at healthcare facility and the Frequency of Use of Healthcare Services, i.e. Cultural Competency of Services, e.g., Interpreters and Medical Professionals Understand Patient’s Condition?

The results of this study may help healthcare providers and refugees understand the way in which cultural perceptions affect opinions, behaviors, and relationships that exist and should exist in health service use in our communities.
CHAPTER III: METHODOLOGY

Introduction

As successive groups of refugees reach the United States yearly, more attention should be paid to refugee healthcare and ideas to reinvent it. Little is known about the health needs of refugees when they arrive at their host country. It is important to note that the majority of these immigrants spend the greater part of their lives in refugee camps with limited resources, in stress, and surrounded by diseases: as such, a health assessment is always conducted at the port of entry. Studies conducted on refugees in the U.S. rarely have addressed their health the first few years following resettlement, in part because the refugees become subsumed under the foreign-born or immigrant category (Lipson, Weinstein, Gladstone, & Sarnoff, 2003). A national study may reaffirm the “healthy immigrant effect,” but fewer sick days and less physician use may reflect access problems, economic concerns, and health beliefs or practices that clash with American healthcare (Lipson et al., 2003). Researchers are aware that statistics may mask differences in health and the reason people seek professional care; therefore, it is important to combine qualitative and quantitative approaches.

This chapter provides a description of the research methods used in the study, including type of study (a mixed representation of basic quantitative and qualitative data collection and analysis tools, the role of the researcher, and the participants). A description is included of the sample and population, followed by procedures in survey and instrument development for the pilot study and data collection. The research design examines the concept of data collection. Other issues of validity and ethics are highlighted, and the chapter concludes with a summary.
Type of Research

In their report to the National Institute of Health, Creswell, Klassen, Plano-Clark, and Smith (2010) stated that priority exists in health science research to develop new methodologies to improve the quality and scientific power of data leading to an extraordinary surge in methodological diversity. These researchers added that the diversity signals a growing acceptance of qualitative and social science research, the formation of interdisciplinary research teams, and use of multi-level approaches to investigate complicated health problems, such as the patient’s point of view and cultural and social models of illness and health. Therefore, contributing to this interest has been the increased methodological sophistication of mixed methods research in the social and behavioral sciences. Funded by the National Institute of Health (NIH), investigators are using research approaches such as in-depth interviews and field observations combined with clinical trials, surveys of attitudes and beliefs, and epidemiological measures to better understand health problems (Creswell et al., 2010). Growing interest in mixed methods research can be documented by the number of NIH-funded studies that include “mixed methods” or “multimethod” in their abstracts.

Creswell et al. (2010) defined mixed methods as a research approach focusing on questions that call for real-life contextual understandings, multi-level perspectives, and cultural influences. They assert that a mixed study means “employing rigorous quantitative research assessing magnitude and frequency of constructs and rigorous qualitative research exploring the meaning and understanding of constructs” (p. 6). A salient strength of qualitative research is its focus on the contexts and meaning of human lives and experiences for the purpose of inductive or theory development driven research.
Conversely, quantitative research is a mode of inquiry often used for deductive research, when the goal is to test theories or hypotheses, gather descriptive information, or examine relationships among variables (Creswell et al., 2010).

For the current study, both quantitative and qualitative research designs were applied to collect data. Surveys were distributed to 110 participants, and individual interviews were conducted with four refugees’ representative of the majority of the refugee population in Bowling Green. These interviews allowed the researcher not only to collect thoughts, feelings, and reflections on cultural diverse health-seeking behaviors but also to integrate and mirror the evidence from one data collection method with the other for further in-depth understanding and clarity of the research questions and topic.

Mixed methods research is more than simply collecting qualitative data from interviews; or collecting multiple forms of qualitative evidence (e.g., observations and interviews); or multiple types of quantitative evidence (surveys and tests). It involves the intentional collection of both quantitative and qualitative data and the combination of the strengths of each to answer research questions. In mixed methods studies, investigators intentionally integrate or combine quantitative and qualitative data rather than keeping them separate (Creswell et al., 2010). The basic concept is that integration of quantitative and qualitative data maximizes the strengths and minimizes the weaknesses of each type of data set.

**Integrating Data in Mixed Studies**

Integrating data in mixed studies consists of combining qualitative data (text or images) with quantitative data (numeric information) in various forms such as the following:
1. Merging data: This integration can be achieved by reporting results together in a discussion section of a study, such as reporting first the quantitative statistical results followed by qualitative quotes or themes that support or refute the quantitative results (Creswell et al., 2010).

2. Connecting data: “It involves analyzing one dataset (e.g., a quantitative survey), and then using the information to inform the subsequent data collection (e.g., interview questions, identification of participants to interview). In this way, the integration occurs by connecting the analysis of results from the initial phase with the data collection from the second phase of research” (Creswell et al., 2010, p. 7).

3. Embedding data: Although rarely used, it involved embedding a dataset of secondary priority within a larger, primary design. An example is the collection of supplemental qualitative data about how participants are experiencing an intervention during an experimental trial. Alternatively, a qualitative data collection may precede an experimental trial to inform development of procedures or follow an experimental trial to help explain the results of the trial.

**Population and Sample**

The city of Bowling Green is located in Warren County in southcentral Kentucky. Due to re-settlement of refugees, the city has hosted over 8,342 refugees from 25 different countries, nationalities, or citizenships around the world. The International Center of South Central Kentucky, with its head office in Bowling Green, has hosted over 7,610 refugees, whereas its Owensboro office has hosted 732. These offices have been in
inception since 1981. The fiscal year for refugee entry to the city of Bowling Green begins in September of each year.

The target population was identified as refugees who currently reside in the city of Bowling Green, are registered with the International Center, and fit one or more of the following criteria:

- Have been forcibly displaced outside their native countries with a history of hardship, including war, famine, and violence;
- Have spent a part of their lives in refugee camps;
- Have faced a variety of health and socio-economic issues resulting from difficult conditions in refugee camps and incomplete medical care prior to resettlement;
- Individuals who may or may not have a form of health insurance;
- Have resettled in Bowling Green over the past 5 years (2010-2015); and
- Have used a healthcare facility (clinic, ER, hospital, health department) at least once.

Based on the fifth criterion delineated (resettled in Bowling Green from 2010-15), the actual target population was 3,371 refugees. Refugees meeting this criterion include Afghans, Burmese, Burundians, Congolese, Cubans, Iraqis, Nepalese (Bhutanese), and

![Figure 2. Schematic representation of the target population.](image)
Somalians. A convenience sample of 110 refugees was gathered from the target population because of the non-static nature of the refugee population. Nations represented in the study sample were Burma (which are one of the largest refugee group in Bowling Green), Burundi, Democratic Republic of Congo, Cuba, Iraq, Nepal (Bhutan), Somalia and Others (Bosnia, Pakistan and Saudi Arabia).

Table 1a

Population Per Refugee Group, 2010-2015

<table>
<thead>
<tr>
<th>Country</th>
<th>Target Population</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afghanistan</td>
<td>62</td>
<td>1.83</td>
</tr>
<tr>
<td>Burma</td>
<td>2122</td>
<td>62.94</td>
</tr>
<tr>
<td>Burundi</td>
<td>37</td>
<td>1.09</td>
</tr>
<tr>
<td>DRC</td>
<td>141</td>
<td>4.18</td>
</tr>
<tr>
<td>Cuba</td>
<td>170</td>
<td>5.04</td>
</tr>
<tr>
<td>Iraq</td>
<td>362</td>
<td>10.73</td>
</tr>
<tr>
<td>Nepal</td>
<td>155</td>
<td>4.59</td>
</tr>
<tr>
<td>Somalia</td>
<td>322</td>
<td>9.55</td>
</tr>
<tr>
<td>Others</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>3371</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Note. DRC – Democratic Republic of Congo

Table 1b

Population and Sample Percentages Per Refugee Group, 2010-2015

<table>
<thead>
<tr>
<th>Country</th>
<th>Target Population</th>
<th>Study Sample</th>
<th>% of Target Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>Afghanistan</td>
<td>62</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Burma</td>
<td>2122</td>
<td>38 (34.50)</td>
<td>1.79</td>
</tr>
<tr>
<td>Burundi</td>
<td>37</td>
<td>3 (2.70)</td>
<td>8.10</td>
</tr>
<tr>
<td>DRC</td>
<td>141</td>
<td>19 (17.20)</td>
<td>4.63</td>
</tr>
<tr>
<td>Cuba</td>
<td>170</td>
<td>12 (11.00)</td>
<td>1.71</td>
</tr>
<tr>
<td>Iraq</td>
<td>362</td>
<td>9 (8.20)</td>
<td>2.48</td>
</tr>
<tr>
<td>Nepal</td>
<td>155</td>
<td>8 (7.30)</td>
<td>5.16</td>
</tr>
<tr>
<td>Somalia</td>
<td>322</td>
<td>7 (6.40)</td>
<td>2.17</td>
</tr>
<tr>
<td>Others</td>
<td>-</td>
<td>14</td>
<td>-</td>
</tr>
<tr>
<td>Total</td>
<td>3371</td>
<td>110</td>
<td>-</td>
</tr>
</tbody>
</table>

Note. DRC – Democratic Republic of Congo
Due to the challenges in assembling individuals within each refugee group, a convenience sampling was conducted at community centers such as the International Center, the Community Action of Bowling Green, the Neighborhood Community Services, and the Bowling Green Housing Authority to recruit refugees willing to participate in the study and complete the questionnaire. Each questionnaire was translated into various languages, including Arabic, French, Spanish, and Swahili. Questionnaires were distributed at the previously mentioned sites to aid in proper administration in the event of misunderstanding. Letters of consent were obtained prior to any activity, and required permission was sought from staff or authorities at the sites. In order to prevent coercion during subject recruitment, no record of participants was provided to site staff.

For the individual interviews, a purposeful sample of four individuals fluent in English was selected: one Burmese, two Congolese and one Iraqi. These individuals consented to be interviewed when a general announcement was made regarding the study. Completion of the survey/questionnaire portion of data collection was not a requirement for participation in the interview. During the interviews, which were audio recorded, individuals were encouraged to express themselves as best as they could and to ask questions if an interview question was unclear.

Description of the Variables

This section describes variables conceptually with variable label codes. The description of the variables is organized according to Figure 1. The rationale for including four types of independent variables (Predisposing Factors, Enabling Factors, Need-Related Factors, and Cultural Competency of Services) and the dependent variable (Frequency of Use of Healthcare Services scale) was grounded in theoretical and
conceptual considerations derived from the literature. Survey instrument development is discussed in the next section. A copy of the survey is attached in Appendix A. Specific operational definitions of all variables are attached at Appendix B. The study variables are described from Andersen-Newman’s conceptual framework of healthcare service utilization.

**Development of the Survey/Questionnaire**

The questionnaire was developed by the author under the guidance of Grace Lartey, content expert and co-chair of the dissertation committee; Heath Ray, refugee information expert and coordinator at the Community Action of Bowling Green; and three undergraduate student research assistants. The questionnaire contains two parts. Part one contains sections A to C [A1 to A15, B16 to B23 and C24 to C27] with 27 Likert-type scale questions, section D [D1 to D5] with open-ended questions for respondents to indicate their frequency of use, and section E [E1 to E10] with yes or no questions. Part two contains 15 items [q1 to q15] to gather socio-demographic information. Issues about the validity, reliability, and feasibility of the survey instrument were paramount in decisions about the final set of questions.

Sections A to C contain questions tailored towards the independent variables of the study: (a) Refugee Cultural Characteristics, (b) Level of Healthcare Services Cultural Competency and (c) Identified Barriers. Each section uses a Likert-type scale ranging from 5 – Strongly Agree to 1 – Strongly Disagree. Section D contains open-ended questions for respondents to indicate their frequency of use of available healthcare services in the past year, which served as the dependent variable. Section E is structured around binary responses (yes or no) related to healthcare services and insurance. The
socio-demographic questions in part two are also structured around the independent variables. The different sections of the survey are fashioned to aid in the ease with which respondents navigate the questionnaire, understand instructions, and respond to the content. The complete questionnaire was designed to identify the following five domains or constructs:

1. Cultural Trait Domain: Respondents were asked to identify qualities that were closely related to their culture:
   a. Native Language (q4, E9, E10)
   b. Religion beliefs (q6, A5, A6)
   c. Nationality (q3)
   d. Family Size (q8, q9)

2. Barriers Domain: Respondents were asked to identify factors affecting their use of healthcare services:
   a. Educational Level (q11)
   b. Income Status (q12, E6)
   c. Health Insurance (q10, E1-E4)
   d. English Language Competency (q13, E8)
   e. Cost (B23)
   f. Social Support (q15, q7, E5, A1-4, A12-13)
   g. Length of Stay in the United States (q5)
   h. Access to Medical Facility (E7, C24-27)
   i. Appointment Wait-time (B16-17)
3. Perceived-Need Domain: These items addressed health-seeking behaviors in two areas:
   a. Physical Health (Age-related) (q2, A10)
   b. Psychological Health (Gender-related) (q1, A7-9, A11, A14)
4. Competency Domain: These items helped to identify reasons related to healthcare use:
   a. Interpreters (E9-10)
   b. Health Professionals Understand Patient’s Condition (q14, A15, B18-21)
   c. Appointments and Services (B16-17, B22)
5. Utilization Domain: These items focused on the Frequency of Use of Healthcare Services (D1- D5).

**Independent Variables**

Four independent variables were used in this research: Predisposing Factors, Enabling Factors, Need-Related Factors, and Cultural Competency of Services. Three of the four sets of variables under the Predisposing Factors were chosen because of their relevance to the cultural identity of refugees: Native Language, Nationality, and Religion; they are fundamental to any group. The variables under Enabling Factors (Number of Years in the U.S., Have Health Insurance, Educational Level, Available Transportation, Make an Appointment, and Friendly Environment) can be expected to influence refugees’ attitudes about using available healthcare services. Need-Related Factors (Gender and Age) affect refugees’ health status or their individual perceptions on health. Finally, the constructs under level of Cultural Competency of Services (Interpreters and Health Professionals Understand Patient’s Condition) are related to whether a given healthcare
facility was tailored towards meeting refugee health needs. These independent variables were grounded in theoretical and conceptual considerations derived from the Andersen-Newman framework, which include the following:

- **Predisposing Factors** – Cultural characteristics of the refugee group, including Family Size, Native Language, Nationality, and Religion
- **Enabling Factors** – Barriers to the use of available healthcare services as identified by refugees, including Number of Years in the U.S., Have Health Insurance, Educational Level, Available Transportation, Make an Appointment, and Friendly Environment
- **Need-Related Factors** – Perceived healthcare needs based on one’s age or gender, i.e., physical (Age) and psychological (Gender) related health needs
- **Cultural Competency of Services** – Variables (Interpreters and Health Professionals Understand Patient’s Condition) that help to measure the level of cultural awareness of a given healthcare facility, as well as identify services available at healthcare facility and their actual use by refugees.

**Dependent Variable**

The dependent variable for this study was the Frequency of Use of Healthcare Services scale as defined by the number of times in the past year participants used available healthcare services, such as the emergency room, family planning services, visiting friends and family that were hospitalized, and urgent care centers. The Frequency of Use of Healthcare Services scale consists of 5 items (D1-D5):

- D1. In the past year, I have visited the emergency room for a life threatening medical condition “x” number of times.
• D2. In the past year, I have received family planning services at a healthcare facility (e.g. Contraceptives) “x” number of times.

• D3. In the past year when sick, I have visited/scheduled an appointment at a healthcare facility “x” number of times.

• D4. In the past year, I have visited a sick family member or friend at a healthcare facility “x” number of times.

• D5. In the past year, I have been sick or injured “x” number of times.

Each item on the scale allowed respondents to write in a number signifying the frequency to which they have visited a healthcare facility for one of the identified reasons on each item in the past year.

**Interviews**

The interview portion of the study helped elicit information from respondents in their own words. It allowed the researcher to probe for sentiments and deep-seated cultural values in order to gather further information not possible under the constraints of a questionnaire. Informal interviews represent ethnography, which focuses on gathering qualitative data to describe and interpret more fully the meanings of behavior, language, and interactions within the group. Although all participants were asked about general community issues, some participants were asked to describe their personal experiences. Interview structured questions (IQ) included the following:

IQ1. How important to you is taking care of your health?

IQ2. What are your health concerns, for example; heart disease, myopia, diabetes?

IQ3. Describe your experiences with your health concerns?
IQ4. What type of things do you think are important in the people or the system that provides you with healthcare? – e.g. interpreters, bulletins in native language etc.

IQ5. What affects your ability to receive medical services when you need them? E.g., transport, health insurance, finances, language etc.

IQ6. How have past experiences with healthcare affected the way you approach it now? For example, making an appointment, interpreters, health cost/expenses?

IQ7. Why do you go to the doctors or healthcare provider that you do? For example; is it because of cost, interpreters, location/proximity?

IQ8. How often are you not able to see a doctor when you want to?

IQ9. What do you think works well in the healthcare system? For example; appointment times, interpreters, friendly environment

IQ10. What do you think should be changed in the healthcare system to make it easier for you to receive healthcare? For example, local transportation/accessibility, decrease cost/ affordability

IQ11. How do you get to a clinic/hospital/doctor if the need arises?

IQ12. Is there a difference in men and women experiences with healthcare providers?

IQ13. What do you find most surprising about the healthcare system here in the United States as compared with your country?

The interview question guide was developed to explore the cultural characteristics, barriers, need-related health issues, and level of Cultural Competency of Services used with the aid of the Andersen-Newman conceptual model on healthcare service utilization.
Procedures

Data for the independent variables and dependent variable were collected using the study survey instrument, Refugee Health Survey (Appendix B), administered to refugees in Bowling Green initially as a pilot and later during the main study.

Pilot Study

A pilot study was conducted to test the validity and reliability of the survey instrument to be used. Major difficulties within the instrument were addressed or revised during the pilot, which helped to further evaluate the methods for gathering data. Initially, the instrument was administered to fellow colleagues who helped in editing and providing reasonable feedback. It then was applied to an undergraduate Public Health classroom of 20 international students who closely resembled the target population for the study (refugees in Bowling Green).

Once feedback was received from the committee and the required final changes were made to the instrument, it was tested among 150 Burmese and Congolese refugees in Bowling Green who were not targeted as participants in the main study. The survey was administered at a local church with the help of a case manager from the International Center and at the Housing Authority with the help of leaders of a refugee non-profit group. The pilot subjects were advised to complete the survey and provide necessary feedback on questions asked. These responses were used to run an exploratory factor analysis to establish study constructs. No interviews were conducted during this phase. Data were analyzed by using $t$-test and ANOVA.
Data Collection

Following WKU Institutional Review Board (IRB) approval and final revisions to the survey instrument based on feedback from the committee, the researcher contacted the International Center of Bowling Green who worked closely with the Community Action Center and the Bowling Green neighborhood to inform participants about the surveys. Samples of the consent letter and survey were given to supervisors and case managers at these sites.

Surveys were administered to refugees at identified sites including local churches, the International Center, the Housing Authority and community civic centers. Prior to completing the survey, participants were informed about the study and invited to sign a consent form. Those who consented were allowed to participate. Completing the survey was anticipated to require 20 minutes and was administered by the researcher with the help of interpreters and refugee case managers at the International Center of Bowling Green. Face-to-face administration of the survey was intended to overcome literacy barriers as well as identify any confusion in answering items. Surveys also were sent to the participants at various Housing Authorities in Bowling Green with requests to complete and submit the questionnaire via U.S. mail.

Information from each survey was retrieved and entered into an Excel spreadsheet, allowing the researcher access to all data while ensuring participant anonymity. Data were transferred into Statistical Analysis System (SAS) and Statistical Package for Social Sciences (SPSS) packages for analysis. All data retrieval, storage, and coding were consistent with ethical research standard for maintaining confidentiality and protecting data.
Individual interviews were conducted with a subset of the participants who opted to participate in this format of the study. The informal interview involved the researcher recruiting refugees who were fluent in English to prevent translation errors that could introduce study bias and issues with response delays. The interviews consisted of four participants, all males who ranged in age from 30 to mid-70, with additional demographic information collected. All consented to audio taping the interview; each lasted an average of 50 minutes. After the study was described and verbal consent to participate was obtained, lively discussion and examples were stimulated by questions. The course of each interview was allowed to vary based on information that had been collected and questions asked. Discussion between participants and researcher was encouraged. The topics that were re-emphasized during the interview included:

- A common list of the healthcare sites where basic health services could be accessed
- Factors that make a location favorable or likable
- A list of sites that had positive characteristics along the lines of accessibility, accommodation, acceptability, and affordability
- A list of sites that had negative characteristics along the lines of accessibility, accommodation, acceptability, and affordability
- A discussion of triggers for seeking out healthcare
- Other needs that compete with accessing healthcare

Transcripts were prepared from each recordings in order to facilitate analysis.

**Research Design**

In a mixed study, both qualitative and quantitative research designs are applied. Four primary methods are involved in obtaining qualitative research data: interviews,
surveys, observations, and review of documents pertinent to the study. The current study used interviews. An advantage to the interview process was its adaptability to probe deeper into the responses of the participants and to ask for clarification of responses given. A limitation to the interview format is that, beyond probing, the researcher did not influence the responses of the participant and anonymity could not be guaranteed. However, the respondents identified themselves only to the researcher, and it was the researcher’s responsibility to maintain confidentiality.

With the quantitative design, all potential participants were asked to complete the two-part questionnaire. Part one of the instrument assessed the influence of culture on healthcare service utilization on a 5-point Likert-type scale and the frequency of use in the past year; part two collected background demographic information. Using the questionnaire allowed the same information to be obtained from all participants. However, not all information relevant to the current study could be captured as the instrument is limited in its ability to gather in-depth meaning to the thoughts and feelings of the participants. Hence, the data set for the study was collected using a mixed research design. The remainder of this section addresses the data analysis plan, data screening, and psychometric analyses.

**Data Analysis Plan**

**Qualitative analysis.** Qualitative analysis begins with identifying themes and can be extremely time consuming. Accuracy of the subject’s thoughts and feelings is another major concern. Study themes can be identified through a review session of the interview transcript. The researcher used a counting system for the frequency of the themes observed and tallied their frequency. A summary of the information collected and
organized was compared to the themes identified in relation to the research questions. To categorize the information from the interview audiotapes, the researcher coded each topic as it appeared. First, transcripts from the tapes were transcribed and then repeatedly read to ascertain a code. The interview transcript was coded according to the themes and patterns identified by the research questions. Based on the research questions and subject responses, categories were identified to promote a better understanding of the information. This process was repeated for each of the research questions.

**Quantitative analysis.** The data for this study were intended to measure the relationship that exists (if any) between the independent variables (Cultural Characteristics, Barriers, Perceived Health Behaviors, and Cultural Competency of Services) and the dependent variable/outcome (Frequency of Use of Healthcare Services). Data-screening, descriptive statistics, psychometric analyses, and other statistical analyses were used to answer research questions. This research generally followed a correlational design with direct influences implied through hypothesized relationships among the variables. However, associations among variables, e.g., between socio-demographic indices (Gender, Age, Educational Level, etc.) and the outcome, Frequency of Use of Healthcare Services in the past year, cannot in themselves substantiate causation.

**Data Screening**

Before the actual computation of any statistical analyses, the data were screened and checked for missing data. Any questionnaire with 10% or more items unanswered was eliminated. Also, returned questionnaires were not used if entire sections or scales were omitted. Surveys used included those that had minimal missing values and met the
criteria of full completion. Both imputing data and case wise deletions have the potential for introducing bias. Eliminating cases not only reduced the sample size to 110, but it also likely introduced systematic bias, i.e., there is the possibility that individuals who omitted items are different from those who did not, just as there is the possibility that those who completed the questionnaire are different from those who chose not to do so.

**Psychometric Analyses**

Psychometric analyses represented the second step of this research: analyzing the validity of the Refugee Health Survey items. As this survey was specifically developed for this study, no previous psychometric data existed for its current form. Thus, the items on each scale of the survey required validation. Exploratory factor analysis procedures depend on sufficient sample size to support the calculations—10-15 subjects per item in the analysis. Validity computations included the calculation of composite scale variables in which the scores for each item are summed and then divided by the number of items in that scale. These theory-based subscales were compared to the results from the factor analysis, a procedure for examining construct validity. Inter-scale correlations were computed to examine internal validity.

Internal scale consistency is the dimension of concern with respect to reliability. The coefficient alpha (Cronbach, 1951) provides the inter-item correlation among survey items. A coefficient alpha of 0.7 or greater is considered acceptable internal scale reliability, although a value of 0.6 may be utilized after running an exploratory analysis. Item characteristics for each individual question are included in tables in Chapter IV.
Research Questions

Research questions were formulated to guide the analysis of data collected. The questions were previously introduced in Chapter 1 and are included in this section for convenience of the reader:

**Research Question 1:** What is the extent of relationship between Frequency of Use of Healthcare Services and the refugee cultural markers or Predisposing Factors of Native Language, Nationality, and Religion?

This question examined what relationships exist between cultural characteristics (grouped into a domain) and health service use. Hence, ANOVA was conducted to examine the relationships between the independent variables (cultural characteristics) and the study outcome: Frequency of Use of Healthcare Services. One interview question helped gather additional in-depth information regarding Research Question 1: IQ1. How important to you is taking care of your health?

**Research Question 2:** What is the extent of relationship between Frequency of Use of Healthcare Services and barriers as identified by refugees that include the Enabling Factors of Number of Years in the U.S.; Have Health Insurance; Educational Level; Available Transportation; Make an Appointment; and Friendly Environment (professionals and services rendered)?

This question examined the influence of the Enabling Factors on the Frequency of Use of Healthcare Services. Correlations and t-tests were used to assess the existence of significant relationships between the variables. ANOVA was rejected as an option because more than two groups could not be created with each variable. The independent variables were mainly identified as barriers to the use of healthcare services. Seven
interview questions examined more fully what refugees perceived as potential barriers to the use of healthcare services:

- IQ5. What affects your ability to receive medical services when you need them? (e.g., transport, health insurance, finances, language, etc.)
- IQ6. How have past experiences with healthcare affected the way you approach it now? (e.g., making an appointment, interpreters, health cost/expenses)
- IQ7. Why do you go to the doctors or healthcare provider that you do? (e.g., is it because of cost, interpreters, location/proximity?)
- IQ8. How often are you not able to see a doctor when you want to?
- IQ9. What do you think works well in the healthcare system? (e.g., appointment times, interpreters, friendly environment)
- IQ10. What do you think should be changed in the healthcare system to make it easier for you to receive healthcare? (e.g., local transportation or accessibility, decreased cost/affordability)
- IQ11. How do you get to a clinic/hospital/doctor if the need arises?

**Research Question 3:** What is the extent of relationship between Frequency of Use of Healthcare Services and refugees’ perceived needs, i.e., the Need-Related Factors of Gender and Age?

This question examined the relationship of two types of health-seeking behaviors, perceived physical health (Age) and psychological/mental health (Gender), with the study outcome: Frequency of Use of Healthcare Services. A combination of ANOVA and $t$-tests were used. Three interview questions explored refugees’ understanding of both their physical health and psychological health status:
• IQ1. How important to you is taking care of your health?

• IQ2. What are your health concerns? (e.g., heart disease, myopia, diabetes)

• IQ12. Is there a difference in men and women experiences with healthcare providers?

**Research Question 4:** To what extent does a relationship exist between services available at healthcare facility, and the Frequency of Use of Healthcare Services, i.e., Cultural Competency of Services, e.g., Interpreters and Medical Professionals Understand Patient’s Condition?

The final research question examined the influence of the cultural competence of available healthcare services on the frequency of refugees’ use of these services. This question was addressed via *t*-test analyses. Four interview examined the level of Cultural Competency of Services and Frequency of Use of Healthcare Services:

• IQ3. Describe your experiences with your health concerns?

• IQ4. What type of things do you think are important in the people or the system that provides you with healthcare? (e.g. interpreters, bulletins in native language)

• IQ9. What do you think works well in the healthcare system? (e.g., appointment times, interpreters, friendly environment)

• IQ13. What do you find most surprising about the healthcare system here in the United States as compared with your country?

**Validity**

Errors are inevitable during the data collection or themes or code identification phases as observed in a mixed study. It is of utmost importance that the researcher ensures each process is thoroughly completed. Transferability of concepts and themes to a different group or setting enhances the meaning and accuracy of the research. Yet,
generalizability is limited in that the questionnaires were only administered to a fraction of refugees located within Bowling Green in the Commonwealth of Kentucky.

There are four main types of validity: content, concurrent, predictive, and construct. The validity of the survey instrument was evaluated by conducting two pilot studies with exploratory factor analysis to identify domains and sub-constructs. The main scale for the study was adapted from the Andersen-Newman theory on healthcare service utilization. Eight strategies for promoting validity and reliability in qualitative studies include (a) triangulation, (b) member checks, (c) peer review/examination, (d) researcher’s position or reflexivity, (e) adequate engagement in data collection, (f) maximum variation, (g) audit trail, and (h) rich, thick descriptions. The use of multiple data collection methods (triangulation) in the current study helped mitigate bias in the evaluation of the data.

**Ethics**

As the current study involved the participation of human subjects, the researcher took care to ensure that all aspects of the study met the standards for ethical research. The WKU IRB approval process required completion of an on-line training course for certification in ethical human subject research. This was completed by the researcher. Adherence to the rules of confidentiality with participant information were followed. The participants were assured in writing of the confidentiality and anonymity of their responses via an informed consent, as well as verbally.

Following IRB approval, an additional review was completed of the instruments for appropriateness, accuracy, and representativeness of the specifications. Members of the an “expert panel” were sent an email briefly explaining the study and providing
opportunity for review and comments. The draft instruments and a guide containing a set of questions for their review was sent.

Prior to administering the surveys, the research provided refugees directions on completing and submitting the questionnaires. Since providing the survey had minimal impact on the individuals, a consent form with permission granted by the refugees was required to complete the survey. Both consent forms and questionnaires were written in various languages (French, Spanish and Swahili), which made them easy for refugees to understand. Efforts were made to ensure that the questions were not complicated and threatening to participants and that they could read and respond to them within the timeframe allotted for survey completion.

Summary

This chapter identified the methodological issues involved in assessing cultural perceptions on healthcare service use among refugees in Bowling Green, Kentucky. The purpose of the study was to gain further understanding of the way foreign culture affects usage of healthcare services in the US. This research used a mixed design with information gathered via survey instruments or individually recorded interviews. Specific and demographic information was collected. The target population was all refugees who have lived in Bowling Green within the past six years.

Data collection included sending a notice to research stakeholders at the International Center, Community Action, and Neighborhood Community Services in Bowling Green. Informed consent was requested prior to individuals’ completing the study questionnaires. Four respondents had an additional opportunity to participate in individual interviews. The survey was developed through the concerted efforts of experts
on the subject matter and the adaptation of the Andersen-Newman theoretical framework on factors that influence the utilization of healthcare services.

The research questions were framed from knowledge of other literature reviewed and this study’s theoretical framework. **Research Question 1** focused on how predisposing factors or refugee cultural characteristics like Language, Nationality, and Religion affect refugees’ Frequency of Use of Healthcare Services. **Research Question 2** explored the impact of the Enabling Factors on Frequency of Use of Healthcare Services. **Research Question 3** investigated the relationship between the two Need-Related Factors, Age and Gender, on the use of healthcare services. **Research Question 4** examined the level of Cultural Competency of Services. SAS and SPSS were both utilized for data analyses.

Important issues concerning the population and sample size, as well as the procedure for conducting the mixed-study, were addressed. A pilot study was conducted to provide the researcher with initial information on the validity and reliability of the instrument (which had not previously been used). Ethical issues also were addressed, including the requirement for the completion of human subjects’ review for approval of the study and the appropriate protection of data.

Finally, the criterion for this study was the influence of refugee culture on the use of available healthcare services guided by the following central research question: What are the cultural health-seeking behavioral patterns among refugees at their local healthcare facilities?
CHAPTER IV: RESULTS

Introduction

According to Ivanov and Buck (2002), the United States is a melting pot, one that retains cultural richness from various populations. As the U.S. immigration quotas increase, more research is needed regarding immigrant and refugee groups to further understand their unique behavioral patterns, as evidenced by their cultural differences in the knowledge and use of healthcare services. Surood (2008) listed several reasons to expect differences in healthcare use among refugees due to the impact of culture on health. Hence, immigrant culture poses a challenge in seeking help.

The purpose of this study was to focus on understanding the healthcare utilization patterns of refugees. The importance of understanding the concept is evident by the less than sufficient scholarly work about this subset of immigrants. The current study helps to better understand the role of culture in health service use. In addition, it provides insight into and data about the refugee community in Bowling Green, Kentucky, and similar rural areas. This research provides useful information about the expectations or needs of these refugees as consumers in the U.S. healthcare system and helps to highlight cultural patterns in their knowledge of preventive health and health-seeking behaviors. The researcher attempted to further delineate these immigrants’ views of healthcare and health education entails, coming from their personal foreign perspective.

To better serve this category of immigrant, it is essential to understand the unique cultural beliefs and values that influence their utilization of healthcare services, their health status, and health outcomes. Thus, understanding the dynamics between culture and health is essential. Culture guides and influences various aspects of life, including
health. To obtain detailed perceptions on the influence of culture, a mixed methods study was conducted, with both quantitative (questionnaires) and qualitative (individual interviews) research methods incorporated into the data collection process. This allowed the researcher to integrate and to mirror the evidence gathered from one data collection process with the other to develop a more robust and in-depth understanding of the topic. The remainder of this chapter details the procedures and results of this study.

**Procedures and Pilot**

After WKU IRB approval, the researcher developed the survey instrument based on concepts and perceptions on healthcare service use and health behavior. The questionnaire was later examined for content and clarity with the assistance from professors in the department of Public Health. Revisions to the questionnaire entailed the following steps: (1) modifying the questions to gather the participants’ age; (2) changing some items on the questionnaire from scale-type questions to yes or no answers; and (3) introducing a new scale, Frequency of Use of Healthcare Services, in order to make the construct measurable. A comprehensive review of the survey instrument was conducted by each dissertation committee member, a colleague at Community Action of Bowling Green, and undergraduate student assistants. Changes to the interview questions included (1) modification of words and sentences used, and (2) reduction in the number of questions asked to avoid redundancy. This feedback was incorporated after consultation with dissertation advisors.

A pilot study was conducted to test the validity and reliability of the survey instrument. The participants for the pilot study were non-targeted refugees from two main refugee groups in Southcentral Kentucky: the Burmese and Congolese populations. The
participants in the pilot study (following the completion of the initial reviewed questionnaire) were precise in their feedback of the instrument. The researcher then reviewed the information provided, conducted an exploratory factor analysis to validate the instrument, and conducted additional data analyses as discussed in the following sections. Results from the pilot study provided adequate statistics, that with final revisions, the survey instrument was appropriate for the study.

**Psychometric Analyses**

This section focuses on the validity, reliability, and factor analysis conducted on the survey instrument. Psychometric analysis related to validity of the instrument included an exploratory factor analysis on the sections A to C, Cronbach’s (1951) alpha, and correlations. The information obtained from the various output files was used to confirm the integrity of the survey. The primary analytic technique utilized was factor analysis based on pilot test data. Data checks confirmed that the distribution closely met assumptions relevant to factor analysis; i.e., the sample size \( N = 158 \) was sufficient to support the maximum number of items (27 items). An oblique rotation was utilized which was assumed to be consistent with theory that subscales in all three sections would be related rather than completely independent. Cronbach’s alpha for each scale demonstrated adequate to strong reliability. Seven factors emerged with two to five items, which produced a high Cronbach’s alpha with values ranging from 0.742 to 0.913, which were acceptable. Four items on the initial draft of the survey instrument overlapped other items during factor loading: A12 – I live near (within 3 miles/5km) to a healthcare facility (loading as 0.578); A15 – I understand all the instructions given by the medical professional (loading as 0.469); A17 – I feel frustrated going to a healthcare facility.
because nobody understands my language (loading as 0.547); B23 – There are interpreters in my language at the healthcare facility (loading as 0.460). As these items were deleted from the final questionnaire, the number of items on the final survey instrument was reduced from an initial 31 to 27. Descriptive statistics for individual items are provided in the subsequent tables.

**Frequency of Use of Healthcare Services**

The Frequency of Use of Healthcare Services scale represents the primary dependent variable in this study and addresses the frequency with which refugees used available health facilities in the past one year. Healthcare services include the emergency room, urgent care clinics, follow-up hospital visits, doctors’ private offices and health departments. Participants were expected to provide the number of times they visited any of these facilities in the past year. Five survey items captured this information:

- **D1** – In the past year, I have visited the emergency room for a life threatening medical condition “x” number of times.
- **D2** – In the past year, I have received family planning services at a healthcare facility (e.g. contraceptives) “x” number of times.
- **D3** – In the past year when sick, I have visited/scheduled an appointment at a healthcare facility “x” number of times.
- **D4** – In the past year, I have visited a sick family member or friend at a healthcare facility “x” number of times.
- **D5** – In the past year, I have been sick or injured “x” number of times.
Data Collection Methods

Data collection for this mixed methods study occurred in two phases. Phase 1 involved the distribution of questionnaires at target sites to participants. Phase 2 involved individual interviews with refugees who indicated their interest to participate. The findings are based on both quantitative and qualitative aspects of the study. The first step was to screen the data collected via the survey instrument and input the information into an Excel spreadsheet. Missing information was not accounted for but identified with a dot in order to minimize sampling error. The study addressed the overall central research question: What are the cultural health-seeking behavioral patterns among refugees at their local healthcare facilities? The four research questions guided the organization and synthesis of the data within the theoretical framework from which the survey instrument was structured, as noted in Chapter III.

The researcher began the quantitative section of the study by contacting via phone and word of mouth the International Center of Bowling Green, Community Action, the Neighborhood Community Services, and Association of Rescue and Intervention of Kentucky (ARIKY) for their assistance, which they provided. The letter of consent was given to each association and permission was granted to conduct the research with available and willing refugees. The researcher opted for a convenience sampling method at each designation due to the unpredictable nature of refugee traffic at these sites, as explained by their administrators. Some questionnaires were mailed (during the holiday season). Despite the established deadlines, retrieving the questionnaires spanned approximately two months from when they were distributed. Delays were due to holiday
breaks (i.e., Thanksgiving, Christmas, and the New Year), winter storms (offices closed), mail delivery, and failure to remember the deadline dates.

With each batch of questionnaires returned, data were immediately added to the Excel spreadsheet. After all the 110 respondents’ data had been recorded, the next step was to screen the database for missing information. Missing data were identified as a “dot” on the spreadsheet. Although not all respondent completed all survey items, this study yielded a total of 110 respondents out of a sample of 110 for a response rate of 100%.

**Descriptive Statistics**

A summary of descriptive statistics for the independent variables is reported in Table 2. The independent variables were (a) Predisposing Factors, (b) Enabling Factors, and (c) Need-Related Factors and are discussed separately outlines. The dependent variable reported is the Frequency of Use of Healthcare Services. Psychometric analysis (factor analysis, Cronbach’s Alpha, and inter-scale reliabilities) was conducted for presumptive scales on the survey during the pilot study, which was reviewed and discussed in the Psychometric Analysis section.

**Predisposing Factors**

The predisposing factors to Healthcare Service Use were reflective of refugee Cultural Characteristics, which consisted of Nationality, Native Language, Family Size and Religion. These variables were presumed to influence to an extent the way in which the refugees used available healthcare services.
### Table 2  
**Summary Descriptive Statistics for Predisposing, Enabling, and Needs-Related Factors**

<table>
<thead>
<tr>
<th>Item</th>
<th>Frequency (N)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Gender</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>69</td>
<td>65.09</td>
</tr>
<tr>
<td>Male</td>
<td>37</td>
<td>34.91</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>17-28 yrs.</td>
<td>35</td>
<td>32.71</td>
</tr>
<tr>
<td>29-38 yrs.</td>
<td>30</td>
<td>28.04</td>
</tr>
<tr>
<td>&gt; 39 yrs.</td>
<td>42</td>
<td>39.25</td>
</tr>
<tr>
<td><strong>Nationality</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Burmese</td>
<td>38</td>
<td>34.86</td>
</tr>
<tr>
<td>Congolese</td>
<td>19</td>
<td>17.43</td>
</tr>
<tr>
<td>Cuban</td>
<td>12</td>
<td>11.01</td>
</tr>
<tr>
<td>Iraqi</td>
<td>9</td>
<td>8.26</td>
</tr>
<tr>
<td>Nepalese/Bhutanese</td>
<td>8</td>
<td>7.34</td>
</tr>
<tr>
<td>Others</td>
<td>23</td>
<td>21.10</td>
</tr>
<tr>
<td><strong>Language</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Arabic</td>
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</tr>
<tr>
<td>Burmese</td>
<td>18</td>
<td>17.65</td>
</tr>
<tr>
<td>Karen/Karenni</td>
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<td>11.75</td>
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<td>Somali</td>
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</tr>
<tr>
<td>Spanish</td>
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<td>9.80</td>
</tr>
<tr>
<td>Swahili</td>
<td>18</td>
<td>17.65</td>
</tr>
<tr>
<td>Others</td>
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<td>30.39</td>
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<tr>
<td><strong>Religion</strong></td>
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</tr>
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<td>Buddhism</td>
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<tr>
<td>Christianity</td>
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<tr>
<td>Islam</td>
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</tr>
<tr>
<td>Other</td>
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<tr>
<td><strong>Number of Years in U.S.</strong></td>
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<tr>
<td>&lt; 2+ years</td>
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<tr>
<td>&gt; 3+ years</td>
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<td>39.09</td>
</tr>
<tr>
<td><strong>Educational Level</strong></td>
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<td></td>
</tr>
<tr>
<td>&lt; High School</td>
<td>51</td>
<td>52.04</td>
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<tr>
<td>&gt; High School</td>
<td>47</td>
<td>47.96</td>
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<tr>
<td><strong>Have Health Insurance</strong></td>
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<tr>
<td>Yes</td>
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</tr>
<tr>
<td>No</td>
<td>20</td>
<td>19.80</td>
</tr>
</tbody>
</table>

*Note.* Further breakdown with individual tables below.
**Nationality.** The variable in this category describes the participants in relation to their Nationality (variable code – ETHNIC). Table 3 represents the results for this variable. From the 110 refugees sampled, 109 identified a nationality. Of these, a large presence existed from the Burmese refugee group (34.86%) as compared to other groups. The final tally of ethnic groups comprised of 8 groups: Burmese, Burundians, Congolese, Cuban, Iraqi, Nepalese/Bhutanese, Somali, and Other. Thirteen respondents identified as “other;” however, for statistical purposes the three Burundians and seven Somalis were combined with these 13 to increase the count to 23 (21.10%). Nationalities that identified as “other” included one Asian, three Burundians, three Bosnians, one Pakistani, one Saudi-Arabian, seven Somalis, six Zomis, and one unidentified.

**Table 3**

Descriptive Statistics for Predisposing Factors: Nationality

<table>
<thead>
<tr>
<th>Nationality</th>
<th>Frequency (N)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Burmese</td>
<td>38</td>
<td>34.86</td>
</tr>
<tr>
<td>Congolese</td>
<td>19</td>
<td>17.43</td>
</tr>
<tr>
<td>Cuban</td>
<td>12</td>
<td>11.01</td>
</tr>
<tr>
<td>Iraqi</td>
<td>9</td>
<td>8.26</td>
</tr>
<tr>
<td>Nepalese/Bhutanese</td>
<td>8</td>
<td>7.34</td>
</tr>
<tr>
<td>Other</td>
<td>23</td>
<td>21.10</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>109</strong></td>
<td><strong>100.00</strong></td>
</tr>
</tbody>
</table>

**Native language.** Participants were classified based on their primary or native language spoken (LANGUAGE). Of the 102 refugees responding to this question, 31 participants (30.39%) provided a different native language than those listed on the questionnaire or they identified their language as “other.” These languages included one Ardo (a language spoken by a sub-group from Burma), six French, two Kirundi (a language spoken in Central Africa), six Nepali, 14 Zo/Zomi (a language spoken by a sub-
group from Burma), and two “other.” Based on those surveyed, seven language groups were tallied: Arabic ($n = 10, 9.8\%$), Burmese ($n = 18, 17.65\%$), Karen/Karenni ($n = 12, 11.75\%$), Spanish ($n = 10, 9.8\%$), Somali ($n = 3, 2.94\%$), Swahili ($n = 18, 17.65\%$), and “other” ($n = 31, 30.39\%$).

Table 4

*Descriptive Statistics for Native Language*

<table>
<thead>
<tr>
<th>Language</th>
<th>Frequency ($N$)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arabic</td>
<td>10</td>
<td>9.80</td>
</tr>
<tr>
<td>Burmese</td>
<td>18</td>
<td>17.65</td>
</tr>
<tr>
<td>English</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>Karen/Karenni</td>
<td>12</td>
<td>11.75</td>
</tr>
<tr>
<td>Somali</td>
<td>3</td>
<td>2.94</td>
</tr>
<tr>
<td>Spanish</td>
<td>10</td>
<td>9.80</td>
</tr>
<tr>
<td>Swahili</td>
<td>18</td>
<td>17.65</td>
</tr>
<tr>
<td>Other</td>
<td>31</td>
<td>30.33</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>102</strong></td>
<td><strong>100.00</strong></td>
</tr>
</tbody>
</table>

**Family size.** This variable described refugee family size by (a) the Number of Relatives Living under the Same Roof (FAMILYSZ) and (b) the Number of Children younger than 18 years living at home (CHILDREN). Ninety-six of the 110 sampled respondents provided the number of children younger than 18 years old. These factors to an extent represented cultural differences that exist in family sizes among refugees compared to the average American family. It should be noted that, of the 96 respondents who responded to the number of relatives living under the same roof, 33 (34.38\%) indicated they had less than three relatives living with them, as compared to those who had four to nine relatives living with them ($n = 63, 65.62\%$). These responses indicate
nearly 2:1 ratio, which showed the cultural implication and value of the family unit among immigrants.

Concerning the number of children younger than 18 years, this question highlighted the youthfulness of a given family, as well as their health demands (e.g., doctors’ visits for vaccinations/immunizations, frequent falls at play or in school). Among the 95 refugees responding to the number of children living with them, 51 indicated living with at most one child (53.69%), i.e., those with one child \( n = 26, 27.37\% \) or none at all \( n = 25, 26.32\% \). Conversely, 44 respondents (46.31%) lived with two to seven children at home. The breakdown included 18 families living with two children (18.95%), 13 with three children (13.68%), four with four children (4.21%), five with five children (5.26%) and two living with six and seven children each (2.11%). The results of these variables are presented in Table 5.

Table 5

<table>
<thead>
<tr>
<th>Family Size</th>
<th>Frequency (N)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of Relatives</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than 3 Relatives</td>
<td>33</td>
<td>34.38</td>
</tr>
<tr>
<td>More than 4 Relatives</td>
<td>63</td>
<td>65.62</td>
</tr>
<tr>
<td>Total</td>
<td>96</td>
<td>100.00</td>
</tr>
<tr>
<td><strong>Children under 18 years</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0 or 1 Child</td>
<td>51</td>
<td>53.69</td>
</tr>
<tr>
<td>More than 2 Children</td>
<td>44</td>
<td>46.31</td>
</tr>
<tr>
<td>Total</td>
<td>95</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Religion. Table 6 represents a breakdown of the results for this variable. Among the participants who identified with a religion (RELIGION) \( n = 100 \), the sample was largely Christian (71%). The final tally was comprised of five groups: nine (9%) refugees identified as Buddhists, 17 (17%) with Islam, one (1%) had no religious
affiliation, and two (2%) signified as “other,” which includes those who identified with both Christianity and Tribal Religion.

Table 6

*Descriptive Statistics for Religion*

<table>
<thead>
<tr>
<th>Religion</th>
<th>Frequency (N)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buddhism</td>
<td>9</td>
<td>9</td>
</tr>
<tr>
<td>Christianity</td>
<td>71</td>
<td>71</td>
</tr>
<tr>
<td>Islam</td>
<td>17</td>
<td>17</td>
</tr>
<tr>
<td>No Religious Affiliation</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
</tr>
</tbody>
</table>

**Enabling Factors**

The Enabling Factors for the study were identified as variables responsible for encouraging or discouraging refugees from the use of available healthcare services. These factors were also considered potential barriers and included Educational Level (EDU); Type of Health Insurance (H-INS); Have Health Insurance (E1); Number of Years in the U.S. (NOYUS); Available Transportation (C24); Make an Appointment (B16); and Friendly Environment (B18). All these variables were presumed to influence refugees’ ability to use available healthcare services. Further data analysis examined the existence of significant relationships between these variables and the dependent variable, Frequency of Use of Healthcare Services scale.

**Health insurance.** The items in this section were specific to responses as to whether refugees had a form of health insurance policy (E1) and the type of health insurance each refugee or refugee family possess (H-INS). For both immigrants and non-immigrants, having health insurance coverage is a vital necessity to receiving medical attention in the U.S. Of the 101 refugees who answered the question on health insurance
policy, structured as a “Yes” or “No” response, only 20 (19.80%) indicated they did not have an insurance policy (this could mean they were not the primary insurance policy holder or they actually did not have any form of health insurance coverage). The majority (n = 81, 80.2%) confirmed they had a policy.

Ninety-three respondents further answered questions on the type of health insurance policy. Four refugees (n = 4, 4.3%) who were new immigrants and had to wait for their policy to be sent in the mail, indicated “not yet.” Thus, 89 identified with one of the four health insurance policy types outlined in the survey. Of the 89 with some form of insurance coverage, a large number (n = 78, 83.87%) use Medicaid as their insurance policy. Medicare was used by seven respondents (7.53%), three (3.23%) had employee private insurance, and one (1.08%) student used student health insurance.

Table 7

<table>
<thead>
<tr>
<th>Health Insurance</th>
<th>Frequency (N)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Have Insurance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>81</td>
<td>80.20</td>
</tr>
<tr>
<td>No</td>
<td>20</td>
<td>19.80</td>
</tr>
<tr>
<td>Total</td>
<td>101</td>
<td>100.00</td>
</tr>
<tr>
<td>Type of health Insurance</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Medicaid</td>
<td>78</td>
<td>83.87</td>
</tr>
<tr>
<td>Medicare</td>
<td>7</td>
<td>7.53</td>
</tr>
<tr>
<td>Private Health Insurance</td>
<td>3</td>
<td>3.23</td>
</tr>
<tr>
<td>Student Health Insurance</td>
<td>1</td>
<td>1.08</td>
</tr>
<tr>
<td>Other</td>
<td>4</td>
<td>4.30</td>
</tr>
<tr>
<td>Total</td>
<td>93</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Note. Other – Not yet

Educational level. For this variable, the researcher examined the educational level of the refugees before their entry into the U.S., from not having any form of formal education (None) to possessing a Master’s degree or greater. This variable was further
split in two groups: Group A (n = 51, 52.04%) possessed no more than an Elementary School Education and Group B (n = 47, 47.96%) possessed at least a high school diploma. The educational levels of the 98 respondents included Group A refugees with no form of formal education (n = 15, 15.31%) and others who had completed elementary school prior to coming to the U.S. (n = 36, 36.73%) and Group B refugees with a high school diploma (n = 32, 32.65%), a Bachelor’s degree (n = 8, 8.16%), a Master’s degree (n = 5, 5.1%), and those who were still “students” (n = 2, 2.04%). (See Table 8).

Table 8

<table>
<thead>
<tr>
<th>Education level</th>
<th>Frequency (N)</th>
<th>Percent (%)</th>
<th>Groups</th>
<th>Frequency (N)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
<td>15</td>
<td>15.31</td>
<td>Group A</td>
<td>51</td>
<td>52.04</td>
</tr>
<tr>
<td>Elementary School</td>
<td>36</td>
<td>36.73</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>High School</td>
<td>32</td>
<td>32.65</td>
<td>Group B</td>
<td>47</td>
<td>47.96</td>
</tr>
<tr>
<td>Bachelors’</td>
<td>8</td>
<td>8.16</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Masters’</td>
<td>5</td>
<td>5.10</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other - Student</td>
<td>2</td>
<td>2.04</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Number of Years in the U.S. Schwartz, Unger, Zamboanga, and Szapocznik (2010) stated that acculturation research generally focuses on immigrants, refugees, and asylum seekers who are assumed to be permanently settled in their new homeland (as acculturation refers to cultural change), although these three groups may be quite different from one another. Not surprising, the large flow of migrants around the world has prompted increased scholarly interest in acculturation. It is worthy to note that individuals who migrate as young children are more likely to acquire receiving culture practices, values, and identifications more easily and fluidly than those who migrate at older ages. However, literature suggests it requires five to six years assimilate within the new culture, but particularly faster for younger than older immigrants.
The variable NOYUS, identified as Number of Years in the U.S., could be understood as the refugees’ level of acculturation and assimilation into the American society and way of life, which may be perceived as a mitigating factor or a facilitator to the use of healthcare services. The researcher grouped the 105 responses from this item into two groups for clarity in inferential data analysis: Group 1 consisted of those in the U.S. for at most two years (< 2 years in the country, \( n = 67 \)); Group 2 consisted of those in the U.S. for at least three years (> 3 years in the country, \( n = 38 \)). Group 1 had 57 respondents (54.26%) who identified being in the U.S. for just a few months (from a few weeks to 11 months), those who had lived a year (\( n = 7, 6.67\% \)), and those who have lived in the U.S. for a maximum of two years (\( n = 3, 2.86\% \)). Group 2 (\( n = 38 \)) consisted of refugees that had lived in the U.S. for three years (\( n = 13, 12.38\% \)), four years (\( n = 9, 8.57\% \)), five years (\( n = 11, 10.48\% \)) and six years (\( n = 5, 4.76\% \)).

Table 9

<table>
<thead>
<tr>
<th>Length of Stay</th>
<th>Groups</th>
<th>Frequency (N)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 1 year</td>
<td>Group 1</td>
<td>57</td>
<td>54.29</td>
</tr>
<tr>
<td>1 year</td>
<td></td>
<td>7</td>
<td>6.67</td>
</tr>
<tr>
<td>2 years</td>
<td></td>
<td>3</td>
<td>2.86</td>
</tr>
<tr>
<td>3 years</td>
<td>Group 2</td>
<td>13</td>
<td>12.38</td>
</tr>
<tr>
<td>4 years</td>
<td></td>
<td>9</td>
<td>8.57</td>
</tr>
<tr>
<td>5 years</td>
<td></td>
<td>11</td>
<td>10.48</td>
</tr>
<tr>
<td>6 years</td>
<td></td>
<td>5</td>
<td>4.76</td>
</tr>
</tbody>
</table>

Available transportation. Participants were required to identify their use of healthcare services, with the frequency of availability of reliable transportation to their nearest healthcare facility (C24). This item on the survey was structured into a Likert-type scale format, from Always to Never. It was assumed that the more available
transportation was, the more accessible healthcare facilities would be. Of the 105 respondents to the item, 16 (14.95%) each indicated Never and Rarely having reliable transportation, 28 (26.17%) indicated Sometimes, 34 (31.78%) Often, and 13 (12.15%) Always. Hence, more respondents (n = 47) had reliable transport (often or always) compared to those (n = 32) who did not (rarely or never).

Table 10

Descriptive Statistics for Available Transportation

<table>
<thead>
<tr>
<th>Available Transportation</th>
<th>Frequency (N)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never</td>
<td>16</td>
<td>14.95</td>
</tr>
<tr>
<td>Rarely</td>
<td>16</td>
<td>14.95</td>
</tr>
<tr>
<td>Sometimes</td>
<td>28</td>
<td>26.17</td>
</tr>
<tr>
<td>Often</td>
<td>34</td>
<td>31.78</td>
</tr>
<tr>
<td>Always</td>
<td>13</td>
<td>12.15</td>
</tr>
<tr>
<td>Total</td>
<td>105</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Make an appointment. This variable (B16) examined the level of difficulty in scheduling an appointment with a healthcare facility by the statement, “It is difficult to schedule an appointment with a healthcare facility,” with Likert-type scale of Strongly Agree to Strongly Disagree. It was assumed that, due to inadequate assimilation, refugees found it more difficult to make an appointment as compared to the average American. Of the 106 respondents, 14 (13.21%) Strongly Disagreed and eight (7.55%) Disagreed, indicating that only 22 refugees (20.76%) found it easy to schedule appointments at their local health clinics, whereas 63 refugees (59.44%) agreed that scheduling appointments could be challenging (33.02% Agreed; 26.42% Strongly Agreed). This is more than half the number of respondents to this item and close to a 3:1 ratio to those who did not find it difficult to schedule an appointment. Twenty-one refugees (19.81%) were neutral or undecided.
Table 11

Descriptive Statistics for Make an Appointment

<table>
<thead>
<tr>
<th>Make an Appointment</th>
<th>Frequency (N)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Disagree</td>
<td>14</td>
<td>13.21</td>
</tr>
<tr>
<td>Disagree</td>
<td>8</td>
<td>7.55</td>
</tr>
<tr>
<td>Neutral</td>
<td>21</td>
<td>19.81</td>
</tr>
<tr>
<td>Agree</td>
<td>35</td>
<td>33.02</td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>28</td>
<td>26.42</td>
</tr>
<tr>
<td>Total</td>
<td>106</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Friendly environment. Study participants indicated their perception of how friendly or receptive the healthcare facility and professionals were to their medical needs (B18) on a Likert-type scale from Strongly Agree to Strongly Disagree. Of 106 respondents, the majority \( n = 76, 71.7\% \) reported a friendly reception at the health facility (Agree \( n = 39, 36.79\% \); Strongly Agree \( n = 37, 34.91 \)) as opposed to 13 (12.26%) who felt differently (Strong Disagree \( n = 2 \); Disagree \( n = 11 \)) and 17 (16.04%) undecided.

Table 12

Descriptive Statistics for Friendly Environment

<table>
<thead>
<tr>
<th>Friendly Environment</th>
<th>Frequency (N)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Disagree</td>
<td>2</td>
<td>1.89</td>
</tr>
<tr>
<td>Disagree</td>
<td>11</td>
<td>10.38</td>
</tr>
<tr>
<td>Neutral</td>
<td>17</td>
<td>16.04</td>
</tr>
<tr>
<td>Agree</td>
<td>39</td>
<td>36.79</td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>37</td>
<td>34.91</td>
</tr>
<tr>
<td>Total</td>
<td>106</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Need-Related Factors

The variables in this section categorize participants with respect to their Gender (GENDER) and Age (AGE). Table 13 indicated that the sample was largely female \( n = 69, 65.09\% \), with 37 male respondents (34.91%). Age of participants fell into 3 major groups with an average age of 36 years. Age group 1 \( n = 35, 32.71\% \) consisted of
respondents less than 28; group 2 ($n = 30$, 28.04%) consisted of those ranging in age from 29 to 38; group 3 ($n = 42$, 39.25%) consisted of those 39 or older. Only three of the 110 refugees sampled did not indicate their age.

Table 13

*Descriptive Statistics for Need-Related Factors: Gender and Age*

<table>
<thead>
<tr>
<th>Variables (Need-Related Factors)</th>
<th>Frequency ($N$)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>37</td>
<td>34.91</td>
</tr>
<tr>
<td>Female</td>
<td>69</td>
<td>65.09</td>
</tr>
<tr>
<td>Total</td>
<td>106</td>
<td>100.00</td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Group 1 (17 – 28 years)</td>
<td>35</td>
<td>32.71</td>
</tr>
<tr>
<td>Group 2 (29 – 38 years)</td>
<td>30</td>
<td>28.04</td>
</tr>
<tr>
<td>Group 3 (&gt; 39 years)</td>
<td>42</td>
<td>39.25</td>
</tr>
<tr>
<td>Total</td>
<td>107</td>
<td>100.00</td>
</tr>
</tbody>
</table>

**Cultural Competency of Services**

According to Lehman, Fenza, and Hollinger-Smith (2012), the issue of cultural competency is at the core of high quality, patient-centered care, and it directly impacts how care is delivered and received. The Institute of Medicine’s (2002) report on the unequal medical treatment faced by racial and ethnic groups in the country was based on a rich body of research conducted over the years. The report showed that a lack of culturally competent healthcare delivery system directly contributed to poor patient outcomes, reduced patient compliance, and increased health disparities, regardless of the quality of services and systems available.

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2 To compound these concerns, minorities and non-English speakers have greater difficulty accessing needed healthcare services. Minorities are disproportionately more likely than the general population to be uninsured, and are overrepresented among those in publicly-funded health systems (e.g., Medicaid). Even when these individuals have the same health insurance and similar access to a healthcare provider as non-minorities, recent research indicates that racial and ethnic minorities tend to receive a lower quality of healthcare than whites.
Healthcare professionals who have learned cultural competence engage in assistive, supportive, facilitative, or enabling acts tailor made for individuals, groups, or institutional cultural values, beliefs, and lifeways in order to provide quality healthcare (Lehman et al., 2012). Lehman et al. believed that healthcare facilities and health professionals should demonstrate attitudes and behaviors to work effectively with individuals with diverse backgrounds.

In the current study, Cultural Competency of Services was identified as variables that assessed the competence of the healthcare delivery system in light of the description given by Lehman et al. (2012). One of the important variables was the “Availability of Interpreters” (E10), “Understands Native Language” (E9), and “Medical Professionals Understand Patient’s Condition” (B20). Availability of interpreters and understands native language required dichotomous response (Yes or No). One hundred and four refugees responded to the availability of interpreters question. A majority ($n = 65, 62.5\%$) indicated that interpreters were available at their hospital visits as opposed to those that thought otherwise ($n = 39, 37.5\%$). One hundred and three participants responded to the understand native language question, with a majority ($n = 94, 91.26\%$) indicating that the medical professionals could not speak their native language.

With regards to the variable “Medical Professionals Understand Patient’s Condition” structured on a Likert-type scale of Strongly Agree to Strongly Disagree, 102 (94.44\%) of the 108 respondents were satisfied that their medical professionals understood their medical conditions ($n = 44$ Strongly Agree; $n = 58$ Agree]. Only two (1.85\%) Strongly Disagreed and 4 (3.7\%) remained neutral.
Table 14

*Descriptive Statistics for Cultural Competency of Services: Medical Professional Understands Patient’s Condition*

<table>
<thead>
<tr>
<th>Medical professional understands patient’s condition</th>
<th>Frequency (N)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Strongly Disagree</td>
<td>44</td>
<td>40.74</td>
</tr>
<tr>
<td>Disagree</td>
<td>58</td>
<td>53.70</td>
</tr>
<tr>
<td>Neutral</td>
<td>4</td>
<td>3.70</td>
</tr>
<tr>
<td>Agree</td>
<td>0</td>
<td>0.00</td>
</tr>
<tr>
<td>Strongly Agree</td>
<td>2</td>
<td>1.85</td>
</tr>
<tr>
<td>Total</td>
<td>108</td>
<td>100.00</td>
</tr>
</tbody>
</table>

Table 15

*Descriptive Statistics for Cultural Competency of Services: Understands Native Language and Availability of Interpreters*

<table>
<thead>
<tr>
<th>Cultural Competency Variables</th>
<th>Frequency (N)</th>
<th>Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Understands Native Language</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>9</td>
<td>8.74</td>
</tr>
<tr>
<td>No</td>
<td>94</td>
<td>91.26</td>
</tr>
<tr>
<td>Total</td>
<td>103</td>
<td>100.00</td>
</tr>
<tr>
<td>Availability of Interpreters</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Yes</td>
<td>65</td>
<td>62.50</td>
</tr>
<tr>
<td>No</td>
<td>39</td>
<td>37.50</td>
</tr>
<tr>
<td>Total</td>
<td>104</td>
<td>100.00</td>
</tr>
</tbody>
</table>

**Research Questions**

Four empirical research questions guided this study. For the convenience of the reader, each research question is stated before the results are presented. The analysis for these relationships utilized the results from the descriptive statistics of both the dependent and independent variables sections. A summary of results from the descriptive statistics paired with item variable codes was previously described. Each variable code was used in the computations to answer the research questions with operational definitions specified in Appendix C. The analysis of the research questions utilized $t$-test, ANOVA, and correlation analyses to depict results.
**Research Question 1:** What is the extent of relationship between Frequency of Use of Healthcare Services and the refugee cultural markers or Predisposing Factors of Native Language, Nationality, and Religion?

Research Question 1 addressed whether three predisposing factors are associated with each item within the Frequency of Use of Healthcare Services scale. To answer this question, a combination of *t*-tests and ANOVAs were conducted with each predisposing factor as the independent variable and the Frequency of Use of Healthcare Services as the dependent variable. The result added to the available information regarding influence of culture on the use of healthcare services. In addition, it provided a direct statistical analysis of the relationships between some of the predisposing factors (LANGUAGE, RELIGION, and ETHNIC) and Frequency of Use of Healthcare Services by refugees. Although it demonstrated a significant relationship between the item D4 (*In the past 1 year, I have visited a sick family member or friend at a healthcare facility*) on the Frequency of Use of Healthcare Services scale and the variable ETHNIC, $F(5, 98) = 4.29, p < 0.001$, none of the other Frequency of Use of Healthcare Services items yielded significant relationships. There was no observed significant relationship between RELIGION and LANGUAGE of the sampled refugees and their use of healthcare services.

These findings indicate that nationality (ETHNIC) plays a role in the use of healthcare services within the refugee population in southcentral Kentucky. Although religion (RELIGION) affects the use of these services as indicated by participants interviewed, there was no observed statistical significant relationship. Moreover, the dominant religion was Christianity ($n = 71, 71\%$) and it could not be objectively
compared with Islam ($n=17, 17\%$) and Buddhism ($n=9, 9\%$) using ANOVA without introducing some form of bias, because the researcher could not assume that the variances of these 3 religious groups were equal. These findings do not support other research that show that religion does play a crucial role. Similarly, Native language (LANGUAGE) revealed the non-significant findings with each item on the Frequency of Use of Healthcare Services scale.

Table 16

*ANOVA of Frequency of Use of Healthcare Services and Predisposing Factors: Nationality*

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Assumptions</th>
<th>$df$</th>
<th>$F$</th>
<th>Sig $F$</th>
<th>Adjusted $R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>D1</td>
<td>met</td>
<td>5</td>
<td>0.59</td>
<td>0.712</td>
<td>0.029</td>
</tr>
<tr>
<td>D2</td>
<td>met</td>
<td>5</td>
<td>0.22</td>
<td>0.953</td>
<td>0.011</td>
</tr>
<tr>
<td>D3</td>
<td>met</td>
<td>5</td>
<td>2.08</td>
<td>0.074</td>
<td>0.096</td>
</tr>
<tr>
<td>D4</td>
<td>met</td>
<td>5</td>
<td>4.29</td>
<td>0.001*</td>
<td>0.179</td>
</tr>
<tr>
<td>D5</td>
<td>met</td>
<td>5</td>
<td>1.88</td>
<td>0.105</td>
<td>0.092</td>
</tr>
</tbody>
</table>

*Significant relationship, $p < 0.05$

*Note.* See Appendix B for descriptions of D1-D5 items.

Table 17

*ANOVA of Frequency of Use of Healthcare Services and Predisposing Factors: Language*

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Assumptions</th>
<th>$df$</th>
<th>$F$</th>
<th>Sig $F$</th>
<th>Adjusted $R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>D1</td>
<td>met</td>
<td>5</td>
<td>1.71</td>
<td>0.139</td>
<td>0.088</td>
</tr>
<tr>
<td>D2</td>
<td>met</td>
<td>5</td>
<td>0.46</td>
<td>0.802</td>
<td>0.025</td>
</tr>
<tr>
<td>D3</td>
<td>met</td>
<td>5</td>
<td>1.17</td>
<td>0.328</td>
<td>0.061</td>
</tr>
<tr>
<td>D4</td>
<td>met</td>
<td>5</td>
<td>1.02</td>
<td>0.400</td>
<td>0.050</td>
</tr>
<tr>
<td>D5</td>
<td>met</td>
<td>5</td>
<td>0.94</td>
<td>0.458</td>
<td>0.053</td>
</tr>
</tbody>
</table>

*Note.* See Appendix B for descriptions of D1-D5 items.

**Research Question 2:** What is the extent of relationship between Frequency of Use of Healthcare Services and barriers as identified by refugees that include the Enabling Factors of Number of Years in the U.S.; Have Health Insurance; Educational Level;
Available Transportation; Make an Appointment; and Friendly Environment (professionals and services rendered)?

To answer this question, two analyses were run. t-tests were performed using NOYUS (Number of Years in the U.S.) and E1 (Have Health Insurance) variables, while separate correlation analyses were conducted on Available Transportation (C24), Make an Appointment (B16), Friendly Environment (B18) for each Frequency of Use of Healthcare Services scale item (D1-D5).

For the variable NOYUS, respondents were categorized into two distinct groups: those living in the U.S. for two years or less and those living in the U.S. three years or more. The significant predictors, suggesting a relationship with Frequency of Use of Healthcare Services by respondents included D3 (In the past year when sick, I have visited or scheduled an appointment at a healthcare facility), t-value of -2.03, p < 0.04; D4 (In the past year, I have visited a sick family or friend at the healthcare facility.), t-value of -2.43, p < 0.01; and D5 (In the past year, I have been sick or injured.), t-value of -2.22, p < 0.03. These results indicate that the longer refugees acculturate with their host country, the more likely they are to access healthcare services when sick or when a loved one is sick, thus, demonstrating a significant increase in service use and awareness of available services due to duration of stay.

The variable Health Insurance (E1) was used to examine the association between refugees that claim to have a health insurance and their use of available healthcare services. Visits to the emergency room in the past year (D1), t-value of -3.35, p < 0.001, and visiting a sick family member or friend at the hospital within the last year (D4), t-value of -3.00, p < 0.003, were the only significant relationships found with health
insurance. It can be deduced that possessing a health insurance card to an extent determines access to a health facility.

Simultaneous correlations were run for Available Transportation (C24), Make an Appointment (B16), Friendly Environment (B18). The effects (correlation coefficients) observed were all minimal, ranging from -0.20 for Make an Appointment to 0.25 for Available Transportation, demonstrating very weak relationships between these Enabling Factors and Frequency of Use of Healthcare Services. The only variable from these three that was consistently related to items D1, D2, D4 and D5 on the Frequency of Use of Healthcare Services scale was availability of transportation (C24) with correlation coefficients $r$ values of 0.1, 0.11, 0.2 and 0.25 respectively. Making an Appointment (B16) was significantly related to only one item D1 (visits to the emergency room in the past year). Conversely, the variable of Friendly environment (healthcare professionals are friendly) yielded negative weak relationships with D1 and D5. Thus, having transportation was a significant predictor for healthcare service use.

Table 18

*t-test of Frequency of Use of Healthcare Services and Enabling Factors: NOYUS*

<table>
<thead>
<tr>
<th>Criterion</th>
<th>df</th>
<th>F</th>
<th>Sig F</th>
<th>t</th>
<th>Sig t</th>
</tr>
</thead>
<tbody>
<tr>
<td>D1</td>
<td>101</td>
<td>1.49</td>
<td>0.15</td>
<td>-1.70</td>
<td>0.09</td>
</tr>
<tr>
<td>D2</td>
<td>72</td>
<td>21.10</td>
<td>0.0001</td>
<td>.56</td>
<td>0.57</td>
</tr>
<tr>
<td>D3</td>
<td>102</td>
<td>1.35</td>
<td>0.28</td>
<td>-2.03</td>
<td>0.04*</td>
</tr>
<tr>
<td>D4</td>
<td>62</td>
<td>2.02</td>
<td>0.01</td>
<td>-2.43</td>
<td>0.01*</td>
</tr>
<tr>
<td>D5</td>
<td>48</td>
<td>2.97</td>
<td>0.0002</td>
<td>-2.22</td>
<td>0.03*</td>
</tr>
</tbody>
</table>

*Significant relationship, $p < 0.05$

*Note.* See Appendix B for descriptions of D1-D5 items.
Table 19

*t-test of Frequency of Use of Healthcare Services and Enabling Factors: Have Health Insurance

<table>
<thead>
<tr>
<th>Criterion</th>
<th>df</th>
<th>F</th>
<th>Sig F</th>
<th>t</th>
<th>Sig t</th>
</tr>
</thead>
<tbody>
<tr>
<td>D1</td>
<td>91.261</td>
<td>20.70</td>
<td>0.0001</td>
<td>3.35</td>
<td>0.001*</td>
</tr>
<tr>
<td>D2</td>
<td>18.039</td>
<td>231.19</td>
<td>0.0001</td>
<td>-1.13</td>
<td>0.27</td>
</tr>
<tr>
<td>D3</td>
<td>93.00</td>
<td>1.36</td>
<td>0.35</td>
<td>0.16</td>
<td>0.87</td>
</tr>
<tr>
<td>D4</td>
<td>90.545</td>
<td>35.93</td>
<td>0.0001</td>
<td>3.0</td>
<td>0.003*</td>
</tr>
<tr>
<td>D5</td>
<td>66.337</td>
<td>4.88</td>
<td>0.0005</td>
<td>1.39</td>
<td>0.16</td>
</tr>
</tbody>
</table>

*Significant relationship, \( p < 0.05 \)

Note. See Appendix B for descriptions of D1-D5 items.

Table 20

Pearson Correlations Between Frequency of Use of Healthcare Services Items and Enabling Factors: Make an Appointment, Friendly Environment, and Available Transportation

<table>
<thead>
<tr>
<th>Pearson correlation (r value)</th>
<th>Make an Appointment (B16)</th>
<th>Friendly Environment (B18)</th>
<th>Available Transportation (C24)</th>
</tr>
</thead>
<tbody>
<tr>
<td>D1</td>
<td>-0.21*</td>
<td>-0.25*</td>
<td>0.10*</td>
</tr>
<tr>
<td>D2</td>
<td>-0.006</td>
<td>0.04</td>
<td>0.11*</td>
</tr>
<tr>
<td>D3</td>
<td>-0.01</td>
<td>0.01</td>
<td>0.03</td>
</tr>
<tr>
<td>D4</td>
<td>0.07</td>
<td>-0.02</td>
<td>0.20*</td>
</tr>
<tr>
<td>D5</td>
<td>0.04</td>
<td>-0.20*</td>
<td>0.25*</td>
</tr>
</tbody>
</table>

*Significant relationship, \( p < 0.05 \)

Note. See Appendix B for descriptions of D1-D5 items.

Research Question 3: What is the extent of relationship between Frequency of Use of Healthcare Services and refugees’ perceived needs, i.e., the Need-Related Factors of Gender and Age?

Both ANOVAs and t-test were utilized to answer this research question. The independent variable of Age was categorized into 3 distinct groups to determine through ANOVA the effect on the five Frequency of Use of Healthcare Services scale items (D1 to D5). A t-test was used for Gender. No significant relationship existed between either Need-Related Factor, Gender and Age, and Frequency of Use of
Healthcare Services scale items. The results of these analyses demonstrate that the gender of the refugees and their respective age groups, – young, middle aged or old, were essentially independent of the use of healthcare services as measured in this research.

Table 21

\textit{t-test Results of Frequency of Use of Healthcare Services and Need-Related Factors: Gender}

<table>
<thead>
<tr>
<th>Variable</th>
<th>df</th>
<th>F</th>
<th>Sig F</th>
<th>t</th>
<th>Sig t</th>
</tr>
</thead>
<tbody>
<tr>
<td>D1</td>
<td>97</td>
<td>1.11</td>
<td>0.75</td>
<td>-0.32</td>
<td>0.74</td>
</tr>
<tr>
<td>D2</td>
<td>34.684</td>
<td>54.48</td>
<td>0.0001</td>
<td>0.84</td>
<td>0.40</td>
</tr>
<tr>
<td>D3</td>
<td>98</td>
<td>1.35</td>
<td>0.297</td>
<td>-0.04</td>
<td>0.97</td>
</tr>
<tr>
<td>D4</td>
<td>51.955</td>
<td>2.06</td>
<td>0.012</td>
<td>0.67</td>
<td>0.50</td>
</tr>
<tr>
<td>D5</td>
<td>90.104</td>
<td>2.74</td>
<td>0.003</td>
<td>-0.93</td>
<td>0.35</td>
</tr>
</tbody>
</table>

\textit{Note.} See Appendix B for descriptions of D1-D5 items.

Table 22

\textit{ANOVA of Frequency of Use of Healthcare Services and Need-Related Factors: Age}

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Assumptions</th>
<th>df</th>
<th>F</th>
<th>Sig F</th>
<th>Adjusted $R^2$</th>
</tr>
</thead>
<tbody>
<tr>
<td>D1</td>
<td>met</td>
<td>2</td>
<td>0.13</td>
<td>0.87</td>
<td>0.002</td>
</tr>
<tr>
<td>D2</td>
<td>met</td>
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<td>0.47</td>
<td>0.63</td>
<td>0.009</td>
</tr>
<tr>
<td>D3</td>
<td>met</td>
<td>2</td>
<td>0.29</td>
<td>0.74</td>
<td>0.005</td>
</tr>
<tr>
<td>D4</td>
<td>met</td>
<td>2</td>
<td>0.16</td>
<td>0.85</td>
<td>0.003</td>
</tr>
<tr>
<td>D5</td>
<td>met</td>
<td>2</td>
<td>0.12</td>
<td>0.88</td>
<td>0.002</td>
</tr>
</tbody>
</table>

\textit{Note.} See Appendix B for descriptions of D1-D5 items.

\textbf{Research Question 4:} To what extent does a relationship exist between services available at healthcare facility and the Frequency of Use of Healthcare Services, i.e. Cultural Competency of Services, e.g. Interpreters and Medical Professionals Understand Patient’s Condition?

Among the variables for Cultural Competency of Services, the \textit{t}-test results showed significant relationships between Interpreters (E10) and Frequency of Use of Healthcare Services scale item D1 (visited the emergency room in the past 1 year), \textit{t}-value of 1.92, $p < .05$. This shows that refugees were more likely to visit a healthcare
facility where interpreters were available. From previously discussed results in the descriptive statistics section, a large number of respondents indicated the presence of interpreters at their local health facility, hence the frequent visits to the emergency room.

No other Frequency of Use of Healthcare Services scale items were found to be significantly related to Interpreters. The other independent variable, B20 (Medical professionals understand my condition), had insufficient variability because nearly all respondents Agreed or Strongly Agreed that their medical condition was well treated; thus, the variable was not useful for analysis of relationships.

Table 23

<table>
<thead>
<tr>
<th>Variable</th>
<th>df</th>
<th>$F$</th>
<th>Sig $F$</th>
<th>$t$</th>
<th>Sig $t$</th>
</tr>
</thead>
<tbody>
<tr>
<td>D1</td>
<td>96.00</td>
<td>1.58</td>
<td>0.11</td>
<td>-1.92</td>
<td>0.05*</td>
</tr>
<tr>
<td>D2</td>
<td>61.00</td>
<td>infinity</td>
<td>0.0001</td>
<td>1.39</td>
<td>0.17</td>
</tr>
<tr>
<td>D3</td>
<td>96.00</td>
<td>1.67</td>
<td>0.1079</td>
<td>-0.15</td>
<td>0.88</td>
</tr>
<tr>
<td>D4</td>
<td>94.24</td>
<td>4.97</td>
<td>0.0001</td>
<td>0.18</td>
<td>0.85</td>
</tr>
<tr>
<td>D5</td>
<td>44.24</td>
<td>2.52</td>
<td>0.002</td>
<td>-0.95</td>
<td>0.34</td>
</tr>
</tbody>
</table>

*Significant relationship, $p < 0.05$

Note. See Appendix B for descriptions of D1-D5 items.

Interviews

Data Collection Process

Prior to the interview, individuals who opted to participate received a copy of the interview questions in order to follow along with the researcher. Each part of the interview question was repeated and further explained for the convenience of the participants. The goal of the interview was to gather insight into the experiences and perspectives of the refugees with regards to their use of available health services.
Through this rich qualitative data collection process, an in-depth understanding of cultural leanings and choices could be better appreciated.

A purposeful sample of four refugees from three main groups constituted subjects for the interview process. The researcher coded each of the interview questions with an identification number. The data from each of the four participants’ responses to each of the 13 items on the interview questionnaire were recorded, transcribed on to separate sheets, and later proofread for transcript errors to minimize bias.

In order to analyze responses to the interview questions, transcript data were entered for each question for each participant. Thus, for each of the 13 questions, the response from each of the four participants to that question was recorded. All responses were read, reread, and summarized for relevance to the research questions. This process allowed the researcher to identify themes and patterns that were present in the data, particularly related to interviewees views about their experiences in accessing available healthcare services in the U.S. as compared to their host country.

Demographically, the four interview participants included one Burmese, two Congolese and one Iraqi, ranging in age from 38 to 75 years with an average age of 56.5. This group did not provide an exact representation of refugees in Bowling Green. Educational attainment on the average was at least a high school degree from their respective countries, and all four subjects were married. Three of the four were gainfully employed; the 75-year-old Burmese immigrant was retired. In addition, the sample consisted of one Muslim and three Christians. The four research questions constituted the framework for exploring the existence of cultural influence on the use of healthcare services through the lens of the four interviews.
**Research Question 1:** What is the extent of relationship between Frequency of Use of Healthcare Services and the refugee cultural markers or Predisposing Factors of Native Language, Nationality, and Religion?

Relative to the first research question, each of the four participants embodied three cultural backgrounds: Burmese, Congolese, and Iraqi. They spoke different native languages (LANGUAGE), representing three nationalities (ETHNIC) and varying family sizes. Of the four interviewees, three were Christians and one was Muslim (RELIGION). They all have lived in the U.S. for at least four years as immigrants and felt privileged to represent the thoughts and opinions of the communities from which they hailed. With the first interview question (IQ1): *How important to you is taking care of your health?* “you” became the total of the various cultural characteristics that the participants posed and exhibited. They responded with a sense of how irreplaceable one’s health is. Responses ranged from “very important” to “no one can’t do without it.”

Regarding IQ1, respondents believed that good health was important for working effectively and contributing one’s quota to the American society (being a taxpayer) and the local community, and for paying one’s domestic bills. Besides, good health provides peace of mind and this, in turn, is necessary to maintain one’s daily activities.

**Research Question 2:** What is the extent of relationship between Frequency of Use of Healthcare Services and barriers as identified by refugees that include the Enabling Factors of Number of Years in the U.S.; Have Health Insurance; Educational Level; Available Transportation; Make an Appointment; and Friendly Environment (professionals and services rendered)?
Relative to this research question, IQ5 to IQ11 were asked. Refugees identified with the outlined barriers to their use of available healthcare services. No one avoided these challenges both with verbal and non-verbal cues. Responses to each IQ follow.

- IQ5. What affects your ability to receive medical services when you need them? (e.g., transport, health insurance, finances, language, etc.)

  The Burmese refugee (B1) identified everything listed as a barrier, “All of them, yes, all of them,” specifically mentioning that most Burmese refugees do not have cars so they find it difficult in accessing services:

  Most refugee family they don’t [you see] have car, and although they have [you see] health insurance there are so much [you see] what you call limitation and restriction [sic].

He explained that although refugees may have had some type of health insurance, it did not offer full coverage for specific ailments. He gave an example of his wife requiring treatment for glaucoma in Bowling Green but unable to find an ophthalmologist. His family was later referred out of state to Tennessee where his KY Insurance-Medicaid/Medicare was not accepted (despite having insurance):

  But Nashville is in Tennessee, but the doctor and the clinic [they] don’t accept Kentucky Medicaid and Medicare. So what we had to do is to get treatment from a glaucoma specialized doctor, she had to go to Louisville, for one and half, two-hour journey from here. Not only one time [you know], every appointment she had to go until the eye was operated [sic].

His point of view (on barriers to use of health services) was that refugees not only have challenges with transportation, but also with inadequate health insurance coverage.
Varied views were expressed by the two Congolese refugees (F2 and M3), which showed the diversity of Congolese culture. F2 felt that refugees from his country faced little to no challenges:

For me I can say [the 1st thing] I appreciate this country the United States of America because everything we need they was already prepared that. We have some transportation helpers to take us [you know] to hospital, because if you call 911 it is ready to come help you. And we have some people who [they] help us for translation [sic].

However, his compatriot M3 felt differently:

I think we still have more challenges as refugees. First, we have transportation challenge, even if we have 911, some people they can’t even do that [sic]. He added that his fellow refugees cannot afford the cost of the EMS (Emergency Medical Services):

I call 911, they charge me 500 and something dollars. Also, I think everything is good [prepared by the government] but we still have challenges as refugees because it is hard to get driver license because of the language. So, I think we still have more challenge, transportation, interpretation, translation [sic].

The Iraqi’s (A4) response was somewhat similar to that of the Congolese. A4 identified transportation and language barriers as the two main limiting factors to accessing available healthcare services:

The first thing I’m [gonna] talk about is the transportation – it is very important to the patient. He would stay at home and he would stay sick, plus it is linked with the language barrier. So, if he is limited in English language plus he doesn’t have
transportation, there’s going to be a big problem for him, just like it happened for one of the refugees [sic].

- IQ6. How have past experiences with healthcare affected the way you approach it now? (e.g., making an appointment, interpreters, health cost/expenses)

  All interviewees shared the same perspectives about the way they currently approach accessing health services compared with when they initially arrived. They all identified language, effective communication in scheduling appointments, and transportation as initial barriers. However, over the years with the help of their caseworkers, appointments have been efficiently scheduled, leading to a decline in missed doctor’s visits.

- IQ7. Why do you go to the doctors or healthcare provider that you do? (e.g., is it because of cost, interpreters, location/proximity?)

  The Burmese participant remarked,

  Most refugee [according to my experience/observation] do like to go to the doctor nearest to them [sic].

  It is safe to say that most Burmese refugees favored proximity in the use of healthcare services. B1 pointed out that, personally, he preferred a doctor who treats him as family and one he can trust regardless of the distance.

  The Congolese had a different view from the rest. Both F2 and M3 believed they had to be sick and possess a health insurance card before visiting a hospital. Only F2 opined that the hospital should have an interpreter. Another viewpoint they both raised was the means or speed of receiving treatment:
I choose this hospital because of the way they are gonna help me. Usually I use Green View hospital because they make sure in 5mins they get everything. They do fast. Green-view even if you don’t have insurance they’re gonna treat you. They don’t care if you have or don’t have. Yeah, they gonna send you a bill (laughs), but they would treat you first [sic].

The Iraqi believed that fellow Iraqi or Middle Eastern refugees would seek help from a reputable doctor or health facility:

The main thing is when the patient thinks [that] this is a good clinic or they have a good doctor, it’s all about reputation [sic].

Another reason A4 gave was the feeling of camaraderie with the healthcare professional:

Like for example, most of the Iraqis they go to Morgantown city because there is a doctor over there he speaks Arabic. They feel that they communicate and understand the doctor [sic].

- IQ8. How often are you not able to see a doctor when you want to?

It is interesting to note that, among the Burmese refugees, desiring to see the doctor was frequent (as long as they believed they were sick). And they were quick to label the doctor as bad if he advised less frequent follow-up visits against their belief in more frequent visits:

What [the refugees] they believe is: the doctor should take care and see him or her as long as the illness is going on (laughs)”. If the doctor doesn’t do like that, he or she (refugee) would say “that’s not a good doctor”. That’s [you see] false perception (laughs), on the part of the refugee. That’s why we need to give a lot of health education [sic].
They Congolese and Iraqi believed that at times they were able to make an appointment while at other times they were not. No further reasons were given.

- IQ9. What do you think works well in the healthcare system? (e.g., appointment times, interpreters, friendly environment)

  The Burmese and Congolese (F2) refugee believed that the previously listed items work well in the American healthcare system. However, the other Congolese (M3) singled out friendly environment as that which works when compared to his home country (Democratic Republic of Congo). The Iraqi stated that there a friendly environment exists here in the US and that healthcare professionals are honest and trustworthy.

- IQ10. What do you think should be changed in the healthcare system to make it easier for you to receive healthcare? (e.g., local transportation or accessibility, decreased cost/affordability)

  “I think it’s decreased cost and affordability,” stated the Burmese refugee about health service costs. On the issue of transportation, B1 believed that within the Burmese refugee community, individuals are willing to help those who are not mobile.

  Both Congolese noted what they perceived needed to be changed:

  They should provide interpreters and also, they should provide transportation [sic].

  F2 further emphasized, “Yeah, because lot of people they miss some appointment and it’s about the transportation” [sic].

  The Iraqi immigrant shared the same opinion of cost and affordability as the Burmese, but specifically pointed to dental care:
Well the health system I think it’s really its good and they keep improving it. But the only issue that most of the refugees talk about is the dental. The dental care really is very expensive when you want to do a root filling is very expensive [sic].

IQ11. How do you get to a clinic/hospital/doctor if the need arises?

The perspective of B1 was twofold:

It depends on two situations – one is if the situation is like [you see] life and death in that case call 911 to get immediate medical attention and the other is if he owns a car he can use his car or friends or neighbors will help [sic].

Both Congolese remarked, “…for us because we have already our association ARIKY (Association of Rescue and Intervention of Kentucky), so we use our transportation” [sic]. Also as an association they have received grants that have gone towards transportation, “We are still using it [grant] to help our community for transportation and it is really helpful” [sic]. But they also echoed the sentiments of calling 911 in cases of emergency,

And if someone gets sick it is a case of emergency [we talk to him] call 911 or say [some emergencies they don’t need 911], they just call us and we help. So, we use transportation or we use 911 [sic].

The Iraqi believed that within the Middle Eastern immigrant community:

When someone needs help and he’s limited he just needs to call one of his community and they gave him a ride [sic].

**Research Question 3:** What is the extent of relationship between Frequency of Use of Healthcare Services and refugees’ perceived needs, i.e., the Need-Related Factors of Gender and Age?
Three interview questions, IQ1, IQ2, and IQ12, relate to this research question. Through the interview questions, the refugees provided insight into their perceptions of their physical and psychological state of health. Typical comments related to IQ1, how important to you is taking care of your health? included the importance of taking care of one’s health in order to remain active, relevant, and to make contributions to the society.

- IQ1. How important to you is taking care of your health? included the importance of taking care of one’s health in order to remain active, relevant, and to make contributions to the society.

- IQ2. What are your health concerns? (e.g., heart disease, myopia, diabetes)

  The 78-year-old Burmese immigrant presented age-related diseases such as cataracts, hypertension, and a case of hyperuricemia as his main health concerns. However, the Congolese viewed their health concerns in a different manner. They believed that, before Congolese refugees came into the United States, they passed through screening and health checks and were cleared of all forms of chronic or infectious disease. Thus, they came into the U.S. with a clean bill of health. However, having lived for a few years in the U.S. and beginning to work in maybe different factories, they began to develop some health concerns, such as eye infections, earaches, or headaches. The Iraqi refugee, as a certified medical interpreter, noticed that most refugees have high cholesterol levels and complain of joint and back pains.

- IQ12. Is there a difference in men and women experiences with healthcare providers?

  The Burmese immigrant remarked that there is a clear difference,

  According to mentality in Burma, in case of sickness or illness men [you see] prefer men doctors and the ladies prefer lady doctors [sic].

The researcher also asked whether religion played a role. He responded,

It’s [you see] a concern with the religion Buddhism, and the belief of ethnic groups or ethnic communities as well in Burma. Although, they may not be
Buddhist [they are Christians], even [among] Christians, women should be treated by women doctor only, men should be treated by men doctors only [sic].

The Congolese indicated a different perspective, who thought religion was based on the individual, whether male or female, who may have a personal choice and religion may not play a significant role in their choice of healthcare provider. The Iraqi felt it was about culture:

In our culture, it not acceptable that a female, like if she is pregnant or have issues that she checked by a male [sic].

He continued:

So, she needs to see like a female doctor [like a gynecologist]. So, they prefer that it is part of our culture [sic].

Research Question 4: To what extent does a relationship exist between services available at healthcare facility and the Frequency of Use of Healthcare Services, i.e. Cultural Competency of Services, e.g., Interpreters and Medical Professionals Understand Patient’s Condition?

This question sought to examine the issue of cultural competency of the healthcare system with regard to knowledge about foreign disease conditions or ailments presented by immigrants, such as the case of Ebola in the U.S. or the current outbreak of the Zika virus. Also noted was the availability of services such as interpreters toward which refugees would naturally gravitate. IQ3, IQ4, IQ9, and IQ13 highlighted some salient points.

- IQ3. Describe your experiences with your health concerns?

   Again the 78-year-old Burmese immigrant pointed out,
The [you see] health facilities in the States are more advanced and much better than those in Thailand or in [you see] Burma that’s my experience. Because [you see] my contemporaries in Burma, in Thailand who were in the same age level, they have already died, most of them died. I mean in the United States my health conditions [cataract and hypertension] is better than Burma and Thailand [sic].

He added,

One of my friend who has been living in the States long time, said to me, “hey dear friend, don’t worry if you have a very serious accident or any illness, if you could [you see] arrive at a hospital in time, even if you want to die, you would not die” (laughs) [sic].

Both Congolese echoed the same sentiments:

In America, they make sure we get tested [to make sure] and I believe in America we have good treatment, there are doctors who have many experiences than from our country [we come from] [sic].

The Iraqi had a different view. He felt his experiences were more socio-economic in nature:

Well, the main thing is the chronic back pain and I feel that I am limited, very limited for some jobs. So, for that reason there are few opportunities to get a job [sic].

- IQ4. What type of things do you think are important in the people or the system that provides you with healthcare? (e.g. interpreters, bulletins in native language)

B1 believed that:
Most refugees from Burma arriving in Bowling Green, their greatest problem is language barrier. Most of them haven’t got chance to learn English. A person without a sound [you see] knowledge of English surely has to face many difficulties in communication. Therefore, the first important thing is education. The necessary, the responsible person or organization should give opportunity or program so that refugees they could learn English until they could speak and write English not perfectly but what they write and what they say could be easily understood by the listener or speaker of English [sic].

He also added:

The health services or institution must [you see] give health education that is the basic health education printed paper or printed paper but translated in Burmese language and circulated among the Burmese community and occasionally the health services personnel should have health education talk with the community member occasionally on certain topics which are important for the refugees to know [sic].

The same views were shared by both Congolese refugees, with practical examples:

All is very important in our community. Because I can give you the example of language barrier, - there was a lady she was pregnant, we took her to the hospital, and they [health professionals] said “no you’re not ready to deliver now, you can go home”. She can’t argue with the doctor, she went home. After 2 hours she delivered at home. I think the problem was about the language barrier, so we need interpreters [sic].
The Congolese further stressed that their non-profit organization, ARIKY, was started due to these challenges:

Also, we need transportation, it’s a really, really BIG problem in our community because most of the people they don’t have transportation. They [refugees] missed so much appointment with the doctor. This is why we sit down and to think to start this association ARIKY, because of this kind of problems [sic].

A4, the Iraqi interviewee, believed that interpreters are needed; however, effective interpreters must fully understand the culture of that patient:

I think understanding the situation of the patient is the main thing that come [on the first level]. And of course, the interpreter that can communicate to the patient and their provider and he can [I can say] bridge the gap, bridging the gap between both sides because maybe there is a difference at culture, at the beliefs. The interpreter [he’s not just interpreter] he’s expert with the patient’s culture and he can avoid many points of misunderstanding between the provider and patients [sic].

- IQ 9. What do you think works well in the healthcare system? (e.g., appointment times, interpreters, friendly environment)

The Burmese and the F2 Congolese refugee believed that the previously listed items all work well in the American healthcare system. However, M3 singled out friendly environment as that which works when compared to his home country (DRC-Congo). A4 stated that a friendly environment exists in the US and the health-care professionals are honest and trustworthy.
IQ13. What do you find most surprising about the healthcare system here in the United States as compared with your country?

B1 found the following:

Most refugees are living here they are well convinced that the medical services and facilities in the United States are much more advanced than what they are in Thailand or Burma. And the doctors in the United States when they make diagnoses, they make [you see] detailed and very perfect diagnoses until they discover what the main problem, what’s the disease or the illness. Once the diagnoses show what kind of disease or illness through so many labs work or radiology or other work, the medicine used by the doctors in America they are very effective than those [used by doctors] in Thailand and Burma [sic].

However, B1 found the American health system quite surprising, stating:

America is the most advanced country in the world, including health services. But [you know] instead of [you see what you call], centering on ethics and values of human beings, the business is profit minded. So, it means those people at the lowest social level, the poor and the needy find it very difficult to get benefit of being treated or cured by the competent or the most advanced doctors in the world because they can’t afford [sic].

He ended by saying,

The health services in America should not be centered on profit, not business minded. Health services should be centered on human values such as respect, and then [you see] help, consideration, and then dedication to human kind [sic].
For the Congolese refugees, F2 believed that his experience in the U.S. has been much better than that in Congo:

You see in the place where we are coming from [Congo] every day the people die because they do not have [like] good treatment, so it is very, very different, so we can say everything here in the United States is nice [sic].

M3 commented that the difference in the healthcare system of both countries is like day and night:

There is BIG difference. Because, here they treat people friendly, you may not have money but they are going to treat you. My country they ask you “do you have money”? they give you the bill before they treat you. In America people have health insurance, in my country some people [they] don’t have health insurance, maybe rich people they do have insurance or you have good job, they can provide insurance for you [sic].

The Iraqi immigrant thought the health insurance card helped with medical expenses:

As I told you before, the dental care is very expensive. Most of the things are good than compared to our country (Iraq). Yeah, the insurance covers the medication, most of the medication that they needed. Compared with my country ALL medications you have to pay out of pocket [sic].

The interviews ended on a note of admonition, motivating refugees to learn the English language, obtain a job, and encourage others in the community to do the same. The refugees have others living in their communities who can be influenced and
encouraged to be educated and work hard; they advised other refugees to tap into socio-cultural services such as ARIKY.

Summary

Chapter IV analyzed data that were collected to explore relationships between the independent and dependent variables, with the purpose reflected in the central research question: What are the health-seeking behavioral patterns among refugees at their nearest local health facility? Information provided in this chapter was analyzed using both quantitative and qualitative methodology.

The study was limited to data provided by refugees who have lived in the United States for the past six years or less. The process of checking and coding the data was reviewed and completed; incomplete and ambiguous surveys were not used, resulting in 110 usable questionnaires. Within the nationality category, most respondents identified as Burmese, with the Congolese and Cubans as the next sizeable group. Iraqis, Nepalese, and Somalis were fairly represented. Other groups included Bosnians, Pakistanis, Burundians, and Saudis; these categories were compressed into one factor, “other.” The Frequency of Use of Healthcare Services was explored; it was observed that most refugees, regardless of ethnicity, were more likely to visit a sick family member or friend at their local health facility.

An exploratory factor analysis was conducted on the initial draft of the survey, which yielded eight factor loadings falling into three main scales (A, B, and C) that were for the questionnaire. Cronbach’s alpha for each scale demonstrated adequate to strong reliability. Seven factors emerged with two to five items, producing high Cronbach’s alphas with values ranging from 0.742 to 0.913, which were acceptable. Four items on
the initial draft of the survey instrument overlapped other items during factor loading; these items were deleted from the questionnaire, reducing the number of items on the final survey instrument from an initial 31 to 27 items.

ANOVA, t-tests and correlations were conducted to determine significant relationships inherent within each research questions. For Research Question 1, ANOVA was used due to the ethnic groups and languages being categorized into groups. For Research Questions 2 and 4, t-tests were conducted with added correlation, while Research Question 3 was explored by using a combination of ANOVA and t-test. The analyses explored the relationships between Predisposing Factors, Enabling Factors, Need-Related Factors, Cultural Competency of Services and utilization of health services as previously described.

Relative to Research Question 1, the Predisposing Factors of language and religion were essentially unrelated to any of the five Frequency of Use of Healthcare Services scale items (D1 to D5) identified as the study’s dependent variable. The one factor/variable found to be significant among the Predisposing Factors was Nationality (ETHNIC) in relation to the dependent variable D4 (In the past 1 year I have visited a sick family member or friend at the hospital).

For Research Question 2, the Enabling Factors of Number of Years in the US (NOYUS) and Have Health Insurance (E1) demonstrated relationships with the dependent variable. NOYUS showed significant relationships with three of the five Frequency of Use of Healthcare Services scale items: D3, D4, and D5. D1 (visited the emergency room in the past year) was dependent on refugees having a form of health
insurance policy. The only dimension among the Enabling Factors that did not show any significant relationship was Educational Level.

Research Question 3 was addressed by exploring the relationships between independent variables of Age and Gender and Frequency of Use of Healthcare Services, showing no significant relationships. Research Question 4 explored the relationship of the presence of interpreters (E10) and making an appointment (B20) with Frequency of Use of Healthcare Services through \( t \)-tests. Results indicated that D1 (visited the emergency room in the past year) was related to interpreters being present in a given health facility.

Finally, a purposeful sample of four refugees individually completed interviews that averaged 50 minutes in length. They shared their experiences and insights from their cultural points of views. These participants openly shared and expressed their feelings to each of the interview questions. At times, there were laughs, sighs, and long thoughtful pause, before reasonable responses or perspectives were given. Some of their thoughts and feelings mirrored responses received from participants who completed items on questionnaires, while others represented new insights or ideas.
CHAPTER V: DISCUSSION AND CONCLUSIONS

Introduction

Immigration reform continues to be a hot-button topic and an unresolved issue in the political sphere of this nation. A review of the current immigration acts has been in the news since the last decade; these laws are being structured to reflect the needs of the American society. There appears to be a steady stream of immigrant refugees eligible for social services or medical benefits. However, some who were accustomed to providing for themselves in their native countries now face depending on the government and other civic and social organizations for assistance, which could be particularly traumatic and embarrassing. It is obvious that there are reasons to expect differences in health service use among these groups of individuals. Hence, it also can be inferred that immigrant culture poses a challenge to seeking help. According to Green (2004), in order to work effectively in healthcare settings, health providers must understand that culture plays a role in the way in which health services are utilized by refugees.

Researchers have identified a growing body of knowledge regarding the influence of culture on health behavior and healthcare utilization practices (Ivanov & Buck, 2002). Occasionally, it is falsely assumed that, once refugees are in the U.S., they access and evaluate the services based only on their experiences with the U.S. healthcare system. Ivanov and Buck (2002) admitted that immigrants use the healthcare system according to their patterns of utilization and experiences in their home countries. The value that each unique culture places on health and wellness also emigrates with them. Therefore, as observed in this research, one can presume that not all immigrants access and utilize healthcare services in the same manner.
This study provides a better understanding of the role culture plays in health service use. In addition, the study also provides useful information about the expectations or needs of these refugees as consumers in the healthcare system of the U.S. and highlights cultural patterns in their knowledge of preventive health and health-seeking behaviors. This research further delineates immigrant refugees’ views of healthcare and health education from their personal foreign perspectives. The central research question was: What are the cultural health-seeking behavioral patterns among refugees at their local health facilities? The remainder of this chapter includes a brief overview of the study, analysis and discussion of the findings, recommendations, and conclusions.

**Problem and Purpose of Study**

A low level of healthcare utilization often has been regarded as an important indicator of better health. However, this assumption overlooks the fact that a low level of utilization may result in poorer health status for those in need of healthcare (Surood, 2008). This is true for refugees. With the growing refugee population, the need for more research is evident. To date, few studies have examined the healthcare utilization patterns of refugees in the U.S. However, reports on utilization by immigrants are inconsistent. Fenta et al. (2007) claimed that studies have shown immigrants as a whole underutilize healthcare services compared to native born residents, while opponents to this finding have viewed this as multifactorial. Also, immigrants, particularly refugees, may have a different perspective on their health or health-related issues than residents, which may point to an obvious cultural distance between the caregiver and the recipients.

This study examined cultural health-seeking behaviors among refugee groups who have lived in the U.S. for no more than six years. A variety of Predisposing Factors,
Enabling Factors, and Need-Related Factors were explored related to their influence on refugees’ use of available healthcare services. A fourth factor, the level of cultural competence of services, was further explored. As the nation prepares for reforms to its immigration system, providers and administrators in the health sector not only share a common set of patients (immigrants and citizens), but they also share important public health goals. According to DiPietro and Klingenmaier (2013), it is critical for healthcare providers to actively inform and influence the outcomes of a changing environment in healthcare access and delivery.

Methodology

This mixed-methods research study focused on health behavioral cultural patterns among refugees in southcentral Kentucky and the utilization of available healthcare services at their local health facility. Their local health facility included the health department, urgent care, the emergency room, and a local clinic. The theoretical framework of Andersen-Newman centered on factors that influence health service utilization which knit together the topic. Moreover, the study survey originally created by the researcher used the same framework on healthcare service utilization as a guide. The development of the study instrument/questionnaire was based on questions written by the researcher with assistance of the dissertation advisor and an expert in refugee health, civic, and social affairs. The instrument underwent several layers of modification until the final instrument was approved for use. The empirical research questions were designed to investigate the central research question previously identified.

The sample population included all refugee residents in Bowling Green, Kentucky for the past six years. Bowling Green has been a refugee host city for over 30 years. Over
200 refugees were estimated to be a part of the research, having culled over 150 respondents during the pilot test. The pilot study was conducted to further evaluate the validity and reliability of the instrument. The participants for the pilot study were refugees from only two refugee groups (Burmese and Congolese). Feedback was evaluated and used to make changes to the final outcome of the instrument used later in the current study.

After WKU IRB approval, the researcher recruiting participants. All participating individuals read the survey preamble and checked a consent statement before completing the survey. The survey was administered to 110 refugees in person and through regular mail using convenience sampling. This mixed study describes both 110 refugees that filled out their questionnaires appropriately and four others (all of whom consented via a purposeful sampling method) who participated in recorded interviews. Each interview session was approximately 50 minutes in length. The results of the descriptive statistics and statistical procedures reported in Chapter IV were used to describe the relationships between the variables. The results are discussed in the following sections organized by Descriptive Statistics, Psychometric Analysis, and the four research questions to include discussion of the analyses specific to each.

Discussion

The results of this study relate to the literature on behavioral patterns in the use of healthcare services by immigrants. The study instrument was modified from Andersen-Newman’s theory on factors that affect health service utilization. The changes were sufficient to rename the scale, entitled the Refugee Health Survey (Appendix B).
This research study explored both qualitative and quantitative measures to examine the data received through interviews and survey administration. Also, relationships between Predisposing Factors, Enabling Factors, Need-Related Factors, Cultural Competency of Services, and the Frequency of Use of Healthcare Services were analyzed. Enabling Factors were generally perceived as barriers to the use of health services, while the Need-Related Factors provided information on two demographic items, Age and Gender. For the dependent variable, Frequency of Use of Healthcare Services, five main items were identified:

- D1. In the past year, I have visited the emergency room for a life threatening medical condition “x” number of times.
- D2. In the past year, I have received family planning services at a healthcare facility (e.g. Contraceptives) “x” number of times.
- D3. In the past year when sick, I have visited/scheduled an appointment at a healthcare facility “x” number of times.
- D4. In the past year, I have visited a sick family member or friend at a healthcare facility “x” number of times.
- D5. In the past year, I have been sick or injured “x” number of times.

A complete listing of survey items and codes is included in Appendix C.

Interviews Questions (IQ1 to IQ13) were tailored to explore the research questions more in-depth. Demographic information, including name, age, ethnicity and gender, were collected at the beginning of each recording. Themes were carefully identified. The remainder of this chapter is organized by the study’s four research questions. The findings from the survey instrument were synthesized for each research
question they answered. These findings are then discussed in terms of relevant literature and replications for the field.

**Descriptive Statistics**

Descriptive statistics were reported for most of the independent variables: Predisposing Factors, Enabling Factors, Need-Related Factors, and Cultural Competency of Services. These variables were selected to provide information on the influence of culture in health or help-seeking behaviors by refugees.

**Independent Variables**

The independent variables were divided into four categories: (a) Predisposing Factors (Nationality, Native Language, Family Size, and Religion); (b) Enabling Factors (Number of Years in the US, Have Health Insurance, Educational Level, Available Transportation, Make an Appointment, and Friendly Environment); and (c) Need-Related Factors (Age and Gender); and (d) Cultural Competency of Services (Interpreters and Medical Professionals Understand Patient’s Condition). These factors were observed to be linked to refugee cultural characteristics as shown in the review of literature.

The study participants (see table 2) were predominantly female (65%) and identified as Burmese (34.8%). All of them spoke their native language because none identified with speaking the English language. A majority identified with Christianity (71%) as their form of religion. An average of two years in the U.S. indicated that most of the participants were new arrivals to the U.S. Almost all participants (80.2%) identified as having received some form of health insurance policy on arrival to the US. In addition, a large proportion (36.7%) reported having at least an elementary school education from their home country. A similar portion (31.2%) identified as either fully
employed or working part-time. The majority of respondents were married (70%) with at least one child living in the home (53.6%). A large majority used Medicaid (83.87%), which is provided a few months after arrival in the US. The results also show that the majority of respondents (55.4%) receive some form of assistance, e.g., Supplemental Nutrition Assistance Program (SNAP), from the U.S. government until they find sustainable jobs.

The four refugees who opted for the individual interviews were from three nations: Burma, Congo, and Iraq. Only one interviewee was retired; the remaining were gainfully employed. Everyone could communicate effectively in English. All except the Iraqi professed to be Christians; all had health insurance cards. In most instances during the interview, they appeared to further explain that regardless of having a health insurance card, Medicaid/Medicare insurance policies differed across state lines. The researcher ensured that this situation was documented in the current study.

Overall, the study used a more comprehensive set of categories, Predisposing Factors, Enabling Factors, Needs-Related Factors, and Cultural Competency of Services than previous studies on the use of healthcare services by refugees. Common area addressed by most studies are Nationality, Gender and Number of Years in the U.S. By creating a study that not only dealt with these four areas in a quantitative manner but also expounded on them via individual interviews, the researcher could tap into beliefs, emotions, feelings, and perspectives of the refugees. Thus, a mixed methods study provided a more in-depth approach and painted a broader picture of these participants’ culturally different backgrounds compared to past reviewed literature.
Dependent Variables

As previously mentioned, the dependent variables for the study consisted of five items on the Frequency of Use of Healthcare Services scale:

- **D1.** In the past year, I have visited the emergency room for a life threatening medical condition “x” number of times.

- **D2.** In the past year, I have received family planning services at a healthcare facility (e.g. Contraceptives) “x” number of times.

- **D3.** In the past year when sick, I have visited/scheduled an appointment at a healthcare facility “x” number of times.

- **D4.** In the past year, I have visited a sick family member or friend at a healthcare facility “x” number of times.

- **D5.** In the past year, I have been sick or injured “x” number of times.

Each item on the scale allowed respondents to write in a number signifying the frequency to which they have visited a healthcare facility for one of the identified reasons on each item in the past year.

A majority of the refugees (83%) indicated that they had not visited the emergency room for a life-threatening illness compared to other refugees (11%) who have visited the ER once in the past year. Nearly all refugees surveyed (96%) indicated they had never received family planning services or contraceptives from their health department. This could indicate that some aspect of the respondents’ culture (e.g., belief or religion) does not advocate the use of contraceptives or that respondents were reluctant to disclose this information. Nearly half (42%) had visited or scheduled an appointment in a healthcare facility during the past year. Of these, some (17%) had done so at least
twice and a few (5%) at least five times. Concerning visiting sick friends or family members at the hospital in the past year, the majority (74%) of those surveyed indicated they had not done so. For those who claimed to have been sick or injured in the past year (32%), some (2%) had been sick six times and one person (1%) indicated being sick at least 20 times.

The Frequency of Use of Healthcare Services scale represents a new addition to the previous healthcare services instruments that captured refugees’ responses to the number of times they had directly or indirectly used available healthcare services. Most literature reviewed overlooked this. A search of the literature suggested that this study might be the first to investigate the relationship of cultural characteristics of a diverse refugee population to their frequency of use of healthcare services. The nature of the population—young versus old, uneducated versus educated, native language speakers versus English speakers—may account for the differences observed when inferential statistics (ANOVA, t-test and correlation) were conducted.

Psychometric Analyses

Data for this study were obtained from the Refugee Health Survey, which consisted of 27 items based on a 5-point Likert-type rating scale. Factor analyses were conducted for each set of questions followed by Cronbach’s alpha and inter-scale correlations. An exploratory factor analysis was conducted on the initial draft of the survey, which yielded eight factor loadings falling into three main scales (A, B, and C) that were for the questionnaire. Cronbach’s alpha for each scale demonstrated adequate to strong reliability. Seven factors emerged with two to five items, producing high Cronbach’s alphas with values ranging from 0.742 to 0.913, which were acceptable. Four
items on the initial draft of the survey instrument overlapped other items during factor loading; these items were deleted from the questionnaire, reducing the number of items on the final survey instrument from an initial 31 to 27 items.

**Research Questions**

Four research questions are addressed in this section. A brief review of the results from Chapter IV is presented followed by an analysis of the results. The research questions are discussed according to the findings from the questionnaires and the individual interviews.

**Research Question 1:** What is the extent of relationship between Frequency of Use of Healthcare Services and the refugee cultural markers or Predisposing Factors of Native Language, Nationality, and Religion?

The study’s first research question addressed the extent of relationship that exists between the Predisposing Factors with each of the items on the Frequency of Use of Healthcare Services scale (D1 – D5):

- D1. In the past year, I have visited the emergency room for a life threatening medical condition “x” number of times.
- D2. In the past year, I have received family planning services at a healthcare facility (e.g. Contraceptives) “x” number of times.
- D3. In the past year when sick, I have visited/scheduled an appointment at a healthcare facility “x” number of times.
- D4. In the past year, I have visited a sick family member or friend at a healthcare facility “x” number of times.
- D5. In the past year, I have been sick or injured “x” number of times.
ANOVA results revealed a significant relationship between nationality (ETHNIC) and D4, with an effect size of 0.001; no significant relationships between nationality and the other Frequency of Use of Healthcare Services scale items were found. Similarly, ANOVA results on the relationship between the other Predisposing Factors and Frequency of Use of Healthcare Services scale items were non-significant (table 4 and 6).

These results indicate that the frequency of healthcare service use is essentially independent of refugees’ Predisposing Factors of native language and religion with an exception to refugees’ nationality which was significant. This influence is similar to what Saurina et al. (2012) acknowledged. Recent studies in the field of immigration and health have found inequalities in social and economic factors between individuals (immigrants and citizens) in the host country that predict differences in the use of health services between immigrants and the native population. Findings on language and religion can be viewed from the perspective given by Andersen et al. (2001) who reported that access to healthcare services consists of two components: the use of health services and everything that facilitates or impedes use. Hence, language and religion could be said to have affected access to healthcare services. Murguia et al. (2003) also observed that ethno-medical approaches, such as the use of spiritual folk healers and folk remedies, affect the health outcomes of refugees. In addition, some immigrants and refugees prefer spiritual healers rather than physicians to treat culture-bound syndromes because it is their belief that the physicians do not possess the knowledge or the understanding to treat foreign disease syndromes. Therefore, a need exists to create more awareness through interpreters, communication experts, and translated health bulletins about the effectiveness of evidence-based clinical practice.
Interview data collected to further explore the first research question revealed that the four participants believed that good health was necessary in order to work effectively and to give back to society. Moreover, good health provides peace of mind, which, in turn, helps with maintaining one’s daily activities.

**Research Question 2:** What is the extent of relationship between Frequency of Use of Healthcare Services and barriers as identified by refugees that include the Enabling Factors of Number of Years in the U.S.; Have Health Insurance; Educational Level; Available Transportation; Make an Appointment; and Friendly Environment (professionals and services rendered)?

This question explored the relationship of Enabling Factors, which could also pose as barriers: Number of Years in the U.S. (NOYUS), Have Health Insurance (E1), Educational Level (EDU), Available Transportation (C24), Make an Appointment (B16), Friendly Environment (B18) with each of the items on the Frequency of Use of Healthcare Services scale (D1-D5). A combination of correlations and $t$-tests were conducted. The $t$-test results for NOYUS and Have Health Insurance were significant; results for Educational Level were not. NOYUS was significantly related to three of the five Frequency of Use of Healthcare Services scale items: D3 (when sick, I have visited/scheduled an appointment at a healthcare facility), $t = -2.03, p = 0.04$; D4 (I have visited a sick family member or friend at a healthcare facility), $t = -2.64, p = 0.01$; and D5 (I have been sick or injured), $t = -2.55, p = 0.03$. Have Health Insurance was significantly related to D1 (I have visited the emergency room for a life threatening medical condition), $t = 3.35, p = 0.001$, and D4 (I have visited a sick family member or friend at a healthcare facility), $t = 3.00, p = 0.003$. 
Correlations conducted on Available Transportation, Make an Appointment, and Friendly Environment revealed weak coefficient ($r$) sizes. Weak negative correlations were found between Make Appointment and D1, $r = -0.21$, and Have Health Insurance and D1, $r = -0.25$. These suggest that the more refugees believed they could use emergency services to obtain medical attention, the less likely they were to schedule appointments. In addition, the more these refugees visited the emergency room rather than a doctor’s office, the less they felt the emergency room was a friendly environment.

The positive (weak) correlations of Available Transportation with the statements “I have visited a sick family member or friend at a healthcare facility” (D4, $r = 0.2$) and “I have been sick or injured” (D5; $r = 0.25$) indicate that those with available transportation are more likely to visit a healthcare facility when sick or a friend or family member is sick.

These findings suggest that, although only the Predisposing Factor of nationality was related to use of healthcare services, Enabling Factors (Number of Years in the U.S., Have Health Insurance, and Available Transportation) had a considerably stronger relationship to use of healthcare services. This is similar to the findings of Lim et al. (2009) who suggested that trust in Western medicine also appears to be influenced by acculturation level (similar to Number of Years in the U.S.), indicating that greater levels of acculturation are related to greater trust in modern medicine. Literature reviewed showed that acculturation is strongly related to an individual’s ability to use healthcare resources and overall quality of life, suggesting that more acculturated individuals feel less despondent from the demands of the illness and exhibit a better health status. Sibley and Weiner (2011) observed that in the U.S. access often is synonymous with health insurance and to some degree equality in the utilization of healthcare services. This is
similar to findings of the current study’s Enabling Factors. Furthermore, Pang et al. (2003) identified structural factors that may contribute to the differences observed among refugees in health-seeking behaviors: accessibility, affordability, and availability of services, which translate to lack of knowledge about services, lack of health insurance and other financial resources, and lack of transportation.

Seven interview questions were utilized to elicit participants’ feelings and concerns with regards to the actual use of healthcare services. First, participants chorused that transportation and language were major barriers to the use of available services. They added that most refugees have basic health insurance (Medicaid); insurance was not at the top of their list of barriers. Second, they echoed that it often was difficult to make appointments because of communication issues and more interpreters were needed to bridge the communication gap. Making these appointments regardless of the language barrier was difficult. Third, they preferred a particular hospital over another because of the following reasons: (a) proximity; (b) reduced wait time; (c) they had health insurance that would be recognized by the facility; (d) the hospital’s positive reputation; and (e) available interpreters. Fourth, all applauded the friendly environment that exists in health facilities in the U.S. among health professionals and patients as compared to their various home countries. Fifth, when asked about needed changes in the health system, they voiced “more interpreters” and “available transportation.” Finally, if the need arises to go to an emergency room or urgent care center they would display a spirit of camaraderie and help if they had private cars; otherwise, they would call 911.

These interview responses were similar to Mirza et al.’s (2014) study that reported several healthcare barriers from the perspectives of refugees: lack of language
supports, difficulties with accessing specialty care, unfamiliarity with referral procedures, limited information on finding services, confusion about the roles of different health professionals, and overall difficulties with navigating the healthcare system. Ponce et al. (2006) summed it all by stating that language barriers can reduce the quality of care, while the use of trained interpreters can improve access, quality, and patient satisfaction. This issue of language barrier has been observed affect many Medicare and Medicaid beneficiaries.

**Research Question 3**: What is the extent of relationship between Frequency of Use of Healthcare Services and refugees’ perceived needs, i.e., the Need-Related Factors of Gender and Age?

In order to answer this research question, an ANOVA for Age groups and a t-test for gender were employed; neither analysis revealed significant relationships with the Frequency of Use of Healthcare Services scale items. Although no age or gender differences were observed in the use of health services, one would expect there to be a significant difference, i.e., more vulnerable populations (women, children, the elderly) would be expected to use services more than others (men, teenagers) in a given community. Aday (1993) asserted that demographic indicators of health status (i.e., age, gender) are among the strongest predictors of those who use healthcare. In an equitable system, those with equal need would have equal utilization rates (horizontal equity) and those with less need would have lower utilization rates (vertical equity) (Krasnik, 1996).

Ponce et al.’s (2006) study reported that a substantial body of research demonstrated that children and adults with limited English proficiency experience difficulties accessing mainstream healthcare services. Hence, these researchers pointed to
the fact that the vulnerable population (children and elderly) are already at a
disadvantage. However, the current study found age and gender to have no significant
relationship on use of healthcare services.

Three interview questions were used to explore the roles of age and gender in use
of healthcare services. All participants felt it was very important to take care of one’s
health in order to remain active, relevant, and contribute to society. Some reporting
suffering from age-related diseases, such as back and joint pains, chronic hypertension,
and cataracts, while others felt they had occupation-related diseases. The Burmese and
Iraqi participants shared the same opinion about females preferring to see female doctors
(gender preference) because they felt it was inherent in their culture and religious
practice. However, both Congolese felt it up to individuals to decide whether they
preferred a male or female medical provider.

Research Question 4: To what extent does a relationship exist between services
available at healthcare facility and the Frequency of Use of Healthcare Services, i.e.
Cultural Competency of Services, e.g., Interpreters and Medical Professionals
Understand Patient’s Condition?

This research question explored the association between refugees’ Frequency of
Use of Healthcare Services and the Cultural Competency of Services, including the
availability of interpreters and medical professionals’ understanding of a patient’s
condition. The $t$-test for presence of interpreters at a health facility was only significant ($p
= 0.05$) for D1 – I have visited the emergency room for a life threatening medical
condition. Medical professionals’ understanding of a patient’s condition was not
significantly related to any Frequency of Use of Healthcare Services scale items.
These findings corroborate preexisting information in research. To date, published research has indicated that immigrants face significant challenges in regard to healthcare access (Wafula & Snipes 2014). Wafula and Snipes suggest that such challenges include lack of health insurance, lack of interpreters, discrimination based on race or accent, and lack of understanding on the part of doctors regarding immigrant or cultural perspectives on illness. About cultural competent services of the local health facilities, Mirza et al. (2014) identified barriers reported by healthcare providers, including lack of funding and supports to meet the language and cultural needs of refugee patients, uncertainty about refugees’ entitlements to healthcare, uncertainty about continuity of care, and difficulties with making appropriate referrals.

Four interview questions were used explore more fully participants’ perceptions of the culture competence of healthcare services. First, the Burmese and Iraqi were saddled with chronic health conditions but were currently receiving care; the Congolese refugees applauded the quality of treatment received from their primary care doctors whom they regarded as well experienced and adept in clinical care. Second, everyone echoed the same sentiment of inadequate interpreters at local hospitals despite the imposing communication and language gap. Third, all agreed that health facilities exuded a very friendly environment and that healthcare professionals were honest and trustworthy. Fourth, although the U.S. health system is more advanced than any system in the world, they all experienced and complained about the profit-driven nature of the system and suggested that healthcare delivery should be based on human values and rights.
Recommendations

Refugees as a subset of immigrants have been less studied than other immigrant groups. Relatively little research has been published about refugees and their health concerns (Helweg-larsen & Stancioff, 2008). Acculturation involves the way refugees and other immigrants assimilate into the American lifestyle as compared to the degree to which they maintain their country of origin’s lifestyle or culture. This study provides perspectives, opinions, and feelings about healthcare service use by refugees specifically in relation to Predisposing Factors, Enabling Factors, Needs-Related Factors, and Cultural Competency of Services. Several findings or the lack thereof point to the need for additional research in the future. The following section is divided into two sub-sections, one on policy and practice and the other on future research. These provide an avenue to identify discussion points for future work that is needed.

Policy and Practice

Culture and use of available healthcare services are two cogent components that cannot be overlooked relative to addressing refugee health and well-being in their host country. As research continues to grow and various studies address this topic in minority, international, and public health journals, new findings will begin to develop ways to create awareness and increase the overall understanding of the care and level of cultural competency needed in the U.S. health sector. This in turn should foster an increased sensitivity to the needs of these refugees, who after a few years of being resident-aliens will become citizens.

First, this study was both quantitative and qualitative in nature; a mixed study that enabled the researcher to appreciate important relationships that exist between access and
cultural barriers, demographic indices, perceived refugee needs, and the use of available healthcare services. Feelings, views, and perspectives generated through individual interview discussions ultimately provide an in-depth understanding regarding the reason for these findings.

Second, the study was conducted in Bowling Green, Kentucky. The researcher used the International Center (IC) as a network link to the Community Action Center and the Neighborhood Community Services also involved in refugee and other immigrant affairs. Most refugees in Bowling Green move between the IC and these centers to access pertinent immigration information and documentation. The study surveys were largely distributed at these centers and the IC, while some were sent via regular mail to individual homes and housing authorities. Interviews were conducted at the Community Action Center and a local community church used by the refugee non-profit organization, ARIKY. Results obtained from this study certainly would be different from those outside of Bowling Green; caution was applied in generalizing findings.

Third, it should be further emphasized that access to affordable healthcare is a growing need in the US in general. It is possible that the findings of the current study may not generalize to other states in which healthcare policies and practices differ, as highlighted in the interviews. If a national study were attempted, it would likely show varied outcomes among states.

Fourth, this study was conducted with refugees that were at least 18 years of age and had lived in the US from a few days to at least six years. Upon arrival at the Bowling Green Immigration Center, they are guaranteed a form of health insurance policy, typically, Medicaid, until they obtain jobs. Thereafter, they may choose to opt into a
health insurance policy supported by their current employer due to an increase in their income bracket. Lack of insurance is impacted by income and health status. Goldman, Smith, and Sood (2005) reported that more than 50% of non-insurance is related to socioeconomic status, while approximately 33% is related to type of employment. Although most refugees possess health insurance, Guendelman, Angulo, Wier, and Oman (2005) stated that increasing insurance coverage alone is insufficient to improve use of health services. Regardless of insurance status, immigrants are more likely to postpone annual visits and hospital admissions. Although insurance coverage may improve access to healthcare, it does not guarantee utilization (Van Wie, Ziegenfuss, Blewett, & Davern, 2008). According to Javier, Wise, and Mendoza (2007), conflicting results exist regarding the relationship between health insurance status and utilization of healthcare services.

Fifth, the various healthcare services used by refugees in this study included hospitals, urgent care clinics, emergency rooms, and services offered by health departments, including immunization/vaccinations, screenings, health talks, and follow-up visits. Rhodes, Hergenrather, Zometa, Lindstrom, and Montaño (2008) concluded that healthcare services include formal and informal agencies and providers. Regular source of healthcare can be defined as a patient seeing the same doctor or nurse at least 90% of the time (Javier, Wise, & Mendoza, 2007). Therefore, a regular source of healthcare indicates a relationship with the healthcare system, demonstrating potential access to healthcare (Nandi, Galea, Lopez, Nandi, Strongarone, & Ompand, 2008). However, this was not the case with the refugees in the current study. Private healthcare services are frequently underutilized by refugees and immigrants due to cost (Urrutia-Rojas, Marshall, Trevino, Lurie, & Minguia-Bayona, 2006). The use of the public health sector
(community clinics and medical centers) for both health insurance and healthcare providers is more prevalent among refugees/immigrants.

Finally, for the refugees to use available health services, they should have access to them. Participants in this study complained about transportation and scheduling appointments. According to Javier et al. (2007), utilization is a component of access, but the presence of access does not necessarily result in utilization. Utilization of services is identified as the outcome of access to healthcare. The Behavioral Model of Health Services Utilization identified individual characteristics influencing utilization including predisposing characteristics, perceived need for care, and enabling factors (Davidson, Andersen, Wyn, & Brown, 2004). A perceived need for healthcare is the most important factor for utilization (Norris & Aiken, 2006). However, additional research would be beneficial to explore further the way in which perceived need for care (i.e., age and gender as highlighted in this study) interacts with healthcare service use.

**Future Research**

Limited research exists related to the access and utilization of healthcare for immigrants and refugees. According to Guendelman et al. (2005), refugees are less likely to access healthcare than citizens, regardless of insurance status; therefore, studies comparing uninsured citizens and uninsured refugees are needed to further understand differences. Research focusing specifically on refugee populations is limited; thus, further study investigating access and utilization of healthcare among refugees also is indicated.

Healthcare cost is a growing concern within the US. According to the Organization for Economic Co-operation and Development report (OECD, 2010), healthcare expenditures comprise 16% of the gross domestic product, higher than any
government expenditure. The presence of free community clinics is both cost- and resource-saving. Overall, community clinics are estimated to lower healthcare costs by 41%, potentially saving taxpayers 10-17 billion dollars annually, according to the National Association of Community Health Centers (NACHC, 2007). Further studies are needed to accurately determine the cost-saving benefit of free community clinics or county health departments in the setting of a literacy center, e.g., the International Center. Such studies may help address the pressing issues of health cost and language barriers in healthcare delivery.

Finally, according to Brown et al. (2004), immigrants are more likely than citizens to lack a regular source of healthcare. Thus, it can be inferred that a regular source of healthcare improves access (Weissman, Stern, Fielding, & Epstein, 1991). Providing potential access to the healthcare system, however, does not guarantee utilization. Therefore, the relationship between regular source of healthcare and utilization of healthcare services varies and should be further studied. While, Huang, Yu, and Ledsky (2006) claimed that both a regular source of healthcare and utilization of healthcare are dependent upon perceived health status, Goldman et al. (2005) suggested that they are based on social and economic factors.

Conclusions

Immigrants and refugees are a growing component of the U.S. population, and their ability to access and utilize healthcare is an increasing public health concern. Healthcare disparities and problems with healthcare access exist among immigrants and refugees (Douangmala, Hayden, Young, Rho, & Schnepper, 2012). This mixed study explored the relationship between refugee culture as exemplified by the factors associated
with utilization of healthcare and the actual frequency of use of available healthcare services. The participants shared their perspectives and thoughts on both questionnaires and through recorded interviews. Responses from the interviews gave the researcher an in-depth understanding of concerns.

The sample size for each survey question varied depending upon both data collection dates and missing data. In addition, there is limited ability to generalize data based upon the sample size as there was no control over data collection method (convenience sampling method), reliability and validity of the data collection tool, and interview process. Thus, theoretical limitations include varying interpretations and understanding of concepts addressed during the interviews and on the surveys, e.g., subjects’ interpretations and understanding of questions and potential responses may have differed.

Data collected on the survey were provided by refugees who have lived in the US for the past six years or less. The process of checking and coding the data was reviewed and completed; incomplete and ambiguous surveys were not used, with 110 questionnaires remaining. Most respondents identified as Burmese, with the Congolese and Cubans as the next sizeable groups. Iraqis, Nepalese, and Somalis were also fairly represented. Other groups included Bosnians, Pakistanis, Burundians, and Saudis. The frequency of healthcare service use was explored, and it was noted that, regardless of nationality, most refugees were more likely to visit a sick family member or friend at their local health facility.

Relative to the interviews, a purposeful sample of four refugees completed interviews that were an average of 50 minutes in length. They openly shared their
experiences and insights from their cultural/emic points of views. At times there were laughs, sighs, and long thoughtful pauses before reasonable responses or perspectives were given. Some of their thoughts and feelings mirrored responses from participants completing items on questionnaires, while others represented new thoughts or ideas.

The study utilized a comprehensive set of four factors: Predisposing factors, Enabling Factors, Needs-Related Factors, and a newly developed factor of Cultural Competency of Services not part of previous studies on the use of healthcare services by refugees. A common area addressed by most studies were Nationality, Gender, and Number of Years in the U.S. By creating a study that not only involved the four factors in a quantitative manner, but also individual interviews to tap into beliefs, emotions, feelings, and perspectives of these refugees, this mixed study gave a more in-depth approach to the research and painted a broader picture of these participants and their culturally different backgrounds compared to reviewed literature.

The Frequency of Use of Healthcare Services scale represented a new addition to the survey instrument in order to capture the number of times respondents used available health services in a year. A survey of literature suggested that this study may be the first to compare the cultural characteristics of a diverse refugee population with their frequency of use of healthcare services. The nature of the population—young versus old, uneducated versus educated, native language speakers versus English speakers—may account for differences observed in results.

The data lend additional support for the Behavioral Model of Health Services Utilization, which served as a guide for development of a conceptual framework to identify variables influencing the use of healthcare among the study sample. The model
was adapted to accurately fit the refugee population under study. According to Davidson, Andersen, Wyn, and Brown (2004), the model serves as a guide to identify the individual and community characteristics influencing access and utilization among immigrant and refugee populations. The Behavioral Model of Health Services Utilization identifies predisposing factors influencing access including demographic factors, social factors, and beliefs (Davidson et al., 2004). Demographic factors indirectly impacted access through insurance, while social factors and beliefs impacted access through perceived and realized need. Despite accessibility of services, without perceived or realized need for services among immigrants, utilization may not occur (Guendelman et al., 2005).

Healthcare access encompasses both potential and realized access (Brown et al., 2004). Potential access to healthcare is measured by the ability to identify a regular source of healthcare, while realized access is demonstrated by visits to a healthcare provider within the last 12 months (Davidson et al., 2004). According to Callahan, Hickson, and Cooper (2006), factors facilitating access to healthcare include insurance coverage, a regular source of healthcare, and visiting a care provider within the past 12 months. In summary, a better understanding and investigation of the processes by which refugees access and utilize healthcare services is required. If progress is made in future research, there may be hope that one could distinguish clearly between a regular source of healthcare, potential access, and utilization of healthcare and realized access by refugees.
REFERENCES


Sutherland, E. (2010). *Should immigration laws be modified?* Allentown, PA: Morning Call.


APPENDIX A: Consent Form

IMPLIED CONSENT DOCUMENT

Project Title: The Influence of Culture on the Utilization of HealthCare Services by Refugees at Their Local Health Facility

Investigator: Chika Ejike, Department of Education, Administration, Leadership and Research, (240-505-0108)

You are invited to participate in a study conducted as part of the requirement for my dissertation, in the Department of Educational Leadership at Western Kentucky University.

The information generated will not be used for academic research or publication. All information obtained will be treated in the strictest confidentially. The investigator will explain to you in detail the purpose of the project, the procedures to be used, and the potential benefits and possible risks of participation. You may ask her any questions you have to help you understand the project. A basic explanation of the project is written below. Please read this explanation and discuss with the researcher any questions you may have.

If you then decide to participate in the project, you should be given a copy of this form to keep if requested.

1. Nature and Purpose of the Project:
As a doctoral student in the department of Education, Administration, Leadership and Research and under the supervision of Dr. Capps, Dr. Lartey and Dr. Ciochetty. I am conducting research in Healthcare with a focus on “The Influence of Culture on the Utilization of HealthCare Services by Refugees at Their Local Health Facility”. The purpose of this study is to determine the extent to which refugee culture affect the way refugees use healthcare services at their local health facility– which to an extent is a reflection of the level of cultural competency of the healthcare services and public health policies in the United States.

2. Explanation of Procedures:
I ask that you complete a brief questionnaire. You would be asked to answer a series of questions on a short questionnaire. The instructions are provided for each section. Respondents should expect to spend no more than 15 minutes to complete the survey. Also, you may opt-in or out of participating in an hour long Focus-group interview.

3. Discomfort and Risks:
There are no foreseeable risks associated with this research project and the probability and magnitude of harm or discomfort anticipated in the research is very minimal.
4. **Benefits:**
It is hoped that the knowledge gained through your participation will help other refugees at a later time. The study is aimed at assisting with the development of future health services and program planning that support refugee health and well-being. Also, building an evidence base in refugee/minority health which is an important step to determining whether refugees have adequate access to healthcare services, and if the services provided are indeed culturally competent.

5. **Confidentiality:**
The survey does not contain any identifiable information, and anonymity is assured. Participants’ privacy will be protected in the degree endorsed by state and federal law. If the results of the study are published no personal information will be included. The investigator and the Institutional Review Board (IRB) of WKU have the authority to review all records.

6. **Refusal/Withdrawal:**

Refusal to participate in this study will have no effect on any future services you may be entitled to from the University. Anyone who agrees to participate in this study is free to withdraw from the study at any time with no penalty.

*You understand also that it is not possible to identify all potential risks in an experimental procedure, and you believe that reasonable safeguards have been taken to minimize both the known and potential but unknown risks.*

**I give my informed consent to participate in this study.**

Name & Signature: ______________________

Date: ___________________________

*Your continued cooperation with the following research also implies your consent.*

THIS PROJECT HAS BEEN REVIEWED AND APPROVED BY
THE WESTERN KENTUCKY UNIVERSITY INSTITUTIONAL REVIEW BOARD
Paul Mooney, Human Protections Administrator
TELEPHONE: (270) 745-2129
APPENDIX B: Refugee Health Survey

REFUGEE HEALTH SURVEY

PLEASE FILL THIS FORM ONCE – ONE COPY PER PERSON

INSTRUCTIONS:
1. **DO NOT WRITE IN YOUR NAME**
2. **PLEASE READ THE QUESTIONS CAREFULLY AND ANSWER AS HONESTLY AS POSSIBLE**
3. **FOR SECTIONS (A), (B), (C) & (E) – CIRCLE THE BEST RESPONSE**
4. **FOR SECTION (D) – PLEASE WRITE -IN YOUR RESPONSE**
5. **FOR THE SOCIO-DEMOGRAPHIC SECTION – CIRCLE OR WRITE- IN THE CORRECT RESPONSE WHEN NEEDED**

**This survey is part of a research project conducted by a Western Kentucky University student. The author aims to determine the extent to which refugee culture may affect the way refugees use medical services at a healthcare facility.**
QUESTIONNAIRE

**Instruction:** For the section below, **CIRCLE** the response that best describes your opinion

5 – Strongly Agree; 4 – Agree; 3 – Neutral; 2 – Disagree; 1 – Strongly Disagree

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<td>1</td>
<td>My <em>family</em> believes I should go to a healthcare facility when I become sick</td>
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<td>My <em>family</em> believes I should stay home from work when I become sick</td>
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<td>3</td>
<td>My <em>friends</em> believe I should go to a healthcare facility when I become sick</td>
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<td>4</td>
<td>My <em>friends</em> believe I should stay home from work when I become sick</td>
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<td>5</td>
<td>My <em>religion/personal traditions</em> play a role in my health beliefs</td>
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<td>4</td>
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<td>6</td>
<td>My <em>religion/personal traditions</em> affect my decision to use health resources</td>
<td>5</td>
<td>4</td>
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<td>7</td>
<td>If I am sick, I choose <em>tribal/non-Western remedies</em> instead of going to a healthcare facility</td>
<td>5</td>
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<td>8</td>
<td>Meditation keeps me healthy</td>
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<td>9</td>
<td>When sick, I have the ability to heal myself through the power of my thoughts or prayers</td>
<td>5</td>
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<td>10</td>
<td>Having an annual routine physical exam is important</td>
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<td>11</td>
<td>I believe that following my <em>medical professional’s instructions</em> will make me well when I am sick</td>
<td>5</td>
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<td>12</td>
<td>If I have a medical emergency, my <em>neighbors</em> are willing to take me to an emergency room</td>
<td>5</td>
<td>4</td>
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<td>13</td>
<td>People in my <em>neighborhood help</em> each other when someone gets sick</td>
<td>5</td>
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<tr>
<td>14</td>
<td>I prefer to see a medical professional of the same gender</td>
<td>5</td>
<td>4</td>
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<tr>
<td>15*</td>
<td>When I go to a healthcare facility, the trained medical professionals <em>understand my health problems</em></td>
<td>5</td>
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### B

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<th>Description</th>
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<th>3</th>
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<tbody>
<tr>
<td>16</td>
<td>It is <strong>difficult</strong> to schedule an appointment with a healthcare facility</td>
<td></td>
<td>5</td>
<td>4</td>
<td>3</td>
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<td>17</td>
<td>I <strong>wait</strong> a long time before I am assisted at a healthcare facility</td>
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<td>5</td>
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<td>18</td>
<td>The medical professionals at the healthcare facility are <strong>friendly</strong></td>
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<td>5</td>
<td>4</td>
<td>3</td>
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<td>1</td>
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<tr>
<td>19</td>
<td>When I am at a healthcare facility the medical staff are <strong>helpful</strong></td>
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<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
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<tr>
<td>20</td>
<td>My medical professional is <strong>prepared</strong> to address my medical concerns</td>
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<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
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<tr>
<td>21</td>
<td>My <strong>healthcare provider and I can reach an agreement</strong> on the appropriate medical care I need</td>
<td></td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>22</td>
<td>I am <strong>satisfied</strong> with the level of treatment I receive at the healthcare facility</td>
<td></td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>23*</td>
<td>It is <strong>expensive</strong> to get medical care from a healthcare facility</td>
<td></td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

### C

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Scale</th>
<th>Always</th>
<th>Often</th>
<th>Sometimes</th>
<th>Rarely</th>
<th>Never</th>
</tr>
</thead>
<tbody>
<tr>
<td>24*</td>
<td>I have <strong>reliable transportation</strong> to take me to a healthcare facility if I am sick</td>
<td></td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>25*</td>
<td>When sick, I <strong>choose to</strong> receive medical treatment from a <strong>healthcare facility</strong></td>
<td></td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>26*</td>
<td>I am unable to attend my medical appointments because of a <strong>physical limitation</strong></td>
<td></td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>27*</td>
<td>I can <strong>walk</strong> to a healthcare facility when the need arises</td>
<td></td>
<td>5</td>
<td>4</td>
<td>3</td>
<td>2</td>
<td>1</td>
</tr>
</tbody>
</table>

### D. Instruction:

For the section below, **FILL IN THE NUMBER OF TIMES** that best describes your opinion

1. **In the past 1 year** I have visited the emergency room for a life threatening medical condition ________ times
2. **In the past 1 year**, I have received family planning services at a healthcare facility (e.g. Contraceptives) ________ times
3. **In the past 1 year** when sick, I have visited/scheduled an appointment at a healthcare facility ________ times
4. **In the past 1 year**, I have visited a sick family member or friend at a healthcare facility ________ times
5. **In the past 1 year**, I have been sick or injured ________ times
**Instruction:** For the section below, **CIRCLE** the response that best describes your opinion

**Y – Yes; N – No; NA – Not Applicable**

<table>
<thead>
<tr>
<th></th>
<th>I have health insurance</th>
<th>Yes</th>
<th>No</th>
<th>N/A</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>Y</td>
<td>N</td>
<td>NA</td>
</tr>
<tr>
<td>2</td>
<td>My health insurance is through my job</td>
<td>Y</td>
<td>N</td>
<td>NA</td>
</tr>
<tr>
<td>3</td>
<td>I have been added to my spouse's insurance from their work</td>
<td>Y</td>
<td>N</td>
<td>NA</td>
</tr>
<tr>
<td>4</td>
<td>My employer provided health insurance is <strong>sufficient</strong> for my medical needs</td>
<td>Y</td>
<td>N</td>
<td>NA</td>
</tr>
<tr>
<td>5</td>
<td>My <strong>family</strong> covers my medical expenses</td>
<td>Y</td>
<td>N</td>
<td>NA</td>
</tr>
<tr>
<td>6</td>
<td>I can pay for medical treatment received <strong>without</strong> the assistance of health insurance</td>
<td>Y</td>
<td>N</td>
<td>NA</td>
</tr>
<tr>
<td>7</td>
<td>I live <strong>near</strong> (within 3 miles/5km) a healthcare facility</td>
<td>Y</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>I <strong>understand the instructions</strong> given by my medical professional</td>
<td>Y</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td>When I go to a healthcare facility they understand my <strong>Native Language</strong></td>
<td>Y</td>
<td>N</td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>There are <strong>interpreters</strong> in my language at the healthcare facility</td>
<td>Y</td>
<td>N</td>
<td></td>
</tr>
</tbody>
</table>

**SOCIO-DEMOGRAPHICS**

**Instruction:** PLEASE ANSWER THE FOLLOWING QUESTIONS

1. Gender
   - □ Male
   - □ Female

2. Age _____ years

3. Ethnic Background
   - □ Afghan
   - □ Bosnian
   - □ Burmese
   - □ Congolese
   - □ Cuban
   - □ Iraqi
   - □ Nepalese/Bhutanese
   - □ Somali
   - □ Other__________
4. Primary Language Spoken at home
   - Arabic
   - Burmese
   - English
   - Karen
   - Somali
   - Spanish
   - Swahili
   - Other

5. How long have you lived in the United States ________ (Check one)
   - 0 – 11 months
   - 1 year
   - 2 years
   - 3 years.
   - 4 years
   - 5 years.
   - More than 5 years ______

6. Religious Affiliation (Check one)
   - Buddhism
   - Christianity
   - Hinduism
   - Islam
   - Tribal Religion
   - No Religious Affiliation
   - Other

7. Marital Status
   - Divorced
   - Married
   - Single
   - Widowed
   - Other

8. Family size (number of relatives living under the same roof) ________

9. Number of children younger than 18 years ________
10. I use the following types of Health Insurance (Check any that apply)
   □ Medicaid (e.g. Well-care, Anthem, Humana, Coventry, Passport)
   □ Medicare
   □ Private Health Insurance (Employer provided/Personal Purchase)
   □ Student Health Insurance
   □ Other ______________

11. Educational Level completed from ANY Country (Check One)
   □ None
   □ Elementary/ Primary School
   □ High school/GED
   □ Vocational/Technical Certification
   □ Bachelor’s degree
   □ Master’s degree
   □ Other________

12. Current employment status (Check One)
   □ Working for a pay at a job (Full-time)
   □ Working for a pay at a job (Part-time)
   □ Working, but not for pay (Volunteer)
   □ Looking for a job
   □ Not working and not looking
   □ Retired
   □ Other_______

13. Use of English (Check as many options that apply)
   □ I understand spoken English
   □ I need an interpreter
   □ I communicate effectively in English
   □ I read comfortably in English
   □ I write in English

14. If my healthcare professional has difficulty in identifying my health problems, I feel: (Check as many options)
   □ Angry
   □ Sad
   □ Embarrassed
   □ Frustrated
   □ None of the above
15. Other forms of Social Services used (Check as many options that apply)

- Women Infant and Children (WIC)
- Food Stamps/SNAP benefits
- Unemployment benefits
- All of the above
- None of the above
- Other________
APPENDIX C: Operational Definitions and Codes of Variables

The variables listed in this appendix are organized accordingly in the tables above. The Independent Variables include: Predisposing Factors, Enabling Factors, Needs-related factors and Cultural Competency of services. These are presented in turn, followed by the Dependent Variable, Frequency of Health Service Use Scale. For each variable, the operational definition and variable label code are given. All data included in the research are self-reported by the participants.

Independent Variables

Predisposing Factors

Predisposing factors information includes the following groups: Family Size, Native Language, Nationality and Religion. All of this information is gathered through Refugee Health-Care Survey. All of the participants included in this survey have lived in Bowling Green over the past 5 years. These variables are presumed to influence to an extent the way these refugees use available healthcare services.

Nationality: the variable in this category describes the participants in relation with regards to their Nationality with a variable code ETHNIC: This variable is a nominal scale, coded 1 = Afghan, 2 = Bosnian, 3 = Burmese, 4 = Congolese, 5 = Cuban, 6 = Iraqi, 7 = Nepalese/Bhutanese, 8 = Somali, 9 = Other

Native Language: Participants were described under this variable code LANGUAGE based on their primary or native language spoken. For this study, the nominal scale was coded 1 = Arabic, 2 = Burmese, 3 = English, 4 = Karen, 5 = Somali, 6 = Spanish, 7 = Swahili, 8 = Other

Religion: Among the participants who identified with a religion with a variable
code RELIGION, the sample was largely Christian (71%). Also a nominal scale coded as follows: 1 = Buddhism, 2 = Christianity, 3 = Hinduism, 4 = Islam

*Family Size:* This variable describes refugee family size by the Number of Relatives Living under the Same Roof coded as FAMILYSZ and also by the Number of Children younger than 18 years living at home coded as CHILDREN.

Enabling Factors

Enabling factors were identified as variables responsible for encouraging or discouraging refugees from the use of available healthcare services. These factors were also referred to as Barriers and they include; Educational Level, Health Insurance, Type of Health Insurance, Number of Years in the United States, Transportation, Make an appointment and Friendly environment. All these variables are presumed to have an influence on refugees’ ability to use available healthcare services.

*Educational Level:* This variable examined the educational level of the refugees before their entry into the United States with a variable code of EDU. The measure is a 6-point ordinal/interval scale, coded 1 = None, 2 = Elementary School, 3 = High School, 4 = Vocational/Technical Certification, 5 = Bachelors, 6 = Masters, 7 = Other. This variable was further split in two groups – Group A (1 and 2) those that possessed at least an Elementary School Education; and Group B (3 to 7) consisted of those that had at least a high school diploma.

*Health Insurance:* The items in this section are specific to responses as to whether refugees have health insurance policy coded as E1 and the type of health insurance each refugee or refugee family possess coded as H-INS. To both immigrants and non-immigrants alike, having health insurance coverage is a vital necessity to receiving
medical attention in the United States. E1 is a dichotomous variable, a nominal scale, coded as 1 = Yes and 2 = No. Also, H-INS or type of health insurance was a nominal scale was coded 1 = Medicaid, 2 = Medicare, 3 = Private Health Insurance, 4 = Student Health Insurance, 5 = Other.

*Number of years in the United States:* the variable length of stay in the United States or number of years in the US coded as NOYUS, could be viewed as the refugees’ level of acculturation and assimilation into the American society and way of life, which could be perceived as either a mitigating factor or a facilitator to the use of healthcare services. The variable is a 6-point interval scale, coded 1 = 1 year, 2 = 2 years, 3 = 3 years, 4 = 4 years, 5 = 5 years, 6 = more than 5 years and 7 = less than 1 year. Responses obtained were grouped into two groups: Group 1 consisted of those that have been in the U.S. for at most 2 years (or less than 2 years in the country), while Group 2 consisted of those that had been in the country for at least 3 years.

*Transportation:* Participants were required to identify their use of healthcare services, with the frequency of availability of reliable transportation when needed to their nearest healthcare facility. The variable was coded as C24. The questions on this section of the survey constitute an interval 5-point Likert scale from 1 = Never, 2 = Rarely, 3 = Sometimes, 4 = Often, 5 = Always.

*Make Appointment:* This variable B16 examined the level of difficulty in scheduling an appointment with a healthcare facility. The item asked: “It is difficult to schedule an appointment with a healthcare facility”. This item was structured into a Likert-scale like format, with Strongly Agree awarded 5 points and Strongly Disagree awarded 1 point.
Friendly Environment: Study participants were described based on their perception of how friendly or receptive the healthcare facility and professionals were to their medical needs. The variable was coded as B18. The questions on the survey constitute an interval 5-point Likert scale from 1 = strongly disagree to 5 = strongly agree.

Need-Related Factors

The variables under this section describe the sample participants with respect to their Gender with variable code GENDER and Age with variable code AGE.

Gender: This variable is a nominal scale, coded 1 = male, 2 = female. The sample was largely female with 69 female respondents compared to 37 male respondents.

Age: Age of the participants fell into 3 major groups with an average age of 36 years. With a variable code of AGE, the variable was divided into three groups: Group 1 had a sample size of n = 35. This group consisted of refugees less than 28 years of age. AGE Group 2, with a size of n = 30, consisted of refugees whose ages ranged from 29 years – 38 years. Finally, AGE-Group 3, with n = 42 had respondents 39 years or older.

Cultural Competence of Services

According to Lehman, Fenza, and Hollinger-Smith (2006), the issue of cultural competency is at the core of high quality, patient-centered care, and it directly impacts how care is delivered and received. Cultural competency of services for the study was identified as variable(s) that assessed how competent our healthcare delivery system is in light of the description given by Lehman, Fenza, and Hollinger-Smith (2006). One of such important variables is the availability of Interpreters with variable code E10,
“understands Native Language” coded as E9, and “Medical professionals understand patient’s condition” with a variable code of B20.

*Availability of Interpreters:* The variable was coded as E10. This is a nominal scale, coded 1 = Yes and 2 = No. Also another variable “understands native language” with a code E9 were questions requiring dichotomous answers i.e. Yes, or No coded as 1 = Yes and 2 = No.

*Medical professionals understand patient’s condition:* With a variable code of B20, the questions on this section of the survey constitute an interval 5-point Likert scale from 1 = strongly disagree to 5 = strongly agree.

**Dependent Variable**

**Frequency of Use of Healthcare Services**

The dependent variable for this study is the Frequency of Health Service Use Scale as defined by the number of times the participants have used available healthcare services in the past year. These services range from the Emergency room, Family planning services, visiting friends and family that were hospitalized and Urgent Care centers. The frequency of use scale consists of 5 items each with variable codes -D1, D2, D3, D4 and D5, which include the following:

D1. **In the past year** I have visited the emergency room for a life threatening medical condition _________ times

D2. **In the past year**, I have received family planning services at a healthcare facility (e.g. Contraceptives) _________ times

D3. **In the past year** when sick, I have visited/scheduled an appointment at a healthcare facility _________ times

D4. **In the past year**, I have visited a sick family member or friend at a healthcare facility _________ times

D5. **In the past year**, I have been sick or injured _________ times
APPENDIX D: IRB Approval Letter

DATE: October 19, 2015

TO: Chika Ejike, MPH

FROM: Western Kentucky University (WKU) IRB

PROJECT TITLE: [769023-1] The Influence of Culture on the Use of Healthcare Services by Refugees at their Local Health Facility: A Mixed Study

REFERENCE #: IRB 16-111

SUBMISSION TYPE: New Project

ACTION: APPROVED

APPROVAL DATE: October 19, 2015

EXPIRATION DATE: May 31, 2016

REVIEW TYPE: Expedited Review

Thank you for your submission of New Project materials for this project. The Western Kentucky University (WKU) IRB has APPROVED your submission. This approval is based on an appropriate risk/benefit ratio and a project design wherein the risks have been minimized. All research must be conducted in accordance with this approved submission.

This submission has received Expedited Review based on the applicable federal regulation.

Please remember that informed consent is a process beginning with a description of the project and insurance of participant understanding followed by a signed consent form. Informed consent must continue throughout the project via a dialogue between the researcher and research participant. Federal regulations require each participant receive a copy of the consent document.

Please note that any revision to previously approved materials must be approved by this office prior to initiation. Please use the appropriate revision forms for this procedure.

All UNANTICIPATED PROBLEMS involving risks to subjects or others and SERIOUS and UNEXPECTED adverse events must be reported promptly to this office. Please use the appropriate reporting forms for this procedure. All FDA and sponsor reporting requirements should also be followed.

All NON-COMPLIANCE issues or COMPLAINTS regarding this project must be reported promptly to this office.
This project has been determined to be a Minimal Risk project. Based on the risks, this project requires continuing review by this committee on an annual basis. Please use the appropriate forms for this procedure. Your documentation for continuing review must be received with sufficient time for review and continued approval before the expiration date of May 31, 2016.

Please note that all research records must be retained for a minimum of three years after the completion of the project.

If you have any questions, please contact Paul Mooney at (270) 745-2129 or irb@wk.edu. Please include your project title and reference number in all correspondence with this committee.