

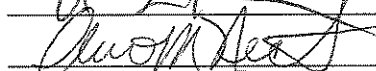
THE ROLE OF SOCIAL SUPPORT AND SOCIAL NETWORKS IN HEALTH
INFORMATION SEEKING BEHAVIOR AMONG KOREAN AMERICANS: A
MIXED METHOD APPROACH

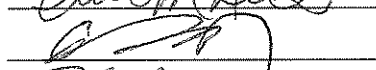
by

Wonsun Kim
A Dissertation
Submitted to the
Graduate Faculty
of
George Mason University
in Partial Fulfillment of
The Requirements for the Degree
of
Doctor of Philosophy
Communication

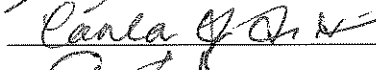
Committee:


 _____ Director


 _____

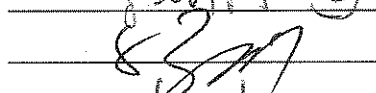
 _____

 _____

 _____

 _____ Department Chairperson

 _____ Program Director

 _____ Dean, College of Humanities and Social
Science

Date:  _____ Spring Semester 2013
George Mason University
Fairfax, VA

The Role of Social Support and Social Networks in Health Information Seeking Behavior
among Korean Americans

A dissertation submitted in partial fulfillment of the requirements for the degree of
Doctor of Philosophy at George Mason University

By

Wonsun Kim
Master of Arts
Michigan State University, 2010

Director: Gary L. Kreps, Professor
Department of Communication

Spring Semester 2013
George Mason University
Fairfax, VA



This work is licensed under a [creative commons attribution-noncommercial 3.0 unported license](https://creativecommons.org/licenses/by-nc/3.0/).

DEDICATION

This is dedicated to my loving husband Minho and my family for their unwavering support, love, and prayers. Also, I praise God who has been with me throughout this process.

ACKNOWLEDGEMENTS

The completion of my doctoral education would not have been possible without support from many individuals. I strongly believe that doctoral education is an endeavor that cannot be accomplished independently. I would like to thank and acknowledge the many individuals who provided the inspiration, encouragement, time, energy, commitment, and practical assistance for a journey to my doctoral degree.

I am so thankful to have Dr. Gary Kreps as my advisor for his constant support, guidance, and understanding. He always had more confidence in me than I did. Thanks to him, I could believe in myself and finish this paper. I am proud of being his advisee and will be forever. I also would like to give appreciation to my committee: Dr. Anne Nicotera for her mentorship and encouragement; Dr. Xiaoquan Zhao for his wisdom and support; Dr. Carla Fisher for her humor, honesty, and intelligence; and Dr. Kyeung Mi Oh for her warm consideration as well as immense knowledge on Korean American population. Finally, I would also like to extend my gratitude to Dr. Hee Sun Park for her sound advice from the very beginning when I started my graduate program at Michigan State University. I have been blessed to meet and honored to have had opportunity to work with each of you. I could not have done this without you. Thank you.

I also would like to acknowledge the professors in the Department of Communication at George Mason University who have been giving me of their wisdom, support and encouragement. Dr. Carl Botan, Dr. Xiaomei Cai, Dr. Tim Gibson, Dr. Don Boileau, and Dr. Melinda Villagran. Also, I would like to give special thanks to my wonderful GMU friends and colleagues that shared our dreams, joys and sorrows. The days that we laughed and cried together are unforgettable. This study was possible because of my study participants. I would like to thank them for their willingness to share their time and experiences with me.

Finally, I send special appreciations to my dear husband, Minho Kim, for his unconditional love and support through the years as my life and academic companion. He did make it all possible by his encouragement and willingness to tolerate my preoccupation. The whole family has sacrificed and shared in the process of completing the doctoral education. My accomplishment undoubtedly is a product of my parents' and parents-in-law's strong inspiration and enthusiasm toward higher education. Without their early encouragement and ongoing support, the fulfillment of this task would not be possible. I also want to thank to my twin sister, Wonyoung Kim and to my brother, Wonsang Kim for their encouragement, interest, and contagious enthusiasm for life.

TABLE OF CONTENTS

	Page
List of Tables	vii
List of Figures	viii
Abstract	ii
Chapter 1: introduction	1
Background and statement of the problem.....	1
Purpose of the study	9
Overview of the Following Chapters	11
Definition of terms	12
Chapter Two: Literature review	15
Health Disparities	15
Health Information Seeking Behaviors	18
Online Health Information Seeking Behavior.....	21
Health Information Seeking among Immigrants.....	23
Health Information Seeking among Korean Americans.....	27
Conceptualization of Social Support.....	30
Perceived Social Support	32
Social Network.....	34
Social Network Theory	37
Health Information Seeking and Social Support and Social Networks	40
Hypotheses and Research Questions.....	42
Social Support/Social Networks.....	42
Social Support/Social Networks and Online Health Information Seeking Behaviors ..	43
Social Networks as a Source of Health Information	44
Social support networks and Immigrants	46
Chapter Three: METHODOLOGY	48
Rationale for Research Method.....	48

The Study population of interest	51
Sampling method.....	52
Research Ethics and Participant Privacy	53
Data analysis.....	58
Chapter 4: RESULTS	62
Demographics.....	62
Demographics of Participants Who Wrote a Health Information Seeking Experience	66
Source of Health Information in Social Networks for Korean Americans	66
Topics of health information	70
The Importance of Social Networks.....	74
Health Information Seeking Behavior.....	79
Relationship between Social Network and Social Support.....	81
Online Health Information Seeking Behavior and Social Support	82
Online Health Information Seeking Activities and Social Network	83
Acculturation and Social Support/Social Network	84
Chapter 5: Discussion	86
Overview of Discussion	86
Significant Findings	87
Research question 1	87
Research Question 2.....	91
Research question 3	93
Hypothesis 1	97
Hypothesis 2 & 3	97
Hypothesis 4	100
Theoretical Implications.....	101
Practical Implications.....	103
Limitations and directions for future study	107
Appendix A: SURVEY INVITATION LETTER.....	109
Appendix B: the informed consent from (survey)	110
Appendix C: a survey questionnaire	111
References.....	118

LIST OF TABLES

Table	Page
Table 1 Study Group Characteristics	65
Table 2 Correlations, Means, and Standard Deviations of Variables.	81
Table 3 Hierarchal Multiple Regression Results for Social Support.....	82
Table 4 Hierarchal Multiple Regression Results for Predicting Online Health Information Seeking.....	83
Table 5. Hierarchal Multiple Regression Results for Predicting Online Health Information Seeking.....	83
Table 6. Multiple Regression Results for Social Support.....	84
Table 7 Multiple Regression Results for Social Network	85

LIST OF FIGURES

Figure	Page
Figure 1. Nested Model of Component of Social Relationship (Uchino, 2004).....	32

ABSTRACT

THE ROLE OF SOCIAL SUPPORT AND SOCIAL NETWORKS IN HEALTH INFORMATION SEEKING BEHAVIOR AMONG KOREAN AMERICANS

Wonsun Kim, Ph.D.

George Mason University, 2013

Dissertation Director: Dr. Gary L. Kreps

Access to health information appears to be a crucial piece of the racial and ethnic health disparities puzzle among immigrants. There are a growing number of scholars who are investigating the role of social networks that have shown that the number and even types of social networks among minorities and lower income groups differ (Chatman, 1991; Ball, Warheit, Vandiver, & Holzer, 1980; Glass, Mendes De Leon, Seeman, & Berkman, 1997; Palmore, 1981; Kaugh 1999). Very few scholars, however, have examined the use of social support in social networks to retrieve health information. In particular, no extant studies examine both availability of social support and social networks and health information seeking behaviors for Korean immigrants (first generation).

This dissertation examined the influences of social support networks on health information seeking behaviors to increase understanding about the important influences of social networks on health information seeking by immigrants, especially the use of the

Internet for health information. More specifically, this study will investigate the effects of (a) demographic factors including age, gender, acculturation, (b) perceived social support, and (c) social networks on online health information seeking behaviors among Korean immigrants. Health information seeking behaviors are examined in these four areas: (1) different health information sources from social networks, (2) topics of health information from social networks, (3) online health information seeking behaviors.

An intramethod approach (Johnson & Turner, 2003) utilizing both qualitative and quantitative approaches was used to provide both specificity of response (with closed-ended questions) and depth of response (with open-ended questions). An online survey was administered to 205 Korean American men and women aged 18-49 who identified themselves as first generation Korean American immigrants (e.g., foreign-born Korean immigrants refer to those individuals who have emigrated from Korea to the United States).

The open-ended questions explored the importance of social support and social networks in health information seeking behavior for Korean Americans. The survey data expanded knowledge about the relationships between social support, social networks, and health information seeking behaviors, in particular online health information seeking. The results from the qualitative data were collected to add to existing literature in health communication by demonstrating why social support and social networks are important for immigrants. These findings also intended to extend current research on health information seeking behaviors and social support to the Korean immigrant population in

the U.S. The results from the survey capture how the availability of social support and the size of social networks can influence health information seeking behaviors.

The findings from this current study enhance the utility of SNT as a theory, as well as our understanding of health communication for immigrants. SNT was applied here for the first time in a health communication study of Korean immigrants' health information seeking behaviors. The results demonstrated how social networks function as sources of health information for Korean Americans within the SNT framework. Hence, the utility of this theory was expanded to include health disparities and immigrant contexts.

In addition, for health care practitioners and public policy makers, this study provides empirical evidence about the unique use of online health information and social network members as health information sources among Korean Americans. As this study's results suggest, in-group online communities can be effective channels for disseminating important health information targeting Korean Americans. The results of this study present useful suggestions for health care providers in offering culturally and linguistically appropriate care to Korean immigrants. Health care providers need to recognize Korean immigrants' expectations of health care services, their unmet needs, and the reasons for their common complaints. Providers should also increase awareness about the US health care system among Korean immigrants and educate them properly to ultimately enhance their health care system literacy.

CHAPTER 1: INTRODUCTION

The purpose of this introductory chapter is to articulate the broader issues relevant to the topic of health disparities among Korean Americans and the importance of social support and social networks in health information seeking behaviors. The chapter will identify limitations of previous research concerning health needs of underserved populations and present the purpose of this study. Finally, an overview of the following chapters and definitions of key terms will be presented.

Background and statement of the problem

The Asian American population is the fastest growing of America's ethnic groups. Approximately 14.7 million (about 5% of the total US population) Asian Americans live in the United States and this population has been increasing more rapidly than any other racial group over the last decade (US Census, 2010). Korean Americans are the fifth largest group of Asian Americans and is one of the fastest growing minority groups, with more than 1.7 million Korean Americans living in the US in 2010 (US Census Bureau, 2010). According to American immigration history, it has been more than one hundred years since the first Koreans immigrated to the United States. The first group of Koreans arrived in Hawaii in 1903. In 1965, large numbers of Koreans immigrated to the USA seeking increased freedom and better economic opportunities (Patterson, 2000).

Korean Americans are a relatively recent U.S. immigration group compared to other Asian subgroups (e.g., Japanese and Chinese Americans), and a majority of the Korean American population is comprised of first-generation immigrants (Reeves & Bennett, 2004). About 71% of Korean Americans were born in Korea and about 25% of those arrived in the U.S. in 2000 or later (U.S. Census Bureau, 2010). Unlike the earlier Korean immigrant groups, these recent immigrants have a high level of education. For example, Census 2000 revealed that 49.2% of the Korean population aged 25 years and older were college graduates, whereas 28.4% of Non-Hispanic White and 26.8% of the total population in the U.S. were college graduates (U.S. Census Bureau, 2000). Consistent with the high level of education, about 39% of Korean Americans hold management and professional occupations, and 30% have sales and office work (Reeves & Bennett, 2004).

Despite their growing presence and the socioeconomic diversity of Koreans immigrants in the U.S., little is known regarding their unique health needs and health information seeking behaviors because population-based health surveys have typically aggregated health data for more than 60 Asian nationalities into one category in the past. This aggregation of data can mask potential differences regarding health beliefs, behavior and needs among the many unique ethnic/cultural groups classified as Asian/Pacific Islanders (Chen, Lephuoc, Guzmán, Rude, & Dodd, 2006; Oh, Kreps, Jun, Chong, & Ramsey, 2012).

Additionally, serious gaps in health status still exist between ethnic minority populations and the dominant population despite years of effort to end health disparities in the U.S. (Institute of Medicine, 2002). According to the Asian Pacific Islander American Health Forum (2006), Korean Americans are regarded as one of

the groups that suffer most from serious health disparities. Several previous studies have indicated that Korean Americans suffer from serious health disparities and have significant health information needs that often go unfulfilled (Oh et al., 2012; Oh, Kreps, Jun, & Ramsey, 2011). Especially, Korean immigrants suffer from health disparities more than the general U.S. born population because they often face unique challenges to access and obtain health information as they adapt to a new life such as language barriers, acculturation, lack of familiarity with the US health care system, inadequate health insurance coverage, and unique cultural values (Ma, 1999; Ryu, Young, & Park, 2001; Kim, 2002). For example, Korean immigrants face challenges in adjusting to a new and complex society with unfamiliar institutions for health coverage and access to service because they arrived in the U.S. to an environment very different from their homeland, where universal health coverage is in place (Oklahoma Medical Research Foundation, 1992).

Among Korean Americans, key characteristics of individuals differ by their immigration generation and age group. Koreans in the U.S can be grouped based on their diverse immigration histories and levels of acculturation: first generation, 1.5 generation, second generation, third generation, and so on. For example, first generation Koreans can be defined as people who immigrate to the U.S. after age 18. First-generation Koreans are born, raised, and educated in Korea and usually maintain Korean culture and language in the U.S. The 1.5 generation Koreans are people who immigrate when they are teenagers. They usually assimilate aspects of American culture while keeping their Korean culture and language. Second-generation and third generation Koreans are the first generation's children and grandchildren, respectively; their culture can be considered American. Korean language is often lost somewhere

between the first and third generations. Since foreign-born individuals have different characteristics of different health beliefs, values, and behaviors from the U.S-born population, this study only focused foreign born individuals who migrates from Korean to the U.S (first and 1.5 Korean Immigrants).

Although the body of research on Korean Americans' health has increased since the early 1990s (Sohng, Sohng, & Yeom, 2002), Korean Americans are one of the most understudied ethnic populations in health service research, relative to its growing population size (Jo, Maxwell, Rick, Cha, & Bastani, 2009; Wu et al., 2009). Additionally, while many health disparity studies on Korean immigrants have focused on the older first generation, relatively little is known about young and middle-aged Korean immigrants' access to and use of health information because few studies have examined health information sources, information-seeking behaviors, and information preferences of this Korean population. Since the number of young and middle-aged Korean immigrants is rapidly increasing due to recent immigration, information on this immigrant population is necessary to fill in the gaps in the literature. To improve Korean immigrants' health, effective health communication is necessary to address their current patterns of health information use, so that favorable changes in knowledge, attitudes, and behavior may follow (Kreps & Sparks, 2008). These patterns can shed light on existing health attitudes, beliefs and practices among various immigrant populations. They can also generate insights to improve the focus and strategies of future communication interventions targeting these populations. Thus, studying this ethnic subgroup is important to gain a better understanding of this relatively new immigrant groups' health information access to and use to develop interventions to decrease potential health disparities.

There has been increased interest in the dynamics of health information seeking in recent years (e.g., Brashers, Goldsmith, & Hsieh, 2002; Johnson & Case, 2012). Health information seeking is the purposive acquisition of information from selected information carriers to guide health-related decision making. Individuals who seek health information report that information to be highly influential on subsequent health behavior decisions (Fox & Rainie, 2002; Freimuth, Stein, & Kean, 1989; Niederdeppe et al., 2007). The use of information sources is one of the most heavily studied topics in information seeking behavior research (Fidel & Green, 2004; Flaxbart, 2001; Hallmark, 2001; Rice & Tarin, 1993).

Although television and other media sources play significant roles in the dissemination of health information, the use of Internet sources was quite influential on people's health information seeking behaviors. According to Goldsmith, 2001, "the Internet exploded during the late 1990s into a powerful new social institution." (p. 148). It is now a heavily relied upon source of reference material for the public that transcends existing geographical and regulatory boundaries, and where distinctions between professions and expertise are blurred (Harley, 2004). The Internet has rapidly expanded to address the demand for medical information on health-related topics (McLeod, 1998; Patrick, 2000), and health information is widely prevalent and often sought on the Internet (Fox & Fallows, 2003; Cotten, 2001; Harris Interactive, 2001; Suarez-Amazor, Kendall, & Dorgan, 2001; Elliott & Elliott, 2000). For Korean Americans, the Internet has also been found to be an important channel for health information seeking (Oh et al., 2011).

While research in the area of health information seeking and the Internet is increasing, many questions remain to be answered. Many of the studies in this area, particularly those by the Pew Internet & American Life Project, are largely descriptive in nature. In addition, few studies have examined factors that discriminate between where individuals seek health information. Further multivariate level research is needed that investigates the interrelationships among Internet usage, sociodemographic characteristics, social support networks, and health information seeking. It is not enough to simply note associations between health information seeking and Internet usage; additional research is needed that controls for key factors that have been related to health information seeking in prior research

Studies show that women are more likely to seek health information online than are men (Fox & Fallows, 2003; Hern, Weitkamp, Hillard, Trigg, & Guard, 1998; Fox & Rainie, 2000). Men and women have other differences in their online health seeking patterns. Women are likely to conduct Internet searches focused on an illness or its symptoms and, as the most active health seekers, are more likely to register strong positive beliefs regarding the benefits of online health searches. Men are more likely than women to allow Internet information to affect their searches. Also, younger people are more likely to have access to the Internet and look for health information on the Internet than older people (Brodie et al., 2000; Ybarra & Suman, 2008).

Another potential predictor of personal views about health information seeking behaviors in this immigrant population may be level of acculturation. Previous studies have shown that the level of acculturation attained in a host society is a proxy for socioeconomic status and an indication of social adaptation (Jang &

Chiriboga, 2010; Jang, Kim, & Chiriboga, 2006; Lee et al. 2000). Those who are more acculturated tend to have better physical and mental health compared to those who are less acculturated (e.g., Chiriboga et al. 2002; Jang et al. 2006; Lee et al. 2000; Myers & Rodriguez 2002; Zheng & Berry 1991). Thus, health information seeking behaviors may vary based on the level of acculturation.

These differences in social and cultural experiences suggest that social support and social networks are likely to be very important to immigrants since social support is a potentially modifiable aspect of their lives that contributes to various health information seeking behaviors (Berkman, Glass, Brissette, & Seeman, 2000). Since immigrants have limited access to health information in comparison to the general US population, they are more likely to seek information from members of their social networks (Courtright, 2005). For example, both positive perceived social support and large social network size seem to be related to fulfillment of immigrants' information access and needs. Diverse network sources also may be helpful for overcoming cultural and language barriers. Even though the function and dimensions of social support may be similar within different cultural contexts, the details of who constitutes the social support network, what is considered to be appropriate social support, how this need is communicated, how the needs are met, and how such support impacts health information seeking behaviors appear to differ considerably between Asian and Western cultures (Kagawa-Singer, Wellisch, & Durvasula, 1997). For instance, Asian American women tend to seek professional assistance at a significantly lower rate than White women (Kagawa-singer et al., 1997). Nevertheless, very few publications in the Western literature describe the ways Korean Americans obtain social support in general. Thus, the current study should be

valuable for understanding the influences of social support and social networks on health information seeking behaviors of Korean Americans, whose cultural background differs from the mainstream US population.

Despite the potential importance of this issue, there has been relatively little empirical research conducted examining how social support and social networks affect health seeking behaviors among Korean Americans. A sizable body of literature has evidenced the positive connections between social networks and physical and mental well-being among various populations (e.g., Krause, 2004; Sugisawa, Liang, & Liu, 1994) including Korean Americans (A. Moon, 1996). There is clear evidence that perceived informational social support is an important form of health advice which can be influencing health information seeking behaviors (P. O'Reilly & Emerson Thomas, 1989). While there have been some studies examining health information behaviors and influencing factors on health information seeking behaviors among Korean Americans (Oh, Kreps, Jun, Chong, & Ramsey, 2012; Oh, Kreps, Jun, & Ramsey, 2011), no extant studies have examined comprehensive social support components related to health information seeking behaviors for Korean Americans. Thus, this dissertation focuses on investigating the pathways from social support and social networks to health information seeking behaviors among Korean Americans.

Immigrants in a society tend to have relatively more limited communication resources in terms of both number and variety, due to their different cultural background, beliefs, social position, and language ability. Immigrants' reduced social networks and limited resources are likely to result in different patterns of media consumption and information source use, compared to those of non-immigrants. In

the context of health information, health care professionals have been regarded as a primary source of information, especially for disease-related information (Hesse et al., 2005). However, to immigrants with limited resources and language/ cultural barriers, health care professionals and other traditional primary information sources might be inaccessible or unhelpful. When access to other sources (e.g., interpersonal, mass media sources) is limited, the Internet may be recognized as a useful functional alternative to traditional health information sources, as they can fulfill both interpersonal and informational needs for immigrants such as Korean Americans.

Purpose of the study

The purpose of this study is to advance our understanding of persistent racial and ethnic health disparities from a perspective that focuses the power of social support and social networks in regards to health information seeking .Specifically, this study is designed to extend current research on health information seeking behaviors and social support to the Korean immigrant population in the U.S. Access to health information appears to be a crucial piece of the racial and ethnic health disparities puzzle among immigrants. There are a growing number of scholars who are investigating the role of social networks that have shown that the number and even types of social networks among minorities and lower income groups differ (Chatman, 1991; Glass, de Leon, Seeman, & Berkman, 1997; Palmore, 1981; Kaugh 1999). Very few scholars, however, have examined the use of social support in social networks to retrieve health information. In particular, no extant studies examine both availability of social support and social networks and health information seeking behaviors for Korean immigrants. This study will examine the influences of social

support networks on health information seeking behaviors to increase understanding about the important influences of social networks on health information seeking by immigrants, especially the use of the Internet for health information. More specifically, this study will investigate the effects of (a) demographic factors including age, gender, acculturation, (b) perceived social support, and (c) social networks on online health information seeking behaviors among Korean immigrants. Health information seeking behaviors are examined in these three areas: (1) different health information sources from social networks, (2) topics of health information from social networks, (3) online health information seeking behaviors.

Extending social support research to include Asian and Pacific Islander (API) immigrant groups is needed for two reasons. First, findings with other diverse groups indicate that support exchanges take place within the context of social networks, which are long-standing and based on shared histories, and not are isolated incidents (Berkman & Glass, 2000). Second, APIs constitute the fastest growing ethnic group in the U.S. today (Kagawa-Singer, Hikoyeda, & Tanjasiri, 1997). Currently, the majority of APIs are foreign born. Given that most APIs have immigrated as adults, when learning English is more difficult, it is likely that linguistic isolation occurs. For example, census (2000) data indicate that Chinese and Korean households in the United States have a high prevalence (35% and 41%, respectively) of linguistic isolation.

Kaugh (1999) reported that Koreans immigrants rarely interact with non-Koreans and obtain many services through ethnic community agencies or churches rather than seeking them directly from formal service agencies. Likely reasons that Koreans do not seek help from English-speaking service agencies are that, like other

older Asian immigrants, they face additional challenges related to adjusting to a different value system, language, customs, lifestyle, and the Westernization of their children and grandchildren (Gelfand, 1989; Mackinnon, Gien, & Durst, 1996; Mutchler & Angel, 2000). A cause for concern with immigrant APIs is that their needs are not being met, since they may live in an environment where their main source of support does not live close-by, and their native cultural value system tells them not to express their negative emotions or needs for help. While there is some past research on API caregivers and acculturation of Chinese Americans (Jones, Jaceldo, Lee, Zhang, & Meleis, 2001; Tran, 1991), little is known about the sources of API support, what they consider to be appropriate social support, how their needs are communicated, and how their needs are met (Kagawa-Singer, Wellisch, & Durvasula, 1997; Wellisch et al., 199b). Even less information is available on the ways that Korean American immigrants access social support. In this study we will carefully examine the communication topics and sources used for social support by Korean American immigrants.

Overview of the Following Chapters

The rest of the dissertation is organized as follows: Chapter II will present the literature in more detail on those concepts include: (1) racial and ethnic health disparities, especially for Korean Americans (2 social support and social networks); and (3) health information seeking behaviors. Next, the theoretical framework on the Social Network Theory (SNT) will be introduced. Each section will conclude with a research question/hypothesis asking the relationships between the factor and SNT.

Chapter III will describe the details of the research method. First, it explains the research design for this study. It will explain the rationale for employing this research design, particularly the use of surveys utilizing both quantitative and qualitative analysis. Then, details of the participants in the study, sampling method, and data collection procedures will be described. Also, the procedures taken to ensure research ethics and participant privacy will be described. In addition, it will provide details about the operationalization of key variables and the design of the survey instruments. Finally, the qualitative and quantitative data analysis techniques to answer research questions will be described.

Chapter IV presents the results of the study. First, a description of the sample will be provided. Next, the findings corresponding to each research question will be provided. Chapter V discusses implications from the findings of the current study, its theoretical and practical implications, limitations, and recommendations for future studies.

Definition of terms

Korean Americans and Korean Immigrants. Korean Americans refer to Korean immigrants (first generation) who were not born in the U.S and have emigrated from Korea to the U.S. In this study, two terms are used interchangeably.

Health information seeking behavior. In this study, *health information seeking behavior* is defined as the purposive acquisition of information from selected information as access to social networks to enable retrieval of health

information from selected information carriers to guide health-related decision making (Johnson & Case, 2012; Berkman et al., 2000).

Social support. Whereas researchers have had difficulty identifying a single and inclusive definition of social support (Helgeson & Cohen, 1996; Roberts, Cox, Shannon, & Wells, 1994), some experts have agreed to divide the dimensions of social support into two broad categories of social support: structural and functional (Blanchard, Albrecht, Ruckdeschel, Grant, & Hemmick, 1995; Roberts et al., 1994). Structural support is the dimension that captures the structure or quantity of social relationships (marital status, group membership, and number of friends) and the connection of social relationships. There is a diversity of ways to represent the structural aspects of support. The existence of a spouse, parents, siblings, other kin relationships, and friends are among the most common social network members assessed in the health literature (Uchino, 2004). In addition, the extent of contact with different network members can be examined. More complex analyses include an examination of the connection between different network ties such as density (how many of these network members have relationships with each other).

(a) Perceived social support. Perceived social support is defined as “an individual’s belief that his/her social network is available and adequate for his/her social support needs as a means of gaining health information” (Laireiter & Baumann, 1992).

(b) Social network. This term refers to “a person’s set of linkages that operate as sources of social support” (Lehto-Järnstedt, Ojanen, & Kellokumpu-Lehtinen, 2004). In addition, barriers operate in social network structures to diminish social

support. Structural indices commonly used to describe network structures include social roles and/or networks, density and/or integration, and most frequent size of social networks (Blanchard et al., 1995). In the present study, social networks are characterized by network size and network diversity. Social network size reflects the number of ties that comprised a participants' social network, while network diversity refers to the extent to which the members are connected with strong ties such as family and friends.

CHAPTER TWO: LITERATURE REVIEW

Chapter 1 briefly introduced the key concepts that form the basis of this research and which will be the focus of the literature review in this chapter. Those concepts include: (1) racial and ethnic health disparities, especially for Korean Americans (2) social support networks; and (3) health information seeking behaviors. This chapter will examine relevant research and theory concerning these key concepts.

Health Disparities

During the past 2 decades, one of the overarching goals presented in the U.S. Department of Health and Human Services' *Healthy People* reports has focused on eliminating disparities to improve the health of all groups. The Healthy People 2020 Phase I report defines a *health disparity* as “a particular type of health difference that is closely linked with social, economic, and/or environmental disadvantage” (p.28). More specifically, health disparities are defined as —difference[s] in which disadvantaged social groups such as the poor, racial/ethnic minorities, women and other groups who have persistently experienced social disadvantage or discrimination systematically experience worse health or greater health risks than most advantaged social groups (Braveman, 2006).

Despite the greater emphasis on preventive medicine and use of advanced medical technology that has resulted in improvements in the life expectancy and overall health for many Americans, health disparities persist among many racial and

ethnic minority groups (Kreps, 2006; Lorence, Park, & Fox, 2006). Korean Americans appear to be one of the populations that suffer most significantly from serious health disparities (Asian Pacific Islander American Health Forum, 2006). Especially, Korean immigrants suffer from health disparities more than the general U.S. born population.

The Korean American community is mainly composed of immigrants, who comprise almost 90% of all Korean Americans in the U.S (Sohn, 2004). Immigrants suffer from health disparities significantly more than the general U.S. born population. When immigrants adapt to a new life environment, they may adopt some native lifestyles and behaviors that could have unfavorable influences on their health (Antecol & Bedard, 2006). For example, those who are more acculturated tend to have better physical and mental health compared to those who are less acculturated (e.g., Chiriboga et al. 2002; Jang et al. 2006; Lee et al. 2000; Myers and Rodriguez, 2002; Zheng and Berry 1991). Moreover, regardless of the duration of residence in the U.S., Koreans tend to retain their cultural traditions (Hurh, 1998; Wu, Kviz, & Miller, 2009).

Cultural beliefs and attitudes can influence immigrant health behaviors. As is true for other groups of Asian Americans (e.g., Chinese, Vietnamese) who have been exposed to Western medicine as a result of immigration, Korean Americans have adopted a crisis-oriented system of care in which preventive medicine or health promotion is often ignored (Vu, 1996; Kim, 2002). For instance, oriental or traditional medicine is often the first choice in terms of treatment option for Korean Americans for many health problems (Kim, Cho, Cheon-Klessig, Gerace, & Camilleri, 2002). As a consequence, many of these individuals only rarely receive preventive care, and

they delay seeking Western medical treatment until their symptoms become severe. Consequently, they often find themselves in both medically and financially difficult situations. Reliance on health practices reflecting their cultural upbringing therefore seems to be a major factor contributing to Korean Americans' health information seeking behaviors.

A consistent finding in the immigrant health literature is that there is a remarkable discrepancy in the availability of health insurance between immigrants and nonimmigrants (Derose, Bahney, Lurie, & Escarce, 2009). Korean immigrants are ranked the lowest among ethnic minority group in terms of having medical insurance (34% lack health insurance coverage of any kind, including private, governmental, or Medicare/Medicaid), primarily because of their recent immigration history and their disproportionate engagement in self-employed, small retail businesses that make it difficult for them to afford health insurance premiums (Brown et al., 2005). Several studies have found that low income, low language proficiency, and low rates of insurance coverage influence immigrant health information seeking behaviors. For example, they are more likely to find information on the Internet than from health care providers since they are not eligible for public health insurance (Asian Pacific Islander American Health Forum, 2006).

Language is one of the major barriers to health care access and the use of health information for immigrants, including Korean Americans, who are predominantly a first generation immigrant group. For example, 83 % of the total Korean American population reported speaking Korean at home, and at least 70% had difficulty with understanding English (Census, 2000). In fact, 75% of Korean Americans were found to prefer visiting Korean-speaking doctors (APIAHF, 2005;

Han, Song, & Kim, 1996). Even those Korean Americans who may speak English at an intermediate level may not feel comfortable conversing with native English speaking health professionals. According to a state-wide public survey of 1,200 mostly foreign-born residents of California, 36 of 100 Korean respondents stated that they had a problem understanding a medical situation at a doctor's office or clinic based on their difficulties speaking English and 60% reported that they didn't speak English well or at all (NCM, 2003). This lack of English proficiency is also evidenced by the existence of at least 27 Korean language ethnic media, including 12 magazines, 7 radio stations, 5 TV channels, and 3 newspapers, and of more than 330 Korean language ethnic churches in the Baltimore- Washington metropolitan area alone (Han et al., 2006). Previous studies have found that Korean language newspapers or magazines, Korean television and radio are sources used regularly for this population (Oh et al., 2012). To decrease health disparities for the Korean American population effective health communication is necessary to address their current patterns of health information use, so that favorable changes in knowledge, attitudes, and behavior may follow (Kreps & Sparks, 2008).

Health Information Seeking Behaviors

Many studies have examined health information seeking behaviors and source selection (e.g., Basu & Dutta, 2008; Dutta-Bergman, 2005; Lambert & Loiselle, 2007; Tian & Robinson, 2008; Wathen, 2006). Information seeking can be defined simply as "the purposive acquisition of information from selected information carriers" (Johnson & Case, 2012). Information is an important first step in health behavior change (Freimuth et al., 1989). The results of information carrier exposure and

seeking are attitude change, knowledge change, and behavior maintenance (Rimal, Flora, & Schooler, 1999). Changes in public knowledge, attitudes, and behavior are crucial to enhancing health.

The use of information sources is one of the most heavily studied areas in information seeking behavior research. Information sources have been investigated extensively in various areas (Fidel & Green, 2004; Flaxbart, 2001; Hallmark, 2001; Rice & Tarin, 1993) such as everyday information seeking (Chen & Hernon, 1982; Hektor, 2003; Kari & Savolainen, 2003), and health information seeking (Bates, Romina, Ahmed, & Hopson, 2006; Case, Johnson, Andrews, Allard, & Kelly, 2004; Warner & Procaccino, 2004). In addition, the issues related to source accessibility (Xu, Tan, & Yang, 2006), sources credibility/authority (Bates, et al., 2006), source quality (Choo, Detlor, & Turnbull, 2000; Rieh, 2004), and source preferences (Rees & Bath, 2001) have been widely reviewed and studied.

In the early 1980s, two large-scale surveys (Chen & Hernon, 1982; Dervin, Ellyson, Hawkes, Guagnano, & White, 1984) were conducted with the general U.S. population to investigate information seeking behaviors when solving problems in everyday life. The studies found that people referred most often to other humans as sources that they look to when they cannot retrieve information from their memories. First, they ask for help from acquaintances who are immediately available to them, such as family members, friends, neighbors and colleagues. When it is necessary, they turn to experts or professionals, such as doctors, librarians, and teachers. The use of media sources, such as TV, radio, newspaper and televisions, were also found to be popular at the time of these surveys. The most interesting finding from these surveys

is that accessibility matters significantly when choosing sources. People would first ask their acquaintances because they were usually nearest to them, and could communicate face-to-face (Krikelas, 1983). When they needed information about a certain professional domain, they looked for experts within their community. It seems that people used human contacts for personalized, situation-specific information and advice while referring to media for general information, news, and trends.

Mediated sources provide people with additional opportunities for mass and interpersonal communication aimed at health information seeking and providing. Television programs and magazine and newspaper articles on health topics are common (Johnson, 1997). Dolan et al. (2004) also found that health professionals were the most frequently accessed source for patients to obtain specific information about certain illnesses, while they preferred media sources, such as magazines, TV, newspapers as well as health professionals, to finding general health information.

Sillence, Briggs, Harris, & Fishwick, (2007) found that people responded differently to the use of information sources in accordance with different phases of information seeking. First, when individuals felt they needed to check about something concerning their health, they would search for information on the Internet to acquire basic knowledge about the topic. Next, they would talk to and get advice from health care professionals or friends about their symptoms. With the information obtained from both online and offline sources, patients would have a more targeted and sophisticated approach to evaluating sources and to approaching support groups in order to find alternatives. Sillence et al. (2007) also argued that those who look for Internet sources tend to find information which can confirm their original points of

view, and few of them made changes in their thoughts or behaviors based on information that they found on the Internet.

Online Health Information Seeking Behavior

The advent of the Internet suddenly expanded the amount and variety of information available and has had a huge influence on traditional ways of information seeking, as it gradually replaced some use of personal contacts and traditional media with diverse channels of Internet sources (Hektor, 2003; Johnson & Kaye, 2004; Kreps & Neuhauser, 2010). The accessibility of health information on the Internet, which can be easily and conveniently available whenever computer users need information, is the number one reason that people use the Internet frequently to access health information (Hektor, 2003; Hesse, Nelson, Kreps, Croyle, Arora, Rimer, & Viswanath, 2005).

According to Hesse, et al. (2005), 50% of Americans reported that physicians are the preferred first source of health information; however, only 11% reported contacting their physician as their first line of inquiry, in comparison with use of the Internet as the first source of health information for 49% of Americans. Additionally, to immigrants with limited resources and language/ cultural barriers, health care professionals and other traditional primary information sources might be inaccessible or unhelpful. When access to other sources (e.g., interpersonal, mass media sources) is limited, the Internet may be recognized as a useful functional alternative to traditional health information sources, as they can fulfill both interpersonal and informational needs for immigrants such as Korean Americans. Previous research on

Korean American health information seeking behaviors (Oh et al., 2012) found that the Internet is an important source of health information for this population.

Research shows that the most popular resources used by immigrants for medical and health information are social networks (family and friends), mass media (TV and radio), written materials (newspapers and magazines) in their primary language (Ahmad *et al.* 2004; Chen *et al.* 2010; Woodall *et al.* 2009; Woodall *et al.* 2006) and among some immigrant groups, healthcare professionals (Eriksson-Backa 2008; Morey 2007). However, health information is now more available on the Internet than from any other resource (Chen *et al.* 2010). As technology rapidly improves, many individuals with health problems turn to the Internet to seek out relevant health information as an active coping strategy. Recently, the Pew Internet & American Life Project conducted a national survey and found that 86% of Internet users have looked online for information (Fox, 2011). While health professionals are still considered the most appropriate source of information for health and medical issues, people increasingly use the Internet. A number of studies consider the use of online health information by various immigrant groups: Chinese living in the USA and Canada (Woodall *et al.* 2009), Hispanics in the USA (DeLorme *et al.* 2010; Pena-Purcell 2008), and Spanish-speaking immigrant women in Canada (Thomson and Hoffman-Goetz 2009).

Furthermore, studies show that women are more likely to seek health information online than are men (Fox & Fallows, 2003; Hern, Weitkamp, Hillard, Trigg, & Guard, 1998; Fox & Rainie, 2000). Men and women have other differences in their online health seeking patterns. Women are likely to conduct Internet searches focused on an illness or its symptoms and, as the most active health seekers, are more

likely to register strong positive beliefs regarding the benefits of online health searches. Men are more likely than women to allow Internet information to affect their searches. Also, younger people are more likely to have access to the Internet and look for health information on the Internet than older people (Ybarra & Suman, 2008; Brodie *et al.*, 2000).

While research in the area of health information seeking and the Internet is increasing, many questions remain to be answered. Many of the studies in this area, particularly those by the Pew Internet & American Life Project, are largely descriptive in nature. In addition, few studies have examined factors that discriminate between where individuals seek health information. Further multivariate level research is needed that investigates the interrelationships among Internet usage, sociodemographic characteristics, social support networks, and health information seeking. It is not enough to simply note associations between health information seeking and Internet usage; additional research is needed that controls for key factors that have been related to health information seeking in prior research. Also, there remains a great deal to learn about the seeking experiences and how it may differ from immigrants.

Health Information Seeking among Immigrants

Patterns of health information seeking can be strongly influenced by different cultural frameworks (Johnson & Case, 2012). Immigrants often possess particular characteristics that distinguish them from native populations, including language, ethnicity, culture, income, type of job, and perhaps even education and legal status. Thus, researchers cannot assume that their information seeking behavior will be

similar to that of native-born residents. For example, due to language barriers, many Korean Americans are more likely to seek health information from their ethnic media (Han et al., 2006; Oh et al., 2012). In addition, assumptions governing health information-seeking among mainstream populations may be undermined by the ensemble of differences that comprise the lives of immigrants (Sligo & Jameson 2000; Suro et al. 2002). Ramandadhan and Viswanath (2006) found that different ethnic groups experience varied access to health-related information, leading to gaps in knowledge and widening health disparities for these populations. Little research has explored the health information seeking behaviors of immigrant minorities (Hudson & Watts, 1996; Mcgrory, 1999). Although the National Cancer Institute conducts the population-based Health Information Trends Survey (HINTS) every two years to examine health and cancer information seeking behaviors, the Asian subgroups studied were aggregated for data analysis and failed to identify disparities between different Asian American populations (Nguyen & Bellamy, 2006). Furthermore, Asian Americans only accounted for a small segment of the national population sampled for the HINTS research program. For example, only 2-3% of total national sample were Asians in HINTS 2007 (National Cancer Institute, 2012). Moreover, the HINTS survey is only conducted in English and Spanish, making it an ineffective survey instrument for studying Asian immigrants who may not be proficient at communicating in either English or Spanish. At best, the HINTS research program is likely to include only the most acculturated Asian immigrants who have developed strong English language proficiency, potentially skewing findings about the ways Asian Americans seek and use health information.

Earlier research (Tomas & Zananiecki, 1981) observed that some ethnic minority groups had a strong interest in health information seeking for self-healthcare. These studies found that ethnic minority groups were more likely to behave in their traditional cultural ways in the U.S which may deteriorate their health. For example, Korean immigrants might not be familiar with American style healthcare treatments, and thus would be likely to use traditional Korean medicine as the basis for their health care treatment information. In addition, only a few studies (Buller et al., 2001; Kakai, Maskarinec, Shumay, Tatsumura, & Tasaki, 2003; Hong, 2006; Oh, Kreps, Jun, Chong, & Ramsey, 2012; Oh, Kreps, Jun, & Ramsey, 2011) have discussed health information seeking behavior by Asians in the U.S. The Asian Pacific Islander American Health Forum (2006) found that the high use of online health information by ethnic minority groups could be caused by several factors: low income, low language proficiency, vast cultural differences, and low rates of insurance coverage, since they are may not be eligible for public health insurance. Also Kaugh (1999) found that Korean Americans rarely interact with non-Koreans and obtain many services though ethnic Korean community agencies or churches rather than seeking them directly from health care providers.

Health-related cultural beliefs have been identified as an important variable in understanding different ethnic groups' health behaviors. In focusing on cultural backgrounds, these studies suggested the need for culturally sensitive consumer health information for different ethnic populations (Buller et al., 2001; Fogel, 2003; Kakai et al., 2003). After examining differences in health information-seeking behavior among Koreans, Kim et al. (2002) found that cultural beliefs and norms influenced how Korean Americans sought, used and communicated health-related information.

For instance, Korean Americans tend to seek health care only when they have severe symptoms (Han, Kang, Kim, Ryu, & Kim, 2007; Kim & Menon, 2009; Kim & Keefe, 2009). No symptoms are regarded as “having good health” or “having no disease” (Jo et al., 2009). In addition, oriental or traditional medicine is often the first choice in terms of treatment option for many health problems (Kim et al, 2002). As a consequence, many of these individuals only rarely receive preventive care, and they delay seeking Western medical treatment until their symptoms become severe; consequently, they often find themselves in both medically and financially difficult situations.

Prior research has also highlighted the importance of strong ties between family, friends, and peers as supporting mechanisms in overcoming health-related challenges (Kakai et al., 2003). Furthermore, multiple factors influence the extent to which health information is accessed by individuals and population subgroups (Johnson, 1997). Several studies have alluded to the influence that cultural background exhibits on health information seeking (Courtright, 2005; Matthews, Sellergren, Manfredi, & Williams, 2002). Many of the existing studies discussing Asian minorities’ consumer health information-seeking behaviors indicated that the language barrier represented the biggest obstacle for ethnic minorities (Oh, Kreps, Jun, Chong, & Ramsey, 2012; Oh, Kreps, Jun, & Ramsey, 2011). Juon, Lee, and Klassen, (2003) found that for Korean female consumers, the extent of English-speaking proficiency was the most significant factor affecting regularly scheduling Pap smears. In particular, elderly Korean immigrants are often not familiar with American style healthcare treatments due to language barriers, and thus often only use traditional Korean medical practices. These studies suggest that language use should be

examined as a potential cultural barrier in understanding health information-seeking behavior of ethnic minority groups.

Health Information Seeking among Korean Americans

Despite the importance of understanding health information seeking behaviors of ethnic minority groups, there is limited research about health information seeking for Korean Americans. A few studies (McDonnell, Lee, Kim, Kazinets, & Moskowitz, 2008; Oh et al., 2011; Oh et al., 2012) have examined health information behaviors or exposure among Korean Americans. These available studies found that Korean ethnic media sources and the Internet are important sources that are used to gather health information. Specifically, low-income Korean Americans with less education were more inclined to seek health information from ethnic magazine and newspapers, while Korean Americans with higher education levels and higher levels of English language proficiency were more likely to seek information online (Oh et al., 2012). Moreover, the most trusted health information source for Korean Americans was a health care professional followed by a newspaper or magazine. Interestingly, health information gathered from the Internet was less likely to be trusted by Korean Americans than other sources (Oh et al., 2012). Although there have been a few studies that investigated health information seeking behaviors and trust in health information sources, there are no extant studies that have examined Korean Americans' access to perceived social support in their social networks that have been identified in prior literatures to be significant predictors of health information seeking or exposure to health information for Korean Americans.

Multiple factors influence the extent to which health information is accessed by individuals from different immigrant groups (Johnson, 1997). For Korean Americans, in particular, lack of familiarity with the US health care system, language barriers, inadequate health insurance coverage, lack of social support and networks, and unique cultural values and beliefs have been noted as potentially significant factors influencing health outcomes (Ma, 1999; Kim et al., 2001; Kim, 2002; Ryu et al., 2001). In contrast, studies of health information seeking behaviors for native Koreans do not generally show such difficulties (Oh, Jun, Zhou, & Kreps, in-press; Oh, Zhou, Kreps, & Kim, 2012, under review). Native Koreans typically live with family and friends in close regions under a single language and culture. Moreover, because the Korean health insurance program has achieved universal coverage for all citizens, most Koreans are unlikely to experience difficulties related to health insurance. This information is consistent with some studies that immigrants tend to obtain lower-quality and less frequent health care than their native-born counterparts (Guendelman, Schauffler, & Samuels, 2002; Ku & Matani, 2001), which reinforces the characterization of the Korean American study population as vulnerable. Thus, after moving into the new country, different cultural factors and different environmental constraints may affect immigrant's health behaviors and their health care.

Traditionally in the Korean culture, balance and harmony are core concepts of health. Illness is seen as a symptom of imbalance within one's body, social sphere, and environment or the interruption of the flow of life energy. Health treatments are designed to heal this imbalance through attitude change, diet, and interpersonal interactions (Kagawa-Singer, 2001; Kim et al., 2002). There is no correspondence

with Western concepts of health that is defined as “a state of complete physical, mental, and social well-being and not merely the absence of disease and infirmity” (World Health Organization, 1958). In addition to the different health beliefs and approaches to health care, Asian patients tend to believe that the nature of their body and illness is different from that of the Westerners, and some of them distrust Western medical care (Sung, 1999).

Another traditional health belief is related to the conception of food as a medicine. As the Korean notion of “food is medicine” indicates, Koreans stress the importance of eating healthful food to prevent and treat an illness (H. C. Koh, 2003). An empirical study reveals that more than 90% of the Koreans surveyed believed that food consumption habits were the most important factor determining a person’s health condition and that diseases could be cured by changing dietary habits (Lee, Ro, and Lee, 1996).

These differences in social and cultural experiences suggest that social support and social networks are likely to be very important to immigrants since social support is a potentially modifiable aspect of their lives that contributes to various health information seeking behaviors (Berkman et al., 2000). Since immigrants have limited access to health information to the general US population, they are more likely to seek information from members of their social networks (Coutright, 2005). For example, For example, both positive perceived social support and large social network size seem to be related to fulfillment of immigrants’ information access and needs. Diverse network sources also may be helpful for overcoming cultural and language barriers.

Conceptualization of Social Support

Over the last 30 years, there have been many articles, and books, on issues related to social support. The concept of social support was first articulated in the mid-1970s by Cassel, 1974 and Caplan, 1974, who identified the importance of social ties in coping with crises, life transitions, and deleterious environments. Empirical analyses suggest that social support is a multidimensional concept (Caplan, 1974; House, 1981; Vaux & Harrison, 1985; O'Reilly, 1995; Viel, 1985). Despite the advances and proliferation of research on social support, there is a lack of consensus with regard to the definition of social support (Starker, 1986; Tilden, 1985; A Vaux & Harrison, 1985). Therefore, various conceptualizations of social support have been extensively considered in the literature (Cohen & Wills, 1985; House, 1981; Turner, 1981; Alan Vaux, 1987)

Social support is a broad construct that can refer to many social phenomena and processes (Goldsmith, 2008). For example, Cobb (1976) defines social support as information that one belongs to a socially coherent community and that one is loved, esteemed, and valued. Johnson and Sarason (1979) define social support as the degree to which individuals have access to social resources in the form of relationships which they can rely on. House (1981) regards social support as an interpersonal transaction involving concern, aid, and information about oneself and the environment. According to House & Kahn (1985), social support refers to the functions performed for the individual by significant others, such as family members, friends, coworkers, relatives, and neighbors.

Taking a broad perspective based on the literature, social support is usually defined to include both the structure of an individual's social network and functions they may serve (Uchino, 2004). Functional components of support are usually organized along two dimensions: what support is perceived to be available and what support is actually received or provided by others. (Dunkel-Schetter & Skokan, 1990).

For the purposes of this current study, social support can be defined as functions performed for an individual by significant others in various networks, such as family members, friends, and coworkers (House & Kahn, 1985; Thoits, 1995). Moreover, one conceptualization, perceived social support is a focus of interest that is enacted within a social network or attained via relationships within one's network. Perceived social support is identified as cognitive appraisals of availability and adequacy of support from his/her social network (Holahan & Moos, 1981; Laireiter & Baumann, 1992; Thoits, 1995). Social support is believed to create a sense of belonging in a network with people that can provide a variety of resources including health information (Berkman et al., 2000; White & Cant, 2003). Therefore, examining perceived social support can enhance scientific understanding of the perception of the availability of each support type within one's social network and communication patterns used to seek relevant health information among immigrants. This study will utilize perceived social support to measure the functional aspects of social relationships.

Recently, Uchino (2004) proposed that social networks are embedded within the broad social relationship construct and each captures a facet of the construct of

social relationships. Social support is believed to be nested within social integration and social networks. This model implies that social networks give individuals access to social support resources, should the need arise. The nested model approach is used in this study.

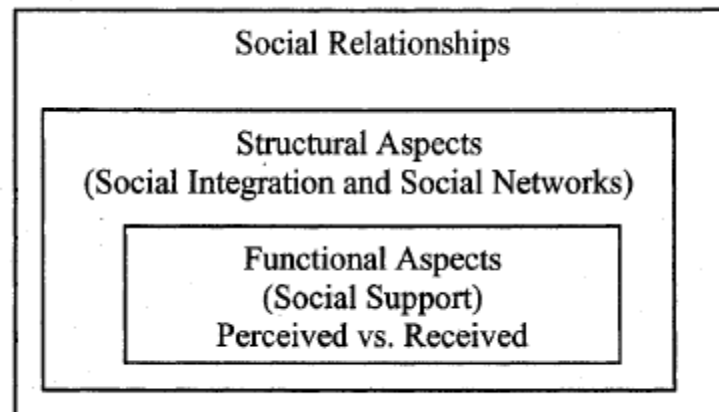


Figure1 1. Nested Model of Component of Social Relationship (Uchino, 2004)

Perceived Social Support

In social support literature, the effects of perceived social support have been most frequently examined. Perceived social support refers to cognitive appraisals of availability and adequacy of support from social others (Holahan & Moos, 1981; Procidano & Heller, 1983; Thoits, 1995). The essential function of perceived social support is that the subjective appraisal and expectations of support lead an individual “to believe that he is cared for and loved, esteemed, and a member of a network of mutual obligations” (Cobb, 1976, p. 300).

One way to look to examine perceived social support is by breaking it down into different types of social support people seek: (1) emotional support, (2) instrumental support, and (3) informational support (Blanchard et al., 1995; Helgeson & Cohen, 1996). Another way to examine perceived social

support is measuring social support as general view of support from specific individuals in the social network. House (1981) and Israel & Rounds (1987) point out that although there are different types of social support, can be differentiated conceptually, relationships that provide one type of support often also provide other types thus making it difficult to study them empirically as separate constructs. Hence, perceived social support as functional aspects of social support will be examined in general rather than each type of perceived social support in this study. In this way, we can merge both structural and functional approaches to measuring social support.

Perceived support is made up of the supportive functions that are perceived to be available if needed. There is clear evidence that perceived social support is an important form of health advice which can influence health behaviors (O'Reilly & Thomas, 1989); low levels of morbidity and mortality (Orth-Gomér, Rosengren, & Wilhelmsen, 1993); and recovery from life threatening illness (Berkman, Leo-Summers, & Horwitz, 1992). Similarly, Choi (1997) found that perceived social support mediated the relationship between acculturative stress and depression in Korean American families. Thus, perceived support availability is known to be of considerable significance for health (Cohen and Wills, 1985; Wills & Shinar, 2000). Consistent with these findings, perceived support availability can be an important factor for health information seeking behaviors.

Moreover, Cacioppo & Berntson (1992) argued that an individual's perception of having a reliable and accessible social network is more important in reducing mortality than whether or not the network is actually used. Furthermore, perceived

support has also been found to predict the frequency of actual supportive interactions (Lara, Leader, & Klein, 1997). For example, Bruhn & Philips (1984) stated that a person must perceive support to be available before the support itself can become beneficial. Therefore, social support “is likely to be effective only to the extent it is perceived” (House, 1981, p. 27).

Previous research provides overall evidence that social support is related to lower mortality rates across a variety of diseases (Berkman & Syme, 1979; Blazer, 1982; Orth-Gomér & Johnson, 1987). These studies used social integration as a composite index of number and degree of contacts across a wide range of relationship, for example, family, neighbors, and friends. Results of these study demonstrated that social support was associated with lower all-cause mortality rates even after considering the influence of age, gender, education, employment status, and smoking. There are possible reasons for the consistent association between social support and health. Information on multiple relationships provides a more comprehensive assessment of the influence of relationships on well-being. This means individuals are influenced by available support in social networks which in turn may predict whether an individual will seek health information.

Social Network

The structural aspects of social support are often called a social network. These measures have been studied in the social support literature of the late 1970s and early 1980s, when some of the early epidemiological evidence for a link between social ties and health. Individuals develop and maintain various and complex social relationships in a lifetime. Social network is a multidimensional

construct, referring to a web of interpersonal relationships and its characteristics (Berkman & Glass, 2000). According to Berkman, Glass, Brissette, and Seeman (2000), social networks are a structural aspect of various social relationships characterized by size, density, boundedness, and homogeneity, and they influence individuals' psychosocial mechanisms such as social support, influence, engagement, or access to health information. Individuals feel socially connected through interactions with others in the context of social networks and are influenced by norms and values of the networks (Ashida & Heaney, 2008). Network members also receive various types of support from their networks (Cohen, Teresi, & Blum, 1994). For example, Jackson (2013) found that perceived social support from one's significant other, family, and friends influences health behaviors. Similarly, Schnoll and Harlow (2001) demonstrated married patients' preferences for using family members for social support.

Social networks illustrate the pattern through which individuals are connected to one another through social ties (Berkman & Glass, 2000). Research suggests that certain network source tend to be characterized by the provision of many different support types (for example, strong ties), whereas other ties tend to be limited to the provision of one kind of support (Wellman & Wortley, 1990). These networks often are crucial channels for shared resources. The theory of social networks postulates that social supports create enhanced environments that promote healthy behaviors and alter psychological barriers that influence how individuals use health care services (Berkman & Glass, 2000). Our social networks can place pressures on us to act in healthy ways. For instance, your spouse may serve as a

source of information reminding you to eat healthier or see the doctor when you are not feeling well. Previous studies provide evidence that measures of social network tend to be associated with health promoting behaviors such as information seeking and lower risk taking (Lewis & Rook, 1999).

Ethnicity is related to patterns of social networks (Zhou & Kim, 2006). The distinct cultural values and experiences of each ethnic group create unique networks of social relationships. For example, because Korean Americans are a relatively new group of immigrants, they are more likely to maintain their original cultural beliefs and values (Kang, 2002). The characteristics of social relationships in Eastern and Western societies are often compared where the terms “collectivism” and “individualism” are used in describing differences in social relationships between the two types of societies (e.g. Phillips & Crist, 2008; Valle, Yamada, & Barrio, 2004). Collectivism refers to a “high value for group harmony and cooperation” (Phillips & Crist, 2008, p. 326) where more frequent interactions and a higher level of dependency between network members than in Eastern societies are expected (Phillips & Crist, 2008). On the other hand, (Phillips & Crist, 2008, p. 327) expect relatively less frequent interactions and a lower level of dependency between individuals who emphasize individualism (Phillips & Crist, 2008). Individualism is defined as a “high value for independency and self-reliance”

Based on one’s cultural values, immigrants often bring the distinct characteristics of social networks that are common in the homeland to their host country with minor modification (Kukyaman, 1993), and such social networks are especially significant for immigrants as they are important sources of information and services (McMichael & Manderson, 2004). For example, Korean American

cancer patients often consider family members as their primary support source, depending on their families to help them deal with diagnosis, treatment and recovery (Ashing-Giwa et al., 2003). Thus, it is essential to understand the immigrant status of most Korean Americans and the importance of social networks for newcomers and recent immigrants and the specific relationship type performed by different social support providers within their social networks.

Moreover, as a structural disability for immigrants, such barriers may restrict access to social support sources or providers and thereby reduce access to relevant health information. For example, Ashing-Giwa et al (2004) reported that Korean American women diagnosed with cervical cancers were disproportionately challenged by a lack of resources such as health information, affordable health care, and psychosocial services. Thus, understanding cultural barriers to health care access is essential to understanding immigrants' health care experiences.

Social Network Theory

Social network theory (SNT) is concerned with the properties of social networks, social supports and resource exchanges among network members. From a SNT standpoint, a social network involves a number of actors and relations that connect them. Actors, either individual people or combined units such as organizations or families, exchange resources. These resources may contain data, information, goods and services, social support, and financial support (Marsden & Campbell, 1984).

According to SNT, an individual's social networks include strong ties and weak ties (Marsden & Campbell, 1984). A tie is defined as the relationship between a

particular individual and a certain network member. Strong ties are more intimate and involve more self-disclosure and various forms of resource exchange. Individuals who are strongly tied are more likely to show similarities in attitudes, background, and experience. Weak ties, on the other hand, comprise fewer intimate exchanges and less frequent maintenance. Weak-tie relationships exist independent of the pressures and dynamics of close social relationships (Marsden & Campbell, 1984). For example, weak ties can promote anonymity and objectivity that is not generally available in close relationships. Additionally, weak ties may be particularly valuable in the flow of new information. Those who are loosely acquainted are likely to have access to different information and unique perspectives because their social networks involve different members typically from different background and with quite different experiences (Granovetter, 1973). Thus, a weak tie can bring individual resources that are unattained from close associates. Overall, a weak tie relationship allows individuals to diversify their networks or connections, thus providing a helpful alternative for social support. The weak tie was inferred as belonging to a religious, work or volunteer organization (Granvoetter, 1973).

Social network theory provides an important framework from which to examine the health information acquisition influences of social relationships and networks for Korean American immigrants. This study will focus on examining the social network influences on people who emigrated from their native country (South Korea) to their new country (USA), first generation. These people need to seek support and help from different sources and personal networks to cope with the feelings of inadequacy and frustration in their changed environment. When sojourners or immigrants enter a new cultural environment, it is very important for them to build

close relationships with friends and compatible others in the host cultures. The adaptive functions of relational networks, such as providing informational emotional support, provide newcomers with a sense of security and well-being as well as various types of knowledge about the host culture. Members of social groups or relationships share similar experience of living and studying a new cultural environment and the same concern of dealing with various difficulties. Therefore, they are willing to exchange ideas and information about different aspects of life and provide help and support to each other. For instance, many Korean Americans have never heard of the Pap smear test, although cervical cancer is a significant health problem for Korean American women. However, if their friends or family members were to recommend or talk to them about the Pap smear, they would become more familiar with this procedure and might be more likely to receive this screening test.

From an information transmission viewpoint, it is important to look at both strong ties and weak ties. Granovetter (1973) explained that strong ties facilitate dispersion of information, but the same information was being repeatedly circulated within the networks. For new and useful information to penetrate the network, a wider and more dispersed circle of strong ties and weak ties were necessary to facilitate transmission of information. Also, it is important to examine both strong ties and weak ties for immigrants since they seek support and help from different sources and personal networks to cope with the feelings of inadequacy and frustration in their changed environment. In this study, both strong ties (family and close friends) and weak ties (churches and organizations) will be measured.

Health Information Seeking and Social Support and Social Networks

Information seeking has been studied in the context of social support within individual's interpersonal networks (e.g., family, friends, and coworkers). Information that facilitates coping with health problems is one form of social support that may be exchanged among members of a support network. Thus, social support in social networks plays an important role in changing people's health practices (Mullen, Hersey, & Iverson, 1987). A supportive social network is critical because it can expand the range of information available to an individual. As we focus on how people share information with each other and work together in teams seeking answers to questions, social support and social network become a very concrete way to examine the communication patterns used to seek relevant health information. The extent to which individuals expand their social network has important consequences for health information acquisition, and there has been an explosion of interest in the relationships between social support in social networks and health in recent years (Christakis & Fowler, 2009).

One of the most important characteristics of social networks is knowing what the other knows and when to turn to them (Cross, Rice, & Parker, 2001). This implies that individuals have some awareness of where information resides. For instance, the need for personalized advice concerning health matters can be an important reason that people ask questions of other people within their social networks. People may want to talk about their concerns or conditions with health experts, but such experts may not be readily available. Social networks can be an easy and immediate way to receive responses from others. When asking questions, people can elaborate on their conditions and receive responses from those who have some knowledge or similar

experiences. Although answerers may not be health professionals or experts, information obtained from people can be useful for the questioners to understand their conditions. Answers from social support networks can provide several advantages to questioners. For example, the lay-person language of answerers could help patients to easily understand medical information. In particular those related to serious or rare diseases often contain many medical terms that normal people would find difficult to understand.

Courtright (2005) suggested that Hispanic immigrants tend to use personal networks (e.g., grandmothers and mothers) as primary sources of health information. It is important to examine where they receive health information to develop culturally relevant health communication interventions. However, little research has explored the health information seeking behaviors of immigrant minorities (Hudson & Watts, 1996). Only a few studies (Oh, Kreps, Jun, Chong, & Ramsey, 2012; Oh, Kreps, Jun, & Ramsey, 2011) have explored information sources, information-seeking behaviors, and information preferences among immigrant minorities such as Korean Americans. Also, there are no published data examining the relationship between health information seeking behavior and social support/networks among Korean Americans. The main focus of the current study is to examine Korean Americans' use of social networks as primary health information sources.

For example, although immigrants often receive little attention and are poorly understood by health care professionals, strong social support from family members, friends, or relatives has the potential to positively influence their health information seeking behaviors and improve health outcomes. Courtright (2005) found that social networks played an important role in obtaining health-related information among

Latino immigrants. Especially, strong ties, when available in the form of family members, helped participants resolve health problems and locate health care (Courtright, 2005). As this study found, social support and social networks may be a particularly important predictor for health promotion for Korean Americans. Specifically, perceptions of available support in social network, number of social contacts or size of their social network, and the number of people they feel they can talk to about their concerns may contribute to achieving important influencing factors on health information seeking behaviors for Korean Americans.

Hypotheses and Research Questions

Social Support/Social Networks

According to Uchino (2004), when studying the “domain of social support”, it is important to assess both the structural and functional measures of support. As mentioned earlier, structural measures of support (social networks) are interconnection among ties (i.e., marital status, number of friends, attendance and participation in church or community organizations) while functional measures focus the importance of individual perceptions about the availability each support. Based on Uchino’s (2004) nested model of components of social relationships, social networks and perceived social support are not the two distinct concepts, but they are related as social networks give individuals access to social support. Thus, it is likely that social networks and perceived social support are positively correlated. Hence:

H1: The size of social networks and access to social support in social networks are positively correlated.

Social Support/Social Networks and Online Health Information Seeking Behaviors

Social networks and social support can have a significant influence on health by improving health-related behaviors and allowing for the condition of health resources. Social networks provide access to available support. A supportive social network is critical because it can expand the range of information available to an individual.

This explanation would suggest that perceived available support measures are important in combination with the person's larger social network. As we focus on how people share information with each other and work together in teams seeking answers to questions, social support and social network become a very concrete way to examine the communication patterns used to seek relevant health information. The extent to which individuals expand their social network has important consequences for health information acquisition, and there has been an explosion of interest in the relationships between social support in social networks and health in recent years (Christakis & Fowler, 2009).

Individuals high in access to social support from social networks appear to also have greater access to innovative health-relevant information and endorse healthier norms. When looking for health information, a majority of people prefer to explore more than one type of source and to consult multiple sources of information in order to find the best solution for their situations. When Case et al. (2004) examined the use of sources for genetics information, 63% of the respondents identified at least two sources, and 34% of them identified three. Although people considered health professionals as the primary source of information to access, heavy

use of the Internet before (27%) and after (34%) visiting medical doctors was reported, and for other health questions for which they feel there is no need to consult with doctors, they turned to the Internet for searching (Fox & Rainie, 2000). Consistent with this finding, although immigrants with high in access to social support from their social networks already obtain enough health information, they may also go to the Internet to find more information to check whether the information from social networks is reliable. Thus, it is likely that individuals with high available social support and large size of social networks have received more health related information which may be associated with their health information seeking information activities on the Internet. Thus, the following hypotheses are proposed:

H2: Korean Americans with higher accessibility of social support from social networks (i.e., family, friends, and significant of others) are more likely to look for large scope of health information on the Internet.

H3: The size of the social network will be positively associated with the scope of health information searches on the Internet.

Social Networks as a Source of Health Information

Social network theory, particularly its contentions about strong ties and weak ties, is a good framework for examining the influences of social networks on access to health information for immigrants. When immigrants enter a new cultural environment it is very important for them to build close ties with friends and “compatible others” in the host culture (Adelman, 1988). According to Kim (1988), new sets of relationships can help facilitate new comers’ adaptation to the new cultural environment. The adaptive functions of relational networks, such as

informational support, provide new comers as various types of knowledge and health information about the host culture.

Since non-English speaking Korean immigrants are likely to experience difficulty accessing relevant health information, social networks from other Korean friends, family, and Korean ethnic organizations social networks can function as a source of support and information exchange for Korean immigrants. For instance, few studies have found that social networks are significant information sources for vulnerable populations (Gollop, 1997; Liu, Liang, & Gu, 1995). Information that facilitates coping with health problems is one form of social support that may be exchanged among members of a support network. Thus, social support in social networks plays an important role in changing people's health information seeking behavior (Mullen et al., 1987). A supportive social network is critical because it can expand the range of information available to an individual. As we focus on how people share information with each other and work together in teams seeking answers to questions, social support and social network become a very concrete way to examine the communication patterns used to seek relevant health information. However, it has yet to be tested the source of health information in social networks ties. It is unclear whether individuals receive health information from strong ties (family, close friends) or weak ties (church or organizations) as well as the topics of health information. Moreover, we do not yet fully understand the importance of social networks as a source of health information. Thus, following research questions are advanced:

RQ1: What are the sources of health information in social networks for Korean Americans?

RQ2: What health-related topics do Korean Americans communicate about in their social networks?

RQ3: Why is social support from an individual's network important for accessing relevant health information?

Social support networks and Immigrants

Acculturation has often been examined to study immigrants' health-related outcomes (Lee, Sobal, & Frongillo, 2003). The first-generation of Korean immigrants were raised in a collectivistic culture, but they moved to a new culture where individualistic cultural values are more dominant. Immigrants' beliefs, norms, values, lifestyles, and behaviors are adapted, modified, and changed when they come into contact with another culture (Abraído-Lanza, Chao, & Flórez, 2005). This process is called acculturation. Each immigrant has a varying level of acculturation depending upon two primary factors: language proficiency and length of residence in the U.S (H. Shin, Song, Kim, & Probst, 2005).

Furthermore, social support has also been proposed as a possible mechanism with acculturation (Marmot & Syme, 1976; Rogler, 1994). In the process of acculturation, individuals need to receive information from various communication channels to adjust to the host society. Depending on the acculturation status, individuals tend to choose different media and information sources. For instance, newcomers lacking a broad social network may rely on family or friends more than do highly acculturated immigrants and native residents. Jeong's (2004) qualitative

study on Korean international students found that Korean international students tended to more heavily rely on fellow Koreans than U.S. mass media for acquiring everyday life information because of their language barrier and strong ethnic bonds. The presence of supportive family members, relatives and friends as well as one's church and one's personal sense of connectedness is shown to provide social support for immigrants in coping with external challenges in their acculturation process (Wierzbicki, 2004; L. Wong & Mock, 1997). Moreover, previous studies have indicated that the length of time in a host country can influence an individual's use of sources of social support for acculturation (Kim, 2001). It is possible that individuals are more likely to acculturate with the high access to social support in large social networks. In other words, when individuals have many resources from their social networks, they are more likely to acculturate to the host culture. Thus, the following hypothesis is advanced:

H4: The size of social network and access to social support will be associated with the acculturation for Korean Americans.

CHAPTER THREE: METHODOLOGY

This chapter discusses the research methodology used to answer the proposed research questions and hypotheses. First, the chapter describes the overall research design of the study. It offers a rationale for the research method, particularly for the use of surveys to collect data and provide a description of the intra method mixing that are utilized for the study. Then, details of the participants for the study, sampling method, and data collection procedures will be described. Also, the procedures taken to ensure research ethics and participant privacy are discussed. Second, this chapter provides details about the operationalization of key variables and the survey instruments. Finally, specific data analysis techniques used to answer research questions will be described.

Rationale for Research Method

The survey research method was used to collect data in this study for the three following reasons. First, since few studies have examined health information sources, information-seeking behaviors, and the information preferences of the Korean population related to social support networks, surveys allowed the researcher access to a large number of people and a diverse group of participants with limited time and cost compared to other methods, such as interviews and direct observations. Second, considering the nature of inquiries in the present study, surveys provide specific benefits to both participants and the researcher. For instance, to answer

questions about health information seeking experiences and their responses within individuals' social networks, participants may need some time to think.

Questionnaire-based surveys permit participants to recall past experiences at their own pace and describe the experience in detail. The use of questionnaires was also considered effective for reducing researcher effects. According to Frey, Botan, & Kreps, 2000, a researcher may obviously or subtly influence participants' responses due to their personal attribute, unintentional expectancy, and observational biases. Some participants would not feel comfortable to answer some demographic questions (e.g., income, education level, English fluency) and talk about health-related experiences and social networks in interpersonal settings. By conducting this survey with online delivered questionnaires, research effects were minimized.

Intra Method. This study employed an intra-method approach that combined closed-ended and open-ended questions in a questionnaire. Intra-method mixing refers to concurrent or sequential use of one single method that includes both qualitative and quantitative components (Johnson & Turner, 2003). The concurrent use of open- and closed-ended items on a single questionnaire is an example of intra-method mixing. Intra-method mixing has also been called "data triangulation" (e.g., Denzin, 2001). The questionnaire used in the study asked participants not only to answer closed-ended questions about health information seeking, social support, and social networks, but also to provide a fuller description of health information seeking experiences in their social networks and their reactions to these situations. With this approach, it was possible to obtain both numeric and textual data. In answering the two most important research questions intra-method utilizing both qualitative and

quantitative approaches were used to provide both specificity of response (with closed-ended questions) and depth of response (with open-ended questions).

For instance, while statistical analysis of numeric data obtained from answers to the set scales were used to understand relationships between variables and quantitative descriptions of data (e.g., percentage, frequency), qualitative analysis of textual data from the open-ended questions was used to provide in-depth understanding of participants' health information seeking experiences in one's social networks among the Korean population. According to Maxwell (2012), qualitative research has five intellectual benefits as it focuses on words rather than numbers: (1) understanding the meaning of participants' behaviors; (2) understanding the particular context of incidents; (3) identifying unanticipated phenomena and influences; (4) understanding the process in which events and actions take place; and (5) developing causal explanation of actions. Likewise, qualitative analysis of texts about health information seeking experiences written by participants was utilized very usefully in this study to further understand the meaning, context, and process of their experiences. Also, the qualitative analysis provided the important reasons of using social networks to retrieve health information and its contexts.

In addition, qualitative exploitation of textual data was necessary to identify new or other variables that were not explored in previous literature. Social network theory suggests an individual's social networks include strong ties and weak ties. However, additional behaviors could exist that cannot be defined according to these two typologies. Qualitative analysis enables a broader range of explanations for communication behaviors and outcomes. More explanations of the triangulation design of analyses will be offered later in the analysis plan section.

The Study population of interest

The sample of this study consists of young and middle-aged adult Korean immigrants in the U.S. Since foreign-born individuals have different characteristics of different health beliefs, values, and behaviors from the U.S-born population, this study only included only those who migrated to the United States (the first and 1.5 generation).

The survey was administered to Korean American men and women aged 18 to 49. Within the first generation and 1.5 generation, there are fundamental differences between younger immigrants and older immigrants based on different life experiences and exposure to health issues, and their perceptions of and attitudes toward health. Also, the older age immigrants who migrate later in life than those who migrate during childhood or young adulthood tend to strongly adhere to traditional Confucian ways of living that place great emphasis on filial piety, collectivism, and interdependence (Min, Moon, & Lubben, 2005). Furthermore, the majority of older Korean Americans face additional adjustment problems in the U.S, such as language and cultural barriers, lack of economic opportunities, social isolation, and unfamiliarity with social service systems (Koh & Bell, 1987; Moon & Pearl, 1991)..

As a result, the body of literature on Korean Americans highly have focused primarily on older populations (50 +), and there has been little learned about younger and middle-aged first-generation Korean Americans. Since the number of young and middle-aged Korean immigrants is rapidly increasing due to recent immigration, information on this immigrant population is necessary to fill in the gaps in the literature. Thus, the sample selected for this study included first generation Korean immigrants aged 18 to 49.

Sampling method

The convenience and snowball sampling method was used to recruit participants. The researcher searched Korean ethnic associations, Korean businesses and organizations, local Korean churches and referrals, which may have online channels (e.g., electronic mailing lists, web-pages, social network) to communicate with their members. By using public contact information of communication officers or executive members of the organizations, websites, a recruitment e-mail or an online inquiry asking participation in the survey as well as forwarding the recruitment message to their members was sent. Although it was hard to measure exactly how many organizations/individuals distributed the message to their members, the researcher received a positive response supporting the distribution or permitting uploading the message on their websites or social network profiles. Also, the researcher contacted friends to inform them of the purpose of the study, ask them first to participate in the study, and then ask their cooperation to help locate additional potential subjects. Participants were asked to click the online survey link to answer the survey

The two inclusion criteria listed in the consent letter for the survey was that participants needed to: (a) be between 18 and 49 years of age at the time of study; (b) be a first and 1.5 generation Korean American immigrant (e.g., foreign-born Korean immigrants refers to those individuals who have emigrated from Korea to the United States); and (c) have the ability to speak and write Korean or English. Participants who were born in the U.S. and aged 50 years or older were excluded.

Research Ethics and Participant Privacy

This research project and procedures were approved by the George Mason University Human Subject Review Board (HSRB) before data collection. The protocols included the following. First, on the consent form that was displayed on the first page of the survey, participants were informed of 1) the goal and procedures of the study; 2) risks and benefits from participating in the study; 3) confidentiality of the data in the study; 4) assurance that the participation is voluntary and participants' right to withdraw from the survey at any time; 5) contact information of the researchers and the HSRB office; and 6) the potential of being contacted in the future for a second data collection for in-depth interviews.

Second, to maintain confidentiality of the data, personal identifiers such as name, affiliation, address, contact, etc., were not asked on surveys. Data are available to only the researcher. An online survey website was used for creating the survey for the following reason. This website (SurveyMonkey) is known for utilizing some of the most advanced Internet security technologies. When a user accesses secured areas of the survey site, Secure Sockets Layer (SSL) technology protects user information using both server authentication and data encryption, ensuring that user data is safe, secure, and available only to authorized persons. SurveyMonkey requires a designer of a survey to create a unique user name and password that must be entered each time the designer logs on. Only the researcher knows the user name and password.

Instrumentation

To help participants have a clear understanding of the questionnaires' items, the questionnaires were provided to the participants in their native language. Korean language versions of the *Multidimensional Scale of Perceived Social Support (MSPSS)* and the *Lubben Social Network Scale* already exist and these scales are validated in different studies (Kim, Yang, Kwon, & Kim, 2011; Park, Nguyen, & Park, 2012). The health information seeking behavior questions were adopted from the Health Information National Trends Survey (HINTS). The original HINTS survey was carefully developed, refined, and validated to accurately represent the American public's access, understanding, preferences, and uses of cancer-related health information (Nelson et al., 2004).

The survey instrument contains questions assessing demographic characteristics of participants, health seeking behaviors, perceived social support, and social networks. The survey instrument was broken into five sections (see Appendix D). The first page of the survey explained the research purposes and provided information about the informed consent procedure. Then, the following sections of the survey asked participants to describe their demographic characteristics and their self-rated levels of health. Next, participants were asked to complete their social support and respondent's participation in social networks. Finally, participants were asked to think about their health information seeking experience in their social networks and describe their story

Key measures

Sources of Health Information. Respondents were asked the following questions to identify the source: “The most recent time you looked for information

about health or medical topics, where did you go first?’’ Responses were categorized in 7 groups: newspapers/magazines, family/friend/co-worker, health care provider, Internet, television, radio, and other.

Online Health Information Seeking Behavior. Online health information seeking behavior was assessed with the use of the Internet to look for health information. Respondents were asked the following question: “In the past 12 months, have you used the Internet to look for information about health or medical topics?” Responses were coded as yes, no.

Online Health Information Seeking Activities. Online health information seeking activities was measured with the health related behavior on the Internet. Respondents were asked the 10 questions: “In the past 12 months, have you done the following things while using the Internet: looked for health or medical information for yourself; looked for health or medical information for someone else; bought medicine or vitamins on-line; participated in an on-line support group for people with a similar health or medical issue; used e-mail or the Internet to communicate with a doctor or a doctor’s office; looked for information about physical activity or exercise; looked for information about diet or nutrition; looked for a healthcare provider; kept track of personal health information; such as care received; test results; or upcoming medical appointments; and looked for information on social networking sites. Each question was coded as yes (=1), no (=0). If respondents reported yes to seeking online health information activities, they received a score of one for that source; if not, they received a zero. The scores were summed to form an index of online health

information seeking activities ($M = 6.82$, $SD = 2.03$). Scores may range from 0 to 10; high scores indicated large scope of online health information searches.

The Multidimensional Scale of Perceived Social Support (MSPSS).

Perceived social support was measured with the MSPSS developed by Zimet, Dahlem, Zimet, & Farley (1988). It is composed of 12 items and measures social support from three sources: family, friends, and significant others. The responses are graded on a seven-point scale that ranges from 1 (“strongly disagree”) to 7 (“strongly agree”). A high score indicates that more social support is perceived by the participant (Zimet et al., 1988). For this proposed study, the 7 response categories are formed into a 5-point format for the consistency of the response set, ranging from (1) strongly disagree to (5) strongly agree. Zimet et al. (1988) have demonstrated strong internal reliability, factorial validity, construct validity and test–retest reliability ($\alpha = 0.85$). Kim et al. (2011) reported that this measure was reliable for Korean Americans (Cronbach’s $\alpha = .85$). Also, Korean version of MSPSS is validated on Park, Nguyen, and Park (2012)’s study (Cronbach’s $\alpha = .90$). Example items are “My family really tries to help me”, “There is a special person who is around when I am in need”, and “I can talk about my problems with my friends”. Cronbach’s coefficient alpha, a measure of internal reliability, was obtained for the scale as well as for each subscale in this study. For the Significant Other, Family, and Friends subscales, the values were .90, .83, and .88, respectively. The reliability for the total scale was .93. These values indicate good internal consistency for the scale as a whole and for the subscales. An index of perceived social support was created from the mean of the 12 items ($M = 4.29$, $SD = 0.71$)

Abbreviated Version of the Lubben Social Network Scale (Lsns-6). Social network was assessed by the abbreviated version of the Lubben Social Network Scale (LSNS-6; Lubben & Gironde, 2003). The 6 item LSNS-6 assesses the size of 3 different aspects of social network that are attributable to family ties and a parallel set attributable to friendship ties. The LSNS-6 assesses the size of the respondent's active social network (i.e., relatives or friends seen or heard from ≥ 1 times/month), perceived support network (i.e., relatives or friends who could be called on for help), and perceived confidant network (i.e., relatives or friends to whom the respondent could talk about private matters). Each LSNS-6 question is scored a 0 to 5 scale (0 = none, 1 = 1 person, 2 = 2 persons, 3 = 3 or 4 persons, 4 = 5 to 8 persons, and 5 = 9 or more persons). The LSNS-6 is scored by an equally weighted sum of responses to the 6 items. Scores may range from 0 to 30; high scores indicate large social networks. Prior research indicated that the LSNS-6 has good internal consistency ($\alpha = .83$) with a European (Germany, Switzerland, and the United Kingdom) sample (Lubben et al., 2006). Recently, Hong, Casado, & Harrington (2011) investigated the validation of Korean versions of the Lubben social network scales in Korean Americans. This study found acceptable validity for the LSNS-6 (Hong et al., 2011). The Cronbach α values from this study were .85 for the LSNS-6, .84 for the family subscale, and .80 for the friend subscale. The total score of these six items formed an index of social network ($M = 15.02$, $SD = 5.24$).

Sociodemographic Characteristics. Sociodemographic characteristics included age, sex, education, annual household income, marital status (married, not currently married), and employment status (currently employed, unemployed), self-reported health status (excellent or very good, good, fair or poor), health insurance

status (yes, no), number of visits to providers in the last 12 months, and, birthplace (the U.S., Korea, other), years in the U.S., proportion of life in the U.S, graduating from high school in the U.S (yes, no), English proficiency (very comfortable-not at all comfortable), and religious preference (Christian, Catholic, Buddhist, Non-religious). We used these “background characteristics” variables as factors for data analysis to see how they influence access to health information.

Data analysis

Constant Comparative Analysis

The textual data was analyzed with a constant comparative analysis that was obtained from the open-ended questions in the survey to answer each research question. According to Corbin and Strauss (2008), this type of analysis involves examining the data by breaking it down into smaller components to make comparisons within the data to understand how these components operate as a whole. This analytic process is guided by the data in an inductive manner, rather than by theory in a deductive manner.

In this case, these dimensions and properties reflect Korean Americans’ health information sources in their social networks, topics of health information, and the importance of social networks to obtain health information. This method describes four stages: 1) comparing incidents applicable to each category, 2) integrating categories and their properties, 3) delimiting the construction, and 4) writing the construction (Lincoln & Guba, 1985). For the first stage, the researcher studied the open-ended responses to determine trends in the data. Each text was read by the researcher completely without written notes in order to acquire familiarity with the

text and gain understanding from the information. After that, the text was re-read in order to initially listed, without placement into categories.

The investigator drew upon tacit knowledge in making these initial judgments for early category formulation. Colored markers were used to differentiate respondent themes so that the data would remain in context and provide visual indications of emerging categories. From this process, the researcher established categories across the data set. As the data analysis progressed, the researcher was able to combine and more specifically define categories based on overlying themes in the data. Once the categories emerged, fewer modifications were required as more data were processed. Delimiting the construction occurred as the data sources became saturated and the categories were integrated. Although various computer programs for constant comparative analysis are available, the researcher used traditional human coding in order to maximize the subjectivity (Conway, 2006).

Additionally, According to Morse et al. (2008), the terms reliability and validity should be used in qualitative inquiry. I included some verification strategies: data triangulation and checking and confirming the emergent themes. Due to the online nature of this project, specifically taking place on the Internet, limited my ability to do member checks with my participants. Member checks are important because they allow you to ensure that you are interpreting correctly what is being said and done by the participants and also permits you to recognize your own biases (Maxwell, 2012). However, I tried to reduce potential threats to validity. First, the use of closed questions with open ended questions brings a different perspective. This would not have automatically increased the validity of the research study, however, it would still be a significant tool to reduce the risk of chance associations and biases

(Maxwell, 2012) to reduce some of the validity concerns. Also, I used the check-coding from two Korean Americans who were bilingual and had different background because my transcriptions are in Korean. They read through responses from the open-ended questions and found the themes. If our interpretation was different, we discussed and finalized the coding. This allowed for additional validity and affirmation in my confidence that I was coding through a similar interpretative lens.

Statistical Analysis

Statistical analyses were performed using the SPSS 19.0 program. Descriptive statistics were used to describe the background characteristics of the study sample. Multiple analyses were performed using a multiple linear regression between background characteristics-related variables, perceived social support, social networks and online health information activities to answer hypotheses. Also, reliability test and correlation analysis, were performed. The rationale of each techniques and detailed setting is provided when the result of each method is presented.

Before conducting the main analysis, the missing data and distribution of the data were examined to employ appropriate data analysis techniques. As the survey informs participants to withdraw their participation anytime and allows them to skip any questions, some variables may have a large number of missing data. To deal with missing data, the pair wise deletion technique was used for most analyses.

Power Analysis

Adequately testing hypotheses required a participant pool large enough to assure sufficient statistical power. Statistical power indicates the level of probability that actual group differences can be detected in any particular study (Schumacker & Lomax, 2004). For power calculations research, recommended is a 15:1 ratio of

number of people to number of measured or observed variables (Mueller, 1997). Generally, a sample size of less than 100 is identified as small, 100 to 200 is identified as medium and above 200 is considered large (Kline, 1998). This study selects significant demographic information influencing social support networks and health information seeking behaviors, and in turn tests the theoretical models by including only the significant of such variables together with the main variables. A priori power analysis was conducted via G*Power 3.1. To achieve statistical significance ($\alpha=.05$), power ($>.80$) analysis, and effect size ($f=.15$), at least 167 participants are required to test the association between background characteristics-related variables and health information seeking behavior variables. Based on this power analysis this study set as a goal to recruit at least 200 participants.

CHAPTER 4: RESULTS

A total of 215 responses were collected from January 2013, to March 2013. Out of 215 responses 10 were not used due to not meeting inclusion criteria. A response from a participant who was over 50 years or older and was born in the U.S. was discarded. However, 3 participants who were born in the U.S. were included because while they were born in the U.S., they spent most of their lives in Korea. As a result, 205 responses were retained for analyses.

Among those, 135 participants described stories about health information seeking experiences in their social networks. Among these stories, 129 stories were included in constant comparative analyses after excluding erroneous or irrelevant data. Descriptions of demographic characteristics of those who provided this description will be offered at the end of the next section.

Demographics

A summary of characteristics for demographic variables is presented in Table 1. The mean age of the 207 participants is 33.1 years ($SD=6.9$). A majority of participants fell into the age group 30-40 ($n = 90$, 43.5%) or 18-29 ($n = 61$, 29.9%). The number of participants in the age group 40-50 ($n = 28$, 13.5%) was relatively small. In terms of gender, females (54.5%, $n=114$) were more represented in the sample than males (33.5%, $n= 70$). All respondents are Korean immigrants (first or 1.5 generation) and their native language is Korean.

Almost half of the participants (47.8%, n=99) currently live with their spouse or partner. Overall, the sample for this study has a very high level of education. Most of the study subjects have completed college or higher education (74.4%, n=154), while a small proportion (11.5%, n=43) completed high school (11.6%, n=24). In terms of annual income, 25.1% (n=52) of the respondents reported annual household income more than \$100,000 followed by the range of more than \$25,000 but less than \$50,000 ($n = 39$, 18.8%) and more than \$50,000 but less than \$75,000 ($n = 36$, 17.4%). Most participants are either full time worker (32.9%, n=68) or full time students (29%, n=60).

Acculturation, as measured by the length of residence in the U.S, English proficiency, and high school education in the U.S, was assessed. The length of residence in the U.S. averages 11.2 years ($SD=6.5$), with 44.0 % for one to ten years and 33.3% from 11to 20 years. English proficiency was categorized as very comfortable (24.2%), somewhat comfortable (31.9%) and a little/not at all comfortable (31.9%). Only 29.6% of respondent had high school education in the U.S. while 57.5% respondent had high school education in Korea. A majority of participants (51.2%, $n= 106$) came to the U.S. in 2000 or later.

When asked about any kind of health care coverage, 60.9 % of respondents had health insurance, prepaid plans such as HMOs, or government plans such as Medicare. 18.8% of respondents had not gone to a doctor, nurse or other health care provider to get care during the past 12 months. In a self-report of health status, 72.0% described having good or very good health status ($n = 149$). In addition, a majority of participants (51.2%, $n=106$) had not had a regular routine check-up. In terms of religion, the majority (59.4%, $n=123$) of the sample identified themselves as Christian,

while 9.2% (n=19) as Catholic, 6.3% (n=13) as Buddhist, and 11.1% (n=23) as non-religious.

In demographic variables, there were a large number of missing data.

Although approximately 10% of the participants did not complete the demographic information, this seems to be one of general characteristics of online surveys.

According to Lesser, Yang, and Newton (2011), a completion rate of online surveys is significantly lower than that of traditional mail surveys.

Table 1 Study Group Characteristics

Variable		N (%)
<u>Sociodemographic</u>		
Sex ^a	Male	68 (32.9)
	Female	114 (55.1)
Age Group ^b	18-29	61 (29.5)
	30-40	90 (43.5)
	40-49	26 (13.5)
Education (years) ^c	High school graduate	24 (11.6)
	College graduate	95 (45.9)
	Post graduate education	59(28.5)
Living arrangement ^d	Alone	28 (13.5)
	With spouse/partner	99 (47.8)
	With parents	35 (16.9)
	With friends/roommates	22(10.6)
	With children	41 (19.8)
Household Income (\$) ^e	<25,000	20 (9.7)
	25,000 to less than 75,000	75 (36.2)
	>75,000	77 (37.2)
Main Activity ^f	Homemaker ¹	28 (13.5)
	Unemployed ²	22 (5.3)
	Full time student	60 (29.0)
	Full time worker	68 (32.9)
	Part time worker	10 (4.8)
Religion	Christian	123 (59.4)
	Catholic	19 (9.2)
	Buddhist	13 (6.3)
	Non-religious	24 (11.1)
<u>Acculturation</u>		
Length in US (years) ^g	1-10	91 (44.0)
	11-20	69 (33.3)
	>20	18 (8.7)
English Proficiency ^h	Very comfortable	50 (24.2)
	Somewhat comfortable	66 (31.9)
	Does not speak or a little or not at all comfortable	66 (31.9)
<u>Health Status</u>		
Self-reported health status ⁱ	Excellent	23 (11.1)
	Very good/Good	149(72.0)
	Poor	11 (5.3)
Health Insurance ^j	Yes	126(60.9)
	No	54(26.1)
Times visits to health care ^k	0	39(18.8)
	1-4	119(57.5)
	≥5	24(11.6)
Routine Checkup ^l	Yes	77 (51.2)
	No	106 (87.0)

Notes: a. Missing n=25; b. Missing n=28; c. Missing n=29; d. Missing n=24; e. Missing n=35; f. Missing n=30; g. Missing n=29; h. Missing n=25; i. Missing n=24; j. Missing n=27; k. Missing n=25; l. Missing n=24

Demographics of Participants Who Wrote a Health Information Seeking Experience

As previously noted, 129 participants provided a description about health information seeking experiences. In looking at some demographic characteristics of these people, mean of these respondents ($m = 33.2$, $SD = 7.7$) are about same as to the mean of the entire group $m = 33.1$ years, $SD = 6.9$). Females ($n = 86$, 64.7%) were more likely to offer descriptions than males ($n = 47$, 35.3%). Also, a majority of respondents were somewhat comfortable speaking and listening to English ($n = 53$, 40.2%) or little comfortable with English ($n = 27$, 20.5%). They were also highly educated people that a majority answered that they completed college ($n = 68$, 52.3%) or a Masters /a doctorate or/a professional degree ($n = 45$, 34.6%). In terms of annual income, 27.7% ($n = 36$) of the respondents reported annual household income more than \$100,000 followed by the range of more than \$50,000 but less than \$75,000 ($n = 31$, 23.8%)

Source of Health Information in Social Networks for Korean Americans

The first research question explored sources of health information in social networks for Korean Americans. The total 129 stories were divided into three categories that emerged from the constant comparative analysis: (1) friends, (2) church, and (3) family.

Friends. The first theme that emerged from the data is the importance of friends to look for and share health related information. Friends network was the theme mentioned the most frequently by participants in which 51 stories (37.7%) included words or incidents related to this theme. Korean Americans have feelings of

attachment with other Korean friends by providing emotional support and companionship. As a result, Korean immigrants tend to turn to friends when worried and questions about health issues and problems. As immigrants, Korean Americans have similar experiences with health information seeking behavior. For example, many participants reported that they share health information with friends who go through the same issues and problems.

This theme is also related to cultural backgrounds of Korean Americans. Some participants reported that they would rather talk about health issues and problems with friends instead of family members because these participants do not want their family members to worry about their health. In addition, participants described that they often obtained health information from friends who are health professionals, including doctors, nurses, and pharmacists. Representative responses included:

“I usually obtain a doctor or hospital information in D.C from my friends. My friends provided me some recommendations or reviews of Korean doctors and dentists. This information was very useful and helpful.”

“I have a group of friends and we have a monthly meeting to socialize and share information. The name of this group is called “Vienna Korean Moms”. We share a lot of information about our children’s health, regular checkups, cancer screening and so on. We also share our experiences and difficulties with health cares and services. Since we go through similar situation, I trust in health information from this group of friends.”

“Since I have turned 30 years old, my friends and I have begun to take care of our health and interest in health information. When we meet, the most common topic we talk about is somewhat related to health. We talk about the ways to improve our health and share information about different strategies.”

Church. The second theme that emerged from the data is the importance of

the Korean ethnic church network to look for and share health related information. 23 stories (22.0%) included incidents related to this theme. Many participants discussed how the church has been the most important social network in their life. For example, one participant described her experiences when she came to the U.S. for the first time as an immigrant. She discussed her struggles with the new cultural transition concerning reading health issues and problems.

“When I came to the U.S for the first time, I was rarely speak English and I did not know anything about this culture...One day....I was very sick, but I could not go to the hospital because I had no insurance and also I was very afraid to speak English with a doctor. I’d love to ask somebody but I had no family members in Virginia. Only people I can talked to was church people”

Accordingly, many participants tend to search more fervently for religious belief systems after immigrating to adjust to the new country’s lifestyle or simply to extend social networks. Also, many participants explained that in the Korean American community, Christian Korean churches are one of the most important social forces to meet those needs. The church serves as a well-established social networking hub and, therefore, many Korean immigrants tend to become involved in churches or church-affiliated organizations, converting from Buddhism to Christianity after immigrating to the U.S.

In addition, participants discussed how church has played a significant role to promote their healthy behaviors. For example, one participant spent the most time communicating with her church friends. When her church friends shared their stories about some types of healthy behaviors or when her church friends encouraged her to receive screening, she said she was more likely to do it. Particularly, she talked about her story about how she received Pap smear for the first time in the U.S. Her story is below:

“When I had a small group meeting in my church, one of my church friends said that her sister just found out that she had tumor in cervix and her sister never had Pap smear before. After my friend shared her sister story, she encouraged me to get Pap smear. After I migrated here, I have not had screening for a long time. When I went to OBGYN to get Pap smear, I found that I had a big ovarian cyst that may cause a problem. I had a surgery to remove it. I was so glad that my friend shared her stories and asked me to get screened.”

Family. The last theme regards family networks. Many participants discussed the importance of their family as a primary social network. Family social support and care plays a pivotal role in health and illness. Of the many functions served by families, social support is one of the most important ones. Social support from family members also affects physical health by encouraging and reinforcing preventive behaviors. So for example, one participant illustrated that she was more inclined to get a regular checkup at the doctor because her family members urged her to do it. Many participants explained that their spouses served as significant influences on their health behaviors. Additionally, some participants discussed the role of their children related to health issues. These responses indicated that immigrant families have a unique family structure between parents and children. Children often learn the official language faster than their parents due to the influence of schools and peers. So parents may rely on their children as mediators/translators in their dealings with social institutions. Here is an example story:

“I was diagnosed with stage 1 breast cancer last year. Now, I’m totally fine, but I regularly get mammogram every 6 months. If Korean doctors are unavailable, sometimes I meet an American doctor. Then, I asked my son to come with me and he translated what the doctor said. Um...sometimes I feel sorry, but I rely on my little son in dealing with my medical problems.”

Among Korean immigrants, relatives appear to be other important network members (Kim & Hurh, 1993). A Kim and Hurh (1993) study reported that most of

the 622 study respondents were helped by their relatives with their immigration and issues in the U.S. Most respondents had relatives in geographically accessible areas and contacted them once or more. Consistent with the previous study, participants also described that they get help and advice related to health issues from their relatives. A couple of examples among 26 relevant stories (19.0%) are:

“Many of my relatives and extended family live in Washing D.C. Metropolitan area. Although I only have lived in the U.S. less than 10 years, my relatives have lived here over 20-30 years. They gave me health related information a lot including where to go to get medical treatments, where to purchase organic foods, and so on. They’ve been helped me out a lot.”

“When I feel sick or pain, I always talk to my husband about my symptoms. Then, he will look up some information on the Internet. Also, we ask around other family members or relatives about health problems and issues.”

“American physicians do not have any idea to advise my Korean style diet, and they suggest me special diet menu which is absurd. I usually get health information from my mom and uncle. I’ve learned from my uncle that salted mackerel was effective in controlling high cholesterol, based on his experience.”

Topics of health information

The second research questions examined topics of health information in social networks. Topics of health information in individual’s health information seeking experiences appeared across 129 stories. A total of 5 themes emerged from the constant comparative analysis: (1) recommendation of hospitals or doctors, (2) preventive care, (3) diagnosis/specific disease, (4) diet/exercise, and (5) medication.

Recommendation of hospitals or doctors. The first theme refers to health information seeking behavior to find local hospitals or doctors. Korean Americans sought information about a hospital or a doctor in their family or friends networks. Especially, they looked for health information to find Korean hospitals or doctors

who are familiar with Asian medicine. “Can you recommend me some doctors or hospitals that I can go to?” Recommendation of hospitals or doctors was the most common emerged theme with approximately 32% of the stories that contained incidents related to this theme ($n = 44$). This theme is consistent with a previous study that 75% of Korean Americans prefer to visit Korean-speaking doctors (APIAHF, 2006; Han, Song, & Kim, 1996). Even those Korean Americans who may speak English at an intermediate level may not feel comfortable conversing with native English speaking health professionals.

This theme is related to language barriers, lack of access and unfamiliarity with health care system in the U.S. Immigrants who are not familiar with the local health care system have difficulties in knowing where to go in an emergency, how to use health insurance adequately, what kinds of services to expect from public and private health organizations, and where to find further information (Courtright, 2005). Participants also reported that they often share their health information seeking experience in the church network and get information about local doctors or hospital. Some stories written by participants are following:

“I usually share a doctor or hospital information in D.C in my church. When I was pregnant, I have no information about OBGYN doctors. Although my English is ok, I prefer to have a Korean woman OBGYN because I’m not familiar with some medical terminology” I got doctor’s information from my church friend. It was extremely helpful.”

“When I have a small group meeting at church, we share a lot of information where to go to get a health care. My friends recommend me an acupuncture clinic for my shoulder pain.”

“I often share health related information with my family at dinner. My parents also received information about doctors from friends. It is usually about “where is the hospital with low cost?”

Preventive Care. The second theme that emerged from the data is the preventive category including annual checkups or vaccines. Prevention was the second theme mentioned frequently by participants (14%). Many participants described that they share information about the place to get flu shots or vaccines and annual checkups with their health insurance with friends and family. They also illustrated that they looked for information in their social networks about free medical examinations and federal programs for citizens. Due to unfamiliarity with the U.S. health system, participants reported that they asked questions and shared information regarding regular checkups and vaccines. Interestingly, Korean Americans tend to seek health care only when they have severe symptoms (Han et al., 2007; Kim & Keefe, 2009; Kim & Menon, 2009). No symptoms are regarded as “having good health” or “having no disease” (Jo et al., 2009). When they share information and encourage one another to receive preventive care, it could have a great impact on Korean American’s health. Representative stories follow:

“After my friend shared her sister story, she encouraged me to get Pap smear. After I migrated here, I have not had screening for a long time. When I went to OBGYN to get Pap smear, I found that I had a big ovarian cyst that may cause a problem. I had a surgery to remove it. I was so glad that my friend shared her stories and asked me to get screened.”

“I usually share information about free screening test with my friends. Since I’m not insured, it is hard to get a routine checkup.”

“My husband and I get a flu shot in every season. We looked for information where we can get a flu shot with low cost with my friends.”

Diagnosis/Specific Disease. The third theme that emerged from the data refers to information regarding specific diseases and diagnosis. Many participants

reported that they shared information about specific symptoms and friends or family diagnosis with people who experienced similar situations. Participants described if their friends or family went through the same disease or symptoms, they were more likely to trust information from them. Also, they believed that information was helpful. A typical example involves getting advice or information from family or friends before consulting a doctor, and sharing information about cancer and diabetes. A couple of examples among 10 relevant stories (7.0%) are:

“When my wife was suffering from morning sickness during pregnancy, I don’t know what to do. I asked my friends at my church and my family who experienced similar things before. They gave me some valuable information that I can use for my wife. Since then, I gain a great amount of knowledge about pregnancy and we don’t need to go to hospital and saved money.”

“I especially share health related information with my parent’s in-law. Both of them have some health problems with high cholesterols and diabetes. I usually provided them information about nutrition and exercising information”

Diet/Exercise. The third theme that emerged from the data was related to diet and exercise. Participants reported that they shared diet and exercise information with family or friends. Examples involve a specific dietary supplement and food for a disease or symptom. Participants share some experiences regarding this theme:

“The health information I shared with my family is mostly about a dietary supplement. Recently, I had a routine checkup and a doctor said I’m obese. I try to work out every day eat healthy with organic food. My friends shared information where a specific dietary supplement could be purchased. ”

“My friends and I share information about Yoga. We exchange some effective ways to work out and different postures for Yoga.”

Medication. The last theme can be described as medication. Examples included recommendations about drugs without prescription, information about prescription drugs (e.g., side effects), and Asian herbal medicines. Representative stories from this theme follow:

“When I’m sick, I rather take Advil instead of seeing a doctor ” Last time I had a stomach, I asked my friends to recommend me some drugs I can take.”

“I believe that Asian herbal medicines are better for me than Western medicines. I often share information about Asian herbal medicines with my friend who is an oriental medicine doctor.”

The Importance of Social Networks

The third research question explored the reasons why social networks are important to access health information among Korean immigrants. The five themes emerged from the data to explain the importance of their social networks with health information: (1) Shared same experience, (2) Comfortable with language, (3) Physical/mental health, (4) Sense of belonging, and (5) Different health care system. A majority of participants expressed that they rely on their social relationships to exchange health information. Also, they explained that their social networks play an important role to promote the healthy behaviors.

Share same experience and information. The first theme refers to Korean Americans’ health information sharing experience. This theme was mentioned the most frequently by participants in which 57 stories (42.0%) included words or incidents related to this theme. A majority of participants reported that they share health information and symptoms with other immigrants’ family, friends, and ethnic associations. When asked the importance of their social networks related to health and seeking health information, many participants described that their social

networks play an important role in a way that they can share similar health issues and experience and get advice. This theme is associated with many unique characteristics of immigrants including language barriers, cultural backgrounds, new health systems, unfamiliar environments, and limited social networks/social support. As immigrants, participants have adaption problems when they migrated to the U.S and they need someone who has experienced similar situations. One of the advantages of having social networks among immigrants is that they can share similar experiences and situations. Many participants reported that they shared some difficulties in accessing health care or services and getting advice or help from their social network members. Also, participants described that health information from social networks was relatively helpful and useful. Representative responses follow:

“The social network is very important for immigrants because you can’t buy experience from anywhere. From sharing similar experience and health problems, we can find a way to deal with health issues.”

“When I seek health information, I first go to the Internet to find some information. However, I don’t know the information I found is reliable or not. Also, it is hard to find tailored health information for Korean Americans. Because we go through similar difficulties and issues as immigrants, I think the best way to obtain health information is to ask someone from your social networks.”

Comfortable with language. The second theme can be described as “no language barrier”. This theme was mentioned the most frequently by participants in which 31 stories (23.0%) included words or incidents related to this theme. Since participants are only first-generation immigrants, their social networks seem to be composed primarily of ethnic church members, friends, and family/relatives. None of these respondents identified a non-Korean as providing either emotional or tangible social support. One of the reasons for the importance of their social networks to

access health information is comfort with language. Communicating with other Korean immigrants removes language barriers by allowing them to obtain health information in their native language. In fact, according to a state-wide public survey of 1,200 mostly foreign-born residents of California, 36 of 100 Korean respondents stated that they had a problem understanding a medical situation at a doctor's office or clinic based on their difficulties speaking English and 60% reported that they didn't speak English well or at all (NCM, 2003).

Many participants explained that they have had some difficulties understanding a medical topic or health related information from American doctors or friends. It is not just due to language barrier but also different cultural backgrounds. Participants also described that they feel much more comfortable sharing health information and issues with other Korean immigrants. Participants described their experience as follows:

"I've lived in the U.S. for 20 years. Regardless of length of residence in the U.S., language and cultural barriers perpetuate health issues for first generation immigrants. Thus, I'd rather talked to Korean immigrants to obtain health information because it is easy to understand and I can get more accurate information."

"As a Korean immigrant, I am unfamiliar with the U.S. health system and insurance program. This makes me less cautious about my health. I was used to have an annual health checkup in Korea, but I don't think I have had a single checkup here since I've moved to the U.S. When I talked to my Korean friends, sometimes they encourage me to get screened and share some health information. As a result, now I am more likely to take care of my health. I think immigrant's social networks have a positive impact on our health."

"I am somewhat comfortable with speaking and listening English. However, sometimes I have a difficulty to understand medical terminologies. I prefer to seek health information from my social networks, especially other Korean immigrants because we can easily share and communicate any medical terminologies in Korean. This information is more effective."

Physical/Mental health. The second theme is related to the relationship

between physical/mental health and the social network for Korean Americans. 17% of respondents described stories about how their social networks can influence their physical or mental health (n=23). When participants shared and exchanged health information with their social network members, they were not only giving advice and information, but also offering encouragement and emotional support. Participants also reported that the role of social networks to obtain health information is far beyond merely sharing information. In fact, social network members can improve health-related behaviors and allow access to health resources. Social networks also provide access to available support. These functions of social support networks can influence immigrants' physical and mental health. This finding is consistent with previous studies that found that social support protects health by providing goods or services, giving financial assistance, offering encouragement, and reducing the stress response and subjective distress (Cohen & Wills, 1985; Cohen, 1998). Representative of participant's responses follow:

"I obtain health related information from my friends. When talk about health issues a lot for self and our family. Sometimes, my friends recommend me a good doctor or hospital I can go to or places to purchase some dietary supplements. My social network members encourage me to behave in healthier way."

"All my family members live in Korea and I moved here by myself to pursue education in the U.S. Since then, I've lived alone. Sometimes, I feel depression and isolation. My church friends help me a lot to deal with my mental health issues. They offer me a lot of advice and emotional support."

Sense of belonging. The fourth theme is related to immigrant's sense of belonging. In fact, Korean Americans are a group-oriented ethnic minority whose moral and social principles of appropriate behavior are shaped by collectivism and Confucianism (Oak & Martin, 2000). Since Korean Americans have similar cultural

values, beliefs, and norms from the native country, they feel more comfortable talking with other Korean Americans. As members of a minority group in the United States, Korean Americans feel a sense of belonging in their social networks. Many participants reported that they feel much more comfortable to approach and share health information with other Koreans. Also, participants described that health information from their social networks is reliable and accurate because they have similar ways of eating food, life styles, and health beliefs. Out of the 23 related stories (17%), representative experiences follow:

“The social network is important because as a Korean Americans we tend to trust and understand one another much more than we do with Americans. We have same social and cultural background which makes it easier to I obtain relevant health related information. Also, it is more reliable.”

“I feel much more comfortable talking with my Korean friend than my American friends, especially with health or medical topics. It is not just language ability, but something beyond it. I think it may be because we are Korean.”

“When I have some health issues, I usually ask my relatives or friends how they deal with similar situations. It is much more useful than going to the Internet.”

Different health care system in the U.S. The last theme refers to dissatisfaction with a different health care system in the U.S. from Korea. As previously described, the Korean health insurance program has achieved universal coverage for all citizens, most Koreans are unlikely to experience difficulties related to health insurance. However, participants described that they as Korean immigrants have experienced some levels of confusion and frustration with the U.S. health care system and had difficulties using or accessing health care services in the U.S. Although they have health insurance, health care costs are significantly high in the U.S. compared to Korea. Participants also described that sometimes

they go back to their native country to seek effective health care. Thus, participants reported that they often utilized their social networks from family, friends, and church to obtain health information related to the U.S. health system and insurance program. About 10 percent of stories contained relevant stories ($n = 15$). Example descriptions follow:

“I don’t know where to go to get some medical treatments and checkups because the U.S. health system is totally different from that of Korea. That’s why preventive care or health issues can be ignored for immigrants. I don’t see a doctor or go to hospital unless I feel really sick or my symptoms get severe. When I sick, most of time I ask my parents what to eat. Then, I feel better.”

“I obtain health information about benefits of my insurance program from my church friends. He had lived in the U.S. over 20 years and he knows the U.S. health system and program well. The information I got from him was very useful.”

“The U.S. health system has been changing a lot, but there is lack of information for Korean Americans. I wish we had some types of health information about the health system or insurance in Korean. Thus, it is very helpful to ask my other Korean friends and share some information.”

“I was very shocked that health care costs are extremely high. Even co-pay with my insurance program, expenses was still higher than one in Korea. My church friend recommended me to get treatment in Korea. I never thought about having a medical trip, but my total health care cost in Korea was cheaper than here in the U.S. even with my flight ticket. I went back to Korea last summer to get my knee surgery.”

Health Information Seeking Behavior

The survey data explored the general health information seeking behavior for Korean Americans. In assessing health information sources, the internet was the most common source of health information among 6 different sources. 68.1% ($n=141$) of respondents reported that they looked for information about health or medical topics on the Internet most recently, followed by family/friends (15.9%, $n=33$) and health care providers (12.1%, $n=25$). Also, when asked about use of the Internet to look for

health information in the past 12 months, 94.2% (n=195) of respondents said yes¹ they used the Internet to find health information. 94.2% of respondents (n=195) looked for information for themselves and 75.8% of respondents (n=170) looked for information for others. 75.8% of respondents (n=157) agreed to buying medicine or vitamins on the internet and 89.4% reported using the internet for information about diet and nutrition (n=185). 85.5% (n=177) looked for information about physical activity or exercise; 65.2% (n=135) looked for health care providers on the internet; 62.3% (n=129) used email or the internet to communicate with a doctor or a doctor's office; and 55.1% (n=114) looked for health information on social networking sites. On the other hand, only 21.7% (n=45) participated in an online support group for people with a similar health or medical issue. In terms of a specific Internet site to go to for health or medical information, most of the participants reported that they most frequently first visited Google or Naver (a popular search portal in South Korea) in searching for health information. Other web sites participants mentioned using were Yahoo, Wikipedia, and MissyUSA (the largest online community among Korean immigrants in the U.S).

The most trusted source of health information among respondents in this study was from a doctor or other health care professional (69.1% of respondents rated a lot of trust). The majority of respondents rated a lot of trust with health information from a government source (23.2%), a family member or friend (13.0%), the internet (13.5%), a newspaper or magazine (12.6%), and television (11.6%).

¹ The result showed that 94% of respondents have looked for health information on the Internet. Due to the skewed data, online health information seeking behavior on the Internet was removed in the analysis.

Relationship between Social Network and Social Support

Hypothesis 1 predicted a positive relationship between the size of social networks and access to social support in social networks. Table 2 shows means, standard deviations, and correlations of the variables. As shown in Table 3, access to social support in social networks was positively correlated with the size of social networks at a significant level, $p < .001$.

Results of the hierarchical multiple regression analyses using a social network index to predict social support are presented in Table 4. The overall model for predicting social networks and social support was significant, $F(4, 174) = 18.74$, $p < .001$, $adj.R^2 = .29$. As shown in Table 4, social network ($b = 0.60$, $p < .001$) was positively associated with social support and age ($b = -0.30$, $p < .001$) was negatively associated with social support. In other words, compared to individual with small size of social networks, those with large size of social networks tend to have high access to social support from family, friends, and significant others. Also, when individuals get older, they are less likely to have access to social support in social networks. Thus, the data were consistent with H1.

Table 2 Correlations, Means, and Standard Deviations of Variables.

	Social Support Family	Social Support Friends	Social Support Significant Other	Social Support Total	Social Network Family	Social Network Friends	Social Network Total
SS Family		.55**	.65**	.82**	.50**	.31**	.46**
SS Friends			.72**	.89**	.35**	.52**	.49**
SS Significant Other				.91	.43	.48**	.52**
SS Total					.48**	.51**	.56**
SN Family						.56**	.88**

SN friends								.89**
SN Total								
<i>M</i>	4.45	4.03	4.43	4.30	7.59	7.47	15.06	
<i>SD</i>	0.71	0.89	0.80	0.70	2.94	3.00	5.26	

** $p < .001$

Table 3 Hierarchal Multiple Regression Results for Social Support

Step 1	<i>B</i>	<i>SE</i>	β
Social Network	.07	.01	.56***
Step 2			
Social Network	.06	.01	.48***
Age	-.03	.01	-.26***
Female	-.06	.08	-.04
Length of residence in US	.01	.01	.04
Comfort with English	-.01	.05	-.01-

Note: $R^2 = .009$ for Step 1, $\Delta R^2 = .031$ for Step 2 ($p < .05$) * ($p < .001$)***

Online Health Information Seeking Behavior and Social Support

Hypothesis 2 predicted that Korean Americans with higher access to social support in social networks (i.e., family, friends, and significant of others) are more likely to look for large scope of health information on the Internet. To test the hypothesis, a multiple regression analysis was performed. Table 4 presents the hierarchical multiple regression analysis results. As shown in Table 4, among the first block, perceived social support was significant and a positive predictor of online health information seeking score, $\beta = .21$, $t = 2.81$, $p < .01$. Among the predictors in the second block, perceived social support ($\beta = .20$, $t = 2.52$, $p = .01$), gender ($\beta = .25$, $t = 3.38$, $p < .001$), and length of residence in the U.S ($\beta = .17$, $t = 1.20$, $p < .05$) were significant. That is, participants who were female, have higher perceived social

support, and have longer length of residence in the U.S were more likely to look for a variety of health information on online. Thus, H2 was consistent with the result.

Table 4 Hierarchal Multiple Regression Results for Predicting Online Health Information Seeking

	<i>B</i>	<i>SE</i>	β
Step 1			
Social Support	.61	.21	.21**
Step 2			
Social Support	.57	.22	.20**
Age	-.02	.03	-.07
Female	1.02	.30	.25***
Length of residence in US	.05	.03	.17*
Comfort with English	-.17	.16	-.09

Note: $R^2 = .044$ for Step 1, $\Delta R^2 = .096$ for Step 2 ($p < .05$) * ($p < .01$)** ($p < .001$)***

Online Health Information Seeking Activities and Social Network

Hypothesis 3 predicted that the size of social network will be positively associated with online health information seeking activities. To test the hypotheses, a multiple regression analysis was performed. Table 5 presents the hierarchical multiple regression analysis results. The size of social networks among Korean Americans was not found to be significant related to online health information seeking activities ($b = 0.04$, $p = .08$). Female ($b = 0.99$, $p < .001$) and length of residence ($b = 0.06$, $p < .05$) were positively associated with online health information seeking activities. In other words, Korean American females with longer residence in the U.S are more likely to look for health information on online. Thus, the data was not consistent with H3.

Table 5. Hierarchal Multiple Regression Results for Predicting Online Health Information Seeking

	<i>B</i>	<i>SE</i>	β
Step 1			
Social Network	.05	.03	.13
Step 2			

Social Network	.04	.03	.10
Age	-.04	.03	-.12
Female	.99	.31	.25***
Length of residence in US	.06	.03	.18*
Comfort with English	-.17	.16	-.09

Note: $R^2 = .018$ for Step 1, $\Delta R^2 = .10$ for Step 2 ($p < .05$) * ($p < .01$)** ($p < .001$)***

Acculturation and Social Support/Social Network

Hypothesis 4 predicted that the size of social network and access to social support will be associated with acculturation for Korean Americans. Results of the hierarchical multiple regression analyses using age, gender, length or residence in the U.S., and English proficiency to predict access to social support are presented in Table 6. The results showed that acculturation variables were not significant. As shown in Table 7, multiple regression results showed that length of residence in the U.S. and English proficiency were not significant. The result was not consistent with 4. However, an interesting finding was that age was also negatively associated with social support ($b = -0.04$, $p < .001$) and the size of social network ($b = -0.17$, $p < .05$). In other words, when people get older, access to social support and the size of social network decreased.

Table 6. Multiple Regression Results for Social Support

Acculturation	<i>B</i>	<i>SE</i>	β
Age	-.04	.01	-.37***
Gender	-.07	.10	-.05
Length of residence in US	-.01	.01	-.01
Comfort with English	-.05	.06	-.07

Note: *Adj. R*² = .14, $p < .001$ ***, $p < .01$ ** , $p < .05$ *

Table 7 Multiple Regression Results for Social Network

Acculturation	<i>B</i>	<i>SE</i>	β
Age	-.17	.07	-.21*
Gender	-.21	.81	-.02
Length of residence in US	-.05	.07	-.06
Comfort with English	-.72	.45	-.14

Note: *Adj. R*²=.07, *p*<.05 *

CHAPTER 5: DISCUSSION

Overview of Discussion

The primary focus of this study was to examine the use of social support in social networks to retrieve health information for Korean immigrants (first generation). Mixed methods utilizing both qualitative and quantitative approaches were used to provide both specificity of response (with closed-ended questions) and depth of response (with open-ended questions). The open-ended questions explored the importance of social support and social networks in health information seeking behavior for Korean Americans. The survey data expanded knowledge of relationship among social support, social network, and health information seeking behavior, in particular online health information seeking. The results from the qualitative data add to existing literature in health communication by demonstrating why social support and social networks are important for immigrants. These findings also extend current research on health information seeking behaviors and social support to the Korean immigrant population in the U.S. The results from the survey capture how the availability of social support and the size of social networks can influence health information seeking behaviors.

Following is an in-depth discussion of these results. This discussion begins with the significance of the findings in both approaches, specifically how these theoretically and practically expand and contribute to the health disparities for immigrants, strategies and recommendations to improve Korean American's health,

culturally relevant interventions, and health communication; possibilities for future research; and the study's limitations.

Significant Findings

Research question 1

Research question 1 explored health information seeking sources by Korean Americans in their social networks. Through constant comparative analyses of content written by Korean Americans, three themes of source of health information in social networks emerged from the data. These findings indicated that important sources of health information in social networks for Korean Americans included their friends, church, and family networks.

The source of health information in social networks

The data from Research Question 1 revealed that one of the important social networks to obtain health information for Korean Americans was friends. Social support from friends is distinct from support provided by other sources. Adams and Adams and Blieszner (1989) suggested that the voluntary nature of friendships distinguishes friendships from social relationships with relatives, neighbors, and family. A second distinguishing characteristic is that friendships are subject to fewer structural and normative constraints than other social relationships, allowing friends to become flexible and adjustable providers of support (Antonucci & Jackson, 1987).

These findings suggest that Korean Americans may feel most comfortable disclosing health related information or difficulties of accessing health information with their friends. It may be because Korean Americans have feelings of attachment with other Korean friends who provide them with emotional support and

companionship. As a result, Korean immigrants tend to turn to friends when worried and when they have questions about health issues and problems.

Also, friends provide referents for evaluating one's own health. Thus, the availability of friends may influence the promotion of healthy behaviors.

Furthermore, as immigrants, Korean Americans have similar experiences with health information seeking behaviors. For example, many participants reported that they share health information with friends who go through similar issues and problems.

One commonly reported reason for seeking health information from friends is the ability to get advice and relevant information from them. For example, "which hospital is better for me?" "which doctor is good at this disease." This is consistent with a previous study that suggested that the most common sources of information are friends (Wong, Yoo, & Stewart, 2006).

These finding is also related to the cultural backgrounds of Korean Americans. Some participants reported that they would rather talk to friends about health issues and problems instead of with family members because they do not want their family members to worry about their health. Another possible explanation is that friendship may be increasingly important to the Korean immigrants since other options for social support are limited.

Another important source of health information in social networks was the church. Many Koreans are widely recognized to rely on religious belief systems after immigrating to the United States, which might be part of their efforts to adjust to the new country's lifestyle or simply an attempt to extend social networks. In particular, the Korean community in the United States tends to be very church centered (Research Team of the Public Health Informatics Research Laboratory, 2005). For

instance, over 70% of Korean Americans in the U.S. attend churches on a regular basis, while only 14-30% Koreans residing in Korea do so (Min & Kim, 2005). This trend also was illustrated in this study, with 22% of participants reporting Christianity as an important social network and 59.4%.of participants reported being Christian.

In the Korean American community, Christian Korean churches serve as well-established social networking hubs and, therefore many Korean immigrants tend to become involved in churches or church-affiliated organizations, converting from Buddhism to Christianity after immigrating to the U.S. (Huh, 1998; Park & Bernstein, 2008; Shin, 2002). Most Korean Americans use churches as a venue for seeking useful information, meeting with diverse people, and ultimately adjusting in the new environment. Such activities may stem from their loss of intimate family systems, being immersed in an unfamiliar environment, the lack of English proficiency, and a need to have diverse support as well as their beliefs in God after immigrating to the new country. The finding shows how important it may be for Korean Americans to have connections with Korean churches where they can meet other Koreans and speak in Korean to exchange health information. For Koreans living in Korea, religious activities are one of the many available resources for extending social networks. However, for Korean Americans, going to church after immigration may be one of the primary ways to interact with other Koreans in the United States.

Some Korean immigrants affiliate with one or more ethnic associations such as alumni and occupational associations, but these associations are less effective than churches in terms of maintaining social interactions and friendship networks with Koreans (Min, 1993) . That is, Korean ethnic churches seem to assist immigrants in building and maintaining their new social networks. Huh and Kim

(1987) found that 45% of Korean immigrants in Chicago with one or more intimate Korean friends in the same city made those friends in an ethnic church.

In addition to helping build social networks, Korean churches also provide their church membership with various formal and informal services. Min (1993) found that "There are few formal social service agencies in the Korean American community that new immigrants can depend upon for assistance. The Korean ethnic church seems to be the only social institution that most immigrants turn to for useful information and services" (p. 1385). Min further states that the Korean church assists their members both on an individual basis as well as a group basis. Korean churches provide information and counseling on health care, children's health issues, personal problems, and so on. Also, Korean immigrants enjoy an intimate friendship network with other church members not only inside the church, but also outside of it.

In addition, research question 1 revealed that another potentially important source of health information was family. Family members serve as significant influences on the health behaviors of other family members. They provide informational, affective, and instrumental support, which stimulate the pursuit of healthy lifestyles and adherence to the preventive practice recommendations of physicians (Kahana et al, 1994). The finding also suggested that family plays an important role to retrieve health information for Korean immigrants. The literature on social support yields further evidence that family relationships affect psychological well-being and health behaviors by shaping one's social environment and lifestyle (Cohen, 2004; Lewis & Rook, 1999). The naturally occurring support from family members has been shown to increase healthy lifestyle behaviors through providing

information, role modeling, and social support (Weihs, Fisher, & Baird, 2002). Thus, family relationships can influence one's aspirations, self-efficacy beliefs, personal standards, emotional states and other self-regulatory influences, which, in turn, inform and alter subsequent behavior. For example, one participant illustrated that she was more inclined to get a regular checkup at the doctor because her family members urged her to do it. Many participants explained that their spouse served as a significant influence on the health behaviors.

Among Korean immigrants, relatives appear to be other important network members (Kim & Hurh, 1993). A Kim and Hurh (1993) study reported that most of the 622 study respondents were helped by their relatives with their immigration issues in the U.S. Most respondents had relatives in geographically accessible areas and contacted them once or more. Consistent with the previous study, the result of this study indicated that participants get help and advice related to health issues from their relatives. Interestingly, the result related to the family was somewhat unexpected because it was the least common social network in this study. The expectation was that the family network would be the most important and common social network for obtaining health information since Korean Americans are considered as collectivists and family oriented. However, friends and church networks were more common responses in this study. Perhaps, the possible reason of this result may be due to cultural norms. The results showed that participants preferred to share their symptoms or medical issues with friends. It may be because Korean Americans do not want their family members to worry about their illnesses.

Research Question 2

Topics of health information

The second research question explored the topics of health information in Korean American social networks. The second core theme found in the data concerned topics of health information. The five themes that emerged from the data were: (1) recommendation of hospitals or doctors, (2) preventive care, (3) diagnosis/specific disease, (4) diet/exercise, and (5) medication.

These findings revealed that Korean Americans looked for non-medical information (e.g. recommendations and reviews of hospitals/doctors) as well as medical topics from social network members. Indeed, some respondents in this study expressed a preference for doctors who speak Korean. The social networks provide an easy way to find such doctors particularly for novice immigrants with limited social networks in the U.S. Even those who did not explicitly seek doctors who spoke Korean expressed frustration in communicating with doctors who did not speak the language and wanted translation. The consequence of poor communication between the enquirers and the doctors who did not speak Korean led to increased misunderstanding, which led to increased feelings of frustration.

In addition, getting a diagnosis, or learning about treatment options before or instead of consulting doctors from social networks may related to the high medical expenses in the U.S. even with health insurance and cultural beliefs and norms. The costs of visiting a doctor's office and receiving medical treatments are so high that Korean Americans may first share health information with family, friends, or others before incurring the expense of seeing a doctor. Consistent with previous studies based on one's cultural values, immigrants often bring the distinct characteristics of social networks from their homeland to the host country with minor modifications

(McMichael & Manderson, 2004). Also, oriental or traditional medicine is often the first choice in terms of treatment option for many health problems for Korean Americans (Kim et al, 2002). Thus, it may be possible that Korean Americans share information about treatment options and diagnosis/symptoms.

Another traditional health belief is related to the conception of food as a medicine. As the Korean notion of “food is medicine” indicates, Koreans stress the importance of eating healthful food to prevent and treat an illness (Koh, 2003). An empirical study reveals that more than 90% of the Koreans surveyed believed that food consumption habits were the most important factor determining a person’s health condition and that diseases could be cured by changing dietary habits (Lee, Ro, & Lee, 1996). The results also indicated that Korean Americans discuss diet and exercise information with their social network members.

In addition, a previous study also found that having no apparent symptoms is regarded as “having good health” or “having no disease” (Jo et al., 2009). One of the possible explanations why Korean Americans talk about medications with social network members may be related to this cultural belief. If they do not consider the symptom to be serious, they may rather take medicine for it instead of going to a doctor.

Research question 3

The third research question is related to the reasons why social networks are important channels for Korean immigrants to access health information. The five themes that emerged from the data to explain the importance of social networks for seeking health information included: (1) Shared same experience, (2) Comfortable

with language, (3) Physical/mental health, (4) Sense of belonging, and (5) Different health care system.

Among Koreans, it is common to share information about the treatment of health problems with others. Members of the Korean community reveal to others the diseases from which they are suffering, which is at contrast with the Japanese culture, where they typically withhold such information. Japanese have a fear of speaking out loud about disease or sharing the news with others, whereas Koreans have a saying to “spread word of the disease.” Koreans, traditionally have relied on social networks or serendipity to find treatments for diseases, which is similar to Latinos’ health information seeking in the U.S (Courtright, 2005). These findings suggest that the key to health information services for ethnic minorities is an understanding of their unique “culture, language, and needs” (Pourat, Lubben, Yu, & Wallace, 2000, p.131).

Additionally, these findings also revealed that one of the reasons for the importance of social networks for Korean immigrants was that there were “no language barriers.” Communicating with other Korean immigrants removes language barriers by allowing them to obtain health information in their native language. Although they may have health insurance, Korean Americans may not understand the provisions of their insurance, such as which types of health services are covered by the insurance, and as such, seldom take advantage of the health care services because of communication barriers. According to a state-wide public survey of 1,200 mostly foreign-born residents of California, 36 of 100 Korean respondents stated that they had a problem understanding a medical situation at a doctor’s office or clinic based on their difficulties speaking English and 60% reported that they didn’t speak English well or at all (NCM, 2003). In particular, language barriers impede clear

communication that is vital to ensuring the delivery of quality health care. If there were no language barriers, Korean Americans might feel more comfortable and could be more likely to share health information. This may suggest an explanation for why social networks are so important for Korean immigrants in order to retrieve health information. They can communicate more easily and effectively with members of their social networks than they can within the health care system.

When Korean members of the community cannot get satisfactory information within the health care system due to language barriers or cultural differences, they are likely to place more weight on other Koreans' experiences about health services. They are likely to believe it is safe and effective to use the same treatments that have been recommended to other Koreans who they know. Generally speaking, members of the Korean community share similar physical characteristics (e.g., body size/condition, skin type) and lifestyle. So they believe they can share medications and treatments too. In addition, the results from this study indicated that Korean Americans prefer to share health information with other Korean immigrants because it is simply more comfortable than talking with other people. Perhaps, it may be because Korean Americans have a sense of connection and belonging with their peers, since they go through similar life events and situations. This finding is consistent with previous studies with other ethnic and racial groups. According to Deering and Harris (1996), obtaining health information from strong ties is a common pattern among African-Americans, Native-Americans, Hispanics, and Asian-Americans.

Furthermore, the finding from the second research question revealed the theme of widespread lack of familiarity with the US health care system, offering insights into why Korean Americans were dissatisfied with the US health care system and

turned to social networks to get help instead of consulting a doctor. Korean immigrants carry with them expectations generated in their home country which can lead to unsatisfactory experiences with health care services in the U.S. This problem is compounded by language and financial barriers. This study identified several areas where social networks help to resolve these problems. First, the social network removes language barriers by allowing the enquirers to obtain health information in their native language as well as providing translation help before or after consulting a doctor. Second, the social network offers recommendations of hospitals and doctors from other Korean health consumers. Third, the social network supports self-diagnosis. However, a concern is raised about the quality and accuracy of information provided by non-professional health providers. An enquirer should keep in mind that there are few safeguards in place to ensure the accuracy of peer information in social networks and that the experience of one individual does not necessarily apply to another. Thus, many participants in this study reported that they preferred to obtain health information from friends and family who have a professional background such as doctors, nurses, and so on.

In addition, many Koreans tend to maintain their health by using alternative medicine such as herbal medicine, acupuncture, and nutrition. In many cases when they don't have any health insurance, they may use alternative medicine, which do not require any insurance coverage. Also, many Korean Americans still have struggles with using health insurance, even though they may have health insurance coverage. For example, one participant wanted to change to another hospital to receive better treatment, but limited health insurance coverage prohibited access to that hospital. With health care coverage, the medical expenses are still high. This finding suggests

that the quality of the health insurance Korean Americans have may be more important than whether or not they have health insurance. Thus, the government must lead the way in resolving issues related to the financial aspects of insurance coverage and establish more culturally appropriate health insurance systems for minorities.

Hypothesis 1

Hypothesis 1 examined the positive relationship between the access to social support and size of social networks. The results indicated that compared to individuals with small sized social networks, those with large sized social networks tend to have high access to social support from family, friends, and significant others. This finding implies that social networks give individuals access to social support resources based on Uchino's (2004) nested model of components of social relationships. Thus, functional and structural aspects of social support are not two distinct concepts. Thereby it is important to integrate the perceived social support and social networks.

Hypothesis 2 & 3

Hypothesis 2 examined that Korean Americans with higher access to social support in social networks (i.e., family, friends, and significant of others) are more likely to look for a large scope of health information on the Internet (e.g., buying medicine or vitamins on the internet and using the internet for information about diet and nutrition). The results indicated that access to social support, being female and length of residence were positively associated with online health information seeking activities. In other words, participants who were female, have higher perceived social support, and have longer length of residence in the U.S were more likely to look for a variety of health information on online.

These findings imply that Korean Americans who have more perceived social support from family, friends, and significant others may consider seeking health information on the Internet because they may think they need more health information from a variety of health information sources which in turn has a positive influence on different online health information seeking activities. These findings suggested empirical evidence for the importance of access to social support to seeking health information. Larger access to social support offers a mechanism through which Korean Americans can access resources and obtain health information. One explanation for this finding is that having larger social support in social networks provides resource diversification. Thus, individuals with larger social support in their social networks are more likely to seek additional health information and look for health information on the Internet to confirm information reliability.

Additionally, these findings also yield insights about how social support functions in social networks for Korean immigrants in the U.S. For example, given that access to social support is important to health information seeking; frequent contact with social network members may encourage individuals to look for more health related information. Thus, poor immigrant households may be able to protect the health of their families and children by relying on their social networks for social support and frequent contact. Nevertheless, contact with diverse network ties may inclusively improve health information seeking behaviors through the provision of positive social support.

The results also revealed that females are more likely to look for health information than males. Female participants described the specific website they use as MissyUSA, which is the largest online community among Korean immigrants in the

USA, and in which married Korean women living in the US share information about living in their adopted country. Female participants reported that the MissyUSA health forum is often used as a guide to find an adequate doctor, get a diagnosis, or learn about treatment options before or instead of consulting doctors. This finding supports their intention of information seeking for immediate decision-making, confirming the findings of Chuang and Yang (2010) that discussion boards or forums are usually used for posing questions and identifying others who have similar experiences, rather than maintaining social relationships. This finding suggests that weak ties in social networks perform an important role in health information seeking behaviors in addition to the use of strong ties from social relationships. This finding also highlights unique strategies for information seeking behaviors for female Korean Americans.

Moreover, hypothesis 3 suggested that the size of the social network will be positively associated with the scope of health information searches on the Internet. The results found that the size of social network among Korean Americans was not significantly related to use of online channels as health information sources. Thus, hypothesis 3 was not consistent with the data. These findings imply that although Korean Americans have large size of social networks, it will not lead them to search health information online. The most interesting finding from is that accessibility matters significantly when looking for health information on the Internet. However, the larger social networks should provide more access to social support. Thus, the relationship between social networks and online health information seeking behaviors needs further investigation.

This finding implies that Korean American females with longer residence time in the U.S. tend to look for more health information on the Internet regardless of the size of social networks. Consistent with the previous findings that women are more likely to seek health information online than are men (Fox & Fallows, 2003; Hern, Weitkamp, Hillard, Trigg, & Guard, 1998; Fox & Rainie, 2000), one possible explanation is that Korean American females are more active health seekers and are more likely to register strong positive beliefs regarding the benefits of online health searches than men.

Hypothesis 4

Hypothesis 4 related the size of social network and access to social support with acculturation for Korean Americans. However, the examination of length of residence in the United States and English language proficiency were not associated with the size of social networks and access to social support. Thus, hypothesis 4 was not consistent with the data.

Perhaps, new arrivals in a culture are more likely to look for support and find social networks to deal with adjustment. The data from open-ended questions revealed that Korean Americans relied heavily on Korean-specific health information, regardless of education levels. In the current study, participants also reported that they are affiliated with ethnic Korean organizations and look for information and receive support from Koreans. If individuals have high English language ability, they may not need to obtain health information from other Koreans. They may have greater access to others outside of the Korean community, increasing access to U.S. health information.

Interestingly, age was also negatively associated with social network and perceived social support among Korean immigrants. Likewise, many previous studies (Poyrazli, Kavanaugh, & Baker, 2004; Gellis, 2003), have also noted that older people have smaller social networks, have less closeness to network members, and have less social support compared to younger people among immigrants. That is, Korean Americans who are older may lose their family members or close friends due to deaths. Thus, the size of their social networks and perceived social support from Koreans may decrease with aging.

Theoretical Implications

The findings from this current study enhance the utility of SNT as a theory, as well as our understanding of health communication for immigrants. SNT was applied here for the first time in a health communication study of Korean immigrants' health information seeking behaviors. The results demonstrated how social networks function as important sources of health information for Korean Americans within the SNT framework. Hence, the utility of this theory was expanded to include health disparities and immigrant contexts.

In addition, the research findings demonstrate that SNT could extend into various other realms such as e-health communication, cross-cultural communication, and mass-media communication. With recent advances in technology (new media), SNT can bring new perspectives concerning the nature of interpersonal communication in these domains. The introduction of e-health suggests the promise of using new information technologies to improve health and the health care system. Since these new forms of communication have become major tools for exchanging

health-promoting information, any group that utilizes these communication resources may have the potential to prevent illness and promote health at a great rate. The increasing penetration of new communication technologies is an especially important factor for immigrants in terms of their social networks. The present findings provide support for the view that the use of both interpersonal social networks as strong ties and online ethnic social communities as weak ties can help immigrants in their cross-cultural transitions and in accessing culturally relevant health information. Online social networks may be loosely connected, but with a variety of experiences and exposure, they can provide access to more distant resources that can help immigrants adjust to daily life in a new culture. From this perspective, SNT can provide important insights into the links between cross-cultural adaptation and social support.

At the same time, the findings of this study also suggest that SNT can extend to the use of computer-mediated communication (CMC). Social network theory is a good framework for describing human relationships developed in a face-to-face contexts as well as through electronic channels (Birnie & Horvath, 2002). It is particularly relevant to the examination of how the Internet helps maintain old ties and establish new ties. Similar to other interactive media (e.g., telephone), the Internet supports social networks by expanding the means and opportunities for interaction, allowing connection across time and space. In addition, it extends individuals' social networks by allowing them to be involved in various online communities and to communicate with others about their shared interests and concerns.

Unlike traditional communities, virtual communities do not depend on physical closeness. These communities are “‘gathering points for people with common interests, beliefs, and ideas and are supported by a variety of CMC genres”

(Barnes, 2003, p. 227). Some characteristics of online communities, such as anonymity and selective self-presentation, make these social groups a welcome alternative to traditional support networks within the face-to-face environment (Turner, Grube, & Meyers, 2001; Walther & Boyd, 2002). Studies about online social groups have consistently found that these online communities tend to be interpersonally supportive (Barym, 2005). For instance, Bakardjieva (2003) found that people received various types of support from online group members, and some subjects in his study reported that through participating in online groups they found means to deal with life problems.

According to Turner and her colleagues (2001), online communities can provide “weak tie” support. Online communication foster the development of weak ties because discussions often focus on the topic most salient to the users (such as a particular health issue), as opposed to other shared cultural frameworks, such as geographical location, education, jobs, or socioeconomic status. In addition, compared to strong-tie groups of close personal relations, members of such groups tend to have a greater variety of backgrounds and experiences with the specific health issue of concern and thus “more expertise may be brought to bear on the problem” (p. 235). Empirical evidence has lent support for the benefits of online weak ties (e.g., Sharf, 1997; Turner et al., 2001).

Practical Implications

The results of this study offer implications for both health communication researchers and practitioners. This study is the first attempt to investigate racial/ethnic minorities’ use of both social networks and social support in the context

of health information seeking behaviors. While immigrants obtain much health information from social networks members, there has been little known about health information seeking and social networks for immigrants. In addition, while online health care resources have increased dramatically and consumers' use of the Internet for health care information is prevalent, research on health communication and health information seeking on the Internet is still very limited. The present study contributes to advancing our knowledge about this important topic.

Additionally, this study identified health disparities for young and middle-aged group of Korean immigrants. Although this group of immigrants was more likely to have a health insurance, higher income, better English proficiency, and higher education than older Korean immigrants, they still suffered from health disparities to access health information and health cares. While the number of young and middle-aged Korean immigrants is rapidly increasing due to recent immigration, information on this immigrant population is still limited. The present study suggested that more research on young and middle-aged group of Korean immigrants is needed to examine health disparities issues.

For health care practitioners and public policy makers, this study provides empirical evidence about the unique use of online health information and social network members as health information sources among Korean Americans. As this study's results suggest, both strong ties and weak ties in-group online communities can be effective channels for disseminating important health information targeting Korean Americans. The results of this study present useful suggestions for health care providers in offering culturally and linguistically appropriate care to Korean immigrants. Health care providers need to recognize Korean immigrants' expectations

of health care services, their unmet needs, and the reasons for their common complaints. Providers should also increase awareness about the US health care system among Korean immigrants and educate them properly to ultimately enhance their health care system literacy.

More importantly, this study identified several areas of information needs, which could satisfy a significant portion of Korean immigrants' health questions: a list of Korean hospitals and doctors, insurance information, and free medical examination and federal programs for people with low-incomes, and treatment options for certain diseases. This information is currently distributed through major health information resources such as print or online directories, insurance agents, and government Websites, as well as the online forum. Korean immigrants with little English proficiency and/or no Internet access may have difficulty accessing and understanding the information in those resources. More diverse and culturally appropriate resources should be utilized to deliver information in their native language to reach a broader population of Korean immigrants. Korean speaking professionals, such as physicians or medical librarians, should provide access to the information in a more effective and systematic way and through more diverse resources including ethnic media such as newspapers, TV, and brochures for new immigrants

For Korean Americans in particular, the accessibility of social support in social networks had a direct effect on health information seeking behaviors, which seems to suggest that service providers for immigrants should enact certain roles. First, service providers need to encourage Korean immigrants to extend their social network ties by becoming involved in diverse activities. In this study specifically, large network diversity meant individuals being connected to formal

as well as informal social ties. Thus, even though Korean American participants may have had good relationships with informal ties like family, friend, and relatives in the U.S., cultural and language barriers could have limited their relationships with formal ties like community services or social organizations. Therefore, service providers should take responsibility for disseminating diverse information about community resources, thereby encouraging them to meet diverse people and participate in diverse meetings like community events. Such use of professional skill and knowledge to provide effective supportive care services should ultimately decrease health disparities for Korean Americans.

Furthermore, this study also suggested that community-based participation within church communities is an effective way for Korean American immigrants to learn more about health issues and potentially initiate improvements in health care and health promotion services. It is well known that churches function as “social centers” for African American and Latin American populations (Peterson, Atwood, & Yates, 2002). The results in this study also found that Korean churches serve this function. Specifically, many Korean Americans are likely to use churches as a venue to retrieve and exchange health information (Research Team of the Public Health Informatics Research Laboratory, 2005). In addition, several studies found out that churches are the most culturally appropriate and important venues for Korean American populations. Nearly 65% of Koreans are affiliated with various churches (Han et al., 2007; Juon et al., 2003). Because churches play a significant role in Korean life, they are ideal venues for transmission of health messages. Churches also constitute environments that substantially reduce cultural, linguistic, and physiological barriers, facilitating discussion of and participation in

health activities.

Lastly, ethnic online communities and Korean websites seem to play a critical role for Korean American Internet users in need of health information, particularly for the low acculturated and uninsured Korean Americans who have limited accessible information resources. The Internet allows them to search for health information online in their native Korean language. This study observed a wide use of the Internet to gather health information among Korean Americans.

Limitations and directions for future study

This study had several limitations. First, the strategy of convenience sampling through a community organization or a church did not allow the researcher to reach those who were more isolated. Similarly, online surveys did not allow the researcher to reach those who had no internet access and to control geographic regions. It may be plausible that Korean immigrants living in Washington metro areas have different characteristics compared to those living in rural areas. Although the survey was anonymous and confidential, they may have been reluctant to disclose information, which cause many missing values for background information. It may be possible that respondents who answered the survey were more educated and affluent than those who did not answer the survey. Thus, the findings cannot be broadly generalized. Future studies should attempt more rigorous sampling approaches to insure examination of more representative samples.

Although the researcher used a data triangulation method with qualitative and quantitative approach, this study employed a self-administered survey, which may have introduced response bias and missing items. Future research should use a mixed

method using various research methods including in-depth interview and content analysis to capture better understanding of the relationships between social support and health information seeking behaviors for Korean Americans.

Another important implication is that in conducting future research studies on developing health interventions for minorities, it is important to use the subjects' native languages. Although Korean Americans speak moderate level of English, they still have language barriers of understanding medical related topics. Appropriate translation of health information is needed to inform people about health related information.

Despite these limitations, it is notable that this study attempted to understand the role of social support and networks on health information seeking behaviors of a large ethnic population who confronts distinct cultural challenges when looking for health information in the U.S. Identifying the cultural factors that ethnic minorities consider may provide practical insights to information professionals who engage in the venue of consumer health information services of how to better serve those individuals.

APPENDIX A: SURVEY INVITATION LETTER

Dear

We would like to invite you to participate in a research study that we are conducting at the Department of Communication at George Mason University. In this study, we are trying to understand the relationship between social support networks and health information seeking behaviors for Korean Americans. This study results will contribute to a doctoral dissertation conducted by Wonsun Kim, a Ph.D. candidate in the Department of Communication. Her work will be supervised by Gary Kreps, PhD., who is her dissertation advisor and a Professor in the Department of Communication.

If you identify yourself as Korean Americans, are older than 18, and who have emigrated from Korea to the United States (First or 1.5 generation). Please follow the link (<https://www.surveymonkey.com/s/KimDiss2013>) and answer the survey. Also, please forward the link to others. Thank you very much. Upon completion and receipt of the survey by the required date, you will be added to a pool of participants for a drawing of \$25.00 Amazon gift cards.

This is an important study to help improve Korean immigrants' health, and we will appreciate your consideration to participate in the study. However, your decision about whether to participate in the study is completely voluntary.

If you have any question, please contact Wonsun Kim and Dr. Gary Kreps in the Department of Communication at George Mason University in Fairfax, Virginia. They may be reached at 517-899-9121 (phone), wkim10@gmu.edu or gkreps@gmu.edu.

Thank you for your consideration.

Sincerely,

Wonsun Kim, Ph.D. Candidate

Gary ,L. Kreps, Ph.D., Dissertation Chair

GMU Department of Communication

APPENDIX B: THE INFORMED CONSENT FROM (SURVEY)

This research is being conducted to find out more information regarding the health behaviors of Korean Americans within their social networks. My hope is to gain a better understanding of the experiences of Korean Americans to help promote good health. If you agree to participate, you will be asked to complete a questionnaire (that should take about 15-20 minutes to complete) that asks questions related to this topic.

RISKS

The foreseeable risks or discomforts include the potential to cause you to experience emotional discomfort or emotional distress when the interview is taking place. If any questions or concerns do arise for you, you are encouraged to email Wonsun Kim at wkim10@gmu.edu.

BENEFITS

There are no benefits to you as a participant other than to further research findings about health promotion.

CONFIDENTIALITY

The data in this study will be confidential. Names, affiliations, addresses, or any other contact information will not be reported in this survey. All participant data will be locked in a file cabinet at the researcher's home, and only the researcher will have access to this information.

PARTICIPATION

Your participation is voluntary, and you may withdraw from the study at any time and for any reason. If you decide not to participate or if you withdraw from the study, there is no penalty or loss of benefits to which you are otherwise entitled. There are no costs to you or any other party.

CONTACT

This research is being conducted by Wonsun Kim and Dr. Gary Kreps in the Department of Communication at George Mason University in Fairfax, Virginia. They may be reached at 517-899-9121 (phone), wkim10@gmu.edu or gkreps@gmu.edu for questions or to report a research-related problem.

CONSENT

I have read this form and agree to participate in this study.

Name

Date of Signature

A. HEALTH INFORMATION SEEKING

1. The most recent time you looked for information about health or medical topics, where did you go first?

_____ (1) Family or friends/co-workers

(2) Health care provider

_____ (3) Internet

_____ (4) Newspapers or
magazines

_____ (5) Television

(6) Radio

_____ (7) Other (Specify)

2. Based on the results of your most recent search for information about health or medical topics, how much do you agree or disagree with each of the following statements?

	Strongly Disagree	Some What Disagree	Some What agree	Strongly agree
It took a lot of effort to get the information you needed	1	2	3	4
You felt frustrated during your search for the information	1	2	3	4
You were concerned about the quality of the information	1	2	3	4
The information you found was hard to understand	1	2	3	4

3. In the past 12 months, have you used the Internet to look for information about health or medical topics?

Yes () No ()

4. In the past 12 months, have you done the following things while using the Internet?

	Yes	No
Looked for health or medical information for yourself		
Looked for health or medical information for someone else		
Bought medicine or vitamins on-line		
Participated in an on-line support group for people with a similar health or medical issue		
Used e-mail or the Internet to communicate with a doctor or a doctor's office		
Looked for information about physical activity or exercise		
Looked for information about diet or nutrition		
Looked for a healthcare provider		
Visited a "social networking" site, such as "Facebook" or "MissUSA"		
Kept track of personal health information, such as care received, test results, or upcoming medical appointments		

5. Is there a specific Internet site you like to go to for health or medical information?

Yes () No ()

6. Specify which Internet site you especially like as a source of health or medical information including social networking sites (e.g., MissUsa, Naver)

7. In general, how much would you trust information about health or medical topics from....?

	Not at all	A little	Some	A lot
A doctor or other health care professional	1	2	3	4
Family or friends	1	2	3	4
Newspapers or Magazine	1	2	3	4
Radio	1	2	3	4

The internet	1	2	3	4
Television	1	2	3	4
Religious organizations and leaders	1	2	3	4
Government health agencies	1	2	3	4

B. SOCIAL SUPPORT AND SOCIAL NETWORK

1. We are interested in how you feel about the following statements. Read each statement carefully. Indicate how you feel about each statement.

	Strong Disagree	Some What Disagree	Neutral	Some What agree	Strong agree
There is a special person who is around when I am in need	1	2	3	4	5
There is a special person with whom I can share my joys and sorrows	1	2	3	4	5
My family really tries to help me	1	2	3	4	5
I get the emotional help and support I need from my family	1	2	3	4	5
I have a special person who is a real source of comfort to me	1	2	3	4	5
I have a special person who is a real source of comfort to me	1	2	3	4	5
My friends really try to help me	1	2	3	4	5
I can count on my friends when things go wrong	1	2	3	4	5
I can talk about my problems with my family	1	2	3	4	5
I have friends with whom I can share my joys and sorrows.	1	2	3	4	5
There is a special person in my life who cares about my feelings	1	2	3	4	5
My family is willing to help me make decisions.	1	2	3	4	5
I can talk about my problems with my friends	1	2	3	4	5

2. For the next six questions, I will ask you about the number of people, either family or friends, who you see or talk to and how often.

2a. First questions are about **FAMILY**. Considering the people to whom you are related either by birth or marriage.

	0	1	2	3 or 4	5 - 8	9+
How many relatives do you see or hear from at least once a month?	0	1	2	3	4	5
How many relatives do you feel at ease with that you can talk about private matters?	0	1	2	3	4	5
How many relatives do you feel close to such that you could call on them for help?	0	1	2	3	4	5

2a. First questions are about **FRIENDS**. Considering all of your friends including those who live in your neighborhood.

	0	1	2	3 or 4	5 - 8	9+
How many friends do you see or hear from at least once a month?	0	1	2	3	4	5
How many friends do you feel at ease with that you can talk about private matters?	0	1	2	3	4	5
How many friends do you feel close to such that you could call on them for help?	0	1	2	3	4	5

3. Briefly describe your health information seeking experience in your social network.
With who and about what? Do you trust this information? Was this information helpful?

4. As a Korean immigrant in the U.S., Why is social support in individual's network important to access relevant health information?

C. GENERAL INFORMATION

1. What is your gender?

_____ (1) Male _____ (1) Female

2. How old are you? _____

3. What is your **birthplace**?

_____ (1) The United States _____ (2) Korea _____ (3) Other

4. In what year did you come to live in the United States? _____

5. **How long have you lived in the United States?** _____ years

6. Did you graduate from high school in the U.S.?

_____ (1) Yes _____ (1) No

7. **With whom do you live: (check all that apply)**

- (1) Alone
- (2) Parents
- (3) Spouse/Partner
- (4) Friend(s) or Roommate(s)
- (5) Children under 21 years of age
- (6) Adult children (over age 21)
- (7) Other (please specify) _____

8. How comfortable do you feel speaking English?

_____ (1) English is native language _____ (2) Very Comfortable
_____ (3) Somewhat Comfortable _____ (4) A Little Comfortable
_____ (5) Not at all Comfortable

9. Your approximate **household income per year**

(include all income before tax) is:

_____ (1) Under \$15,000 _____ (2) \$15,001 - \$25,000
_____ (3) \$25,001 - \$50,000 _____ (4) \$50,001 - \$75,000
_____ (5) \$75,001 - \$100,000 _____ (6) more than \$100,000

10. Do you have **health insurance** now?

_____ (1) Yes

_____ (2) No

11. Are you currently **employed** either full or part-time?

_____ (1) Yes

_____ (2) No

12. What is **the highest level of schooling** you have completed in Korea or U.S?

_____ (1) 8th grade or less (1-8years)

_____ (2) Some high school (less than 12 years)

_____ (3) High school graduate (12 years)

_____ (4) Some college, vocational or training school

_____ (5) Associate Degree (A.D. or A.A. degree)

_____ (6) College graduate (B.A. or B.S. degree)

_____ (7) Post-graduate education

13. In general, would you say your health is...

_____ (1) Excellent

_____ (2) Very good

_____ (3) Good

_____ (4) Fair

_____ (5) Poor

14. During the past 12 months, not counting times you went to an emergency room, how many times did you go to a doctor, nurse or other health care provider to get care for yourself?

_____ (1) 1-2 times

_____ (2) 3-4 times

_____ (3) 5 times

_____ (4) More than 10 times

_____ (5) None

15. Have you regularly received **a routine check-up**? A routine checkup is a general physical exam, not an exam for a specific injury, illness, or condition

Yes ()

No ()

16. About how long has it been since you last visited a doctor for a routine checkup? _____

17. Do you have a religious preference? _____ (1) Yes _____ (2) No

17a. If Yes, what denomination? _____

REFERENCES

- Asian Pacific Islander American Health Forum (APIAHF). (2006). APIAHF, health brief: Koreans in the United States. Retrieved 2010, May 20, 2010, from http://www.apiahf.org/images/stories/Documents/publications_database/Koreans_in_the_United_States.pdf
- Abraído-Lanza, A. F., Chao, M. T., & Flórez, K. R. (2005). Do healthy behaviors decline with greater acculturation? Implications for the Latino mortality paradox. *Social science & medicine* (1982), 61(6), 1243–1255.
doi:10.1016/j.socscimed.2005.01.016
- Adams, R. G., & Blieszner, R. (1989). *Older adult friendship: structure and process*. Sage Publications.
- Adelman, M. B. (1988). Cross-cultural adjustment: A theoretical perspective on social support. *International Journal of Intercultural Relations*, 12(3), 183–204.
doi:10.1016/0147-1767(88)90015-6
- Antecol, H., & Bedard, K. (2006). Unhealthy assimilation: Why do immigrants converge to American health status levels? *Demography*, 43(2), 337–360.
doi:10.1353/dem.2006.0011

- Antonucci, T. C., & Jackson, J. S. (1987). Social support, interpersonal efficacy, and health: A life course perspective. In L. L. Carstensen & B. A. Edelstein (Eds.), *Handbook of clinical gerontology* (pp. 291–311). Elmsford, NY, US: Pergamon Press.
- Ashida, S., & Heaney, C. A. (2008). Differential Associations of Social Support and Social Connectedness With Structural Features of Social Networks and the Health Status of Older Adults. *Journal of Aging and Health*, 20(7), 872–893.
doi:10.1177/0898264308324626
- Ashing-Giwa, K. T., Kagawa-Singer, M., Padilla, G. V., Tejero, J. S., Hsiao, E., Chhabra, R., ... Tucker, M. B. (2004). The impact of cervical cancer and dysplasia: A qualitative, multiethnic study. *Psycho-Oncology*, 13(10), 709–728.
doi:10.1002/pon.785
- Bakardjieva, M. (2003). Virtual Togetherness: an Everyday-life Perspective. *Media, Culture & Society*, 25(3), 291–313. doi:10.1177/0163443703025003001
- Barnes, S. B. (2003). *Computer-mediated communication*. Allyn and Bacon.
- Barym, L. A. (2005). Interpersonal Life Online. In *Handbook of New Media: Student Edition* (pp. 35–54). SAGE.
- Bates, B. R., Romina, S., Ahmed, R., & Hopson, D. (2006). The effect of source credibility on consumers' perceptions of the quality of health information on the Internet. *Informatics for Health and Social Care*, 31(1), 45–52.
doi:10.1080/14639230600552601

- Berkman, L. F., Glass, T., Brissette, I., & Seeman, T. E. (2000). From social integration to health: Durkheim in the new millennium. *Social science & medicine*, 51(6), 843–857.
- Berkman, Lisa F., Leo-Summers, L., & Horwitz, R. I. (1992). Emotional Support and Survival after Myocardial Infarction A Prospective, Population-based Study of the Elderly. *Annals of Internal Medicine*, 117(12), 1003–1009. doi:10.7326/0003-4819-117-12-1003
- Berkman, Lisa F., & Syme, S. L. (1979). Social Networks, Host Resistance, and Mortality: A Nine-Year Follow-up Study of Alameda County Residents. *American Journal of Epidemiology*, 109(2), 186–204.
- Birnie, S. A., & Horvath, P. (2002). Psychological Predictors of Internet Social Communication. *Journal of Computer-Mediated Communication*, 7(4), 0–0. doi:10.1111/j.1083-6101.2002.tb00154.x
- Blanchard, C. G., Albrecht, T. L., Ruckdeschel, J. C., Grant, C. H., & Hemmick, R. M. (1995). The Role of Social Support in Adaptation to Cancer and to Survival. *Journal of Psychosocial Oncology*, 13(1-2), 75–95. doi:10.1300/J077V13N01_05
- Blazer, D. G. (1982). Social Support and Mortality in an Elderly Community Population. *American Journal of Epidemiology*, 115(5), 684–694.
- Brashers, D. E., Goldsmith, D. J., & Hsieh, E. (2002). Information Seeking and Avoiding in Health Contexts. *Human Communication Research*, 28(2), 258–71.

- Braveman, P. (2006). Health disparities and health equity: concepts and measurement. *Annual review of public health, 27*, 167–194.
doi:10.1146/annurev.publhealth.27.021405.102103
- Brodie, M., Flournoy, R. E., Altman, D. E., Blendon, R. J., Benson, J. M., & Rosenbaum, M. D. (2000). Health information, the Internet, and the digital divide. *Health Affairs, 19*(6), 255–265. doi:10.1377/hlthaff.19.6.255
- Bruhn, J. G., & Philips, B. U. (1984). Measuring social support: A synthesis of current approaches. *Journal of Behavioral Medicine, 7*(2), 151–169.
doi:10.1007/BF00845384
- Bureau, U. S. C. (2002). *U.S. Census 2000 %U*
<http://www.census.gov/prod/2002pubs/c2kprof00-us.pdf>.
- Cacioppo, J., & Berntson, G. (1992). Social psychological contributions to the decade of the brain: the doctrine of multilevel analysis. *American Psychologist, 47*(8), 1019–1028.
- Caplan, G. (1974). *Support systems and community mental health*. New York: Behavioral Publications.
- Case, D. O., Johnson, J. D., Andrews, J. E., Allard, S. L., & Kelly, K. M. (2004). From two-step flow to the Internet: The changing array of sources for genetics information seeking. *Journal of the American Society for Information Science and Technology, 55*(8), 660–669. doi:10.1002/asi.20000

- Cassel, J. (1974). Psychosocial Processes and “Stress”: Theoretical Formulation. *International Journal of Health Services*, 4(3), 471–482. doi:10.2190/WF7X-Y1L0-BFKH-9QU2
- Chen, C., & Hernon, P. (1982). *Information seeking: assessing and anticipating information needs*. New York: Neal-Schuman. Retrieved from http://scholar.google.com/scholar?q=Chen+%26+Hernon%2C+1982+information&btnG=&hl=en&as_sdt=0%2C47
- Chen, G. A., Lephuoc, P., Guzmán, M. R., Rude, S. S., & Dodd, B. G. (2006). Exploring Asian American racial identity. *Cultural Diversity & Ethnic Minority Psychology*, 12(3), 461–476 %U <http://mutex.gmu.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=mnh&AN=16881750&site=ehost-live>.
- Choi, G. (1997). Acculturative Stress, Social Support, and Depression in Korean American Families. *Journal of Family Social Work*, 2(1), 81–97. doi:10.1300/J039v02n01_06
- Choo, C. W., Detlor, B., & Turnbull, D. (2000). Working the Web: an empirical model of Web use. In *Proceedings of the 33rd Annual Hawaii International Conference on System Sciences, 2000* (p. 9 pp.). Presented at the Proceedings of the 33rd Annual Hawaii International Conference on System Sciences, 2000. doi:10.1109/HICSS.2000.926954

- Christakis, N. A., & Fowler, J. H. (2009). Social Network Visualization in Epidemiology. *Norsk epidemiologi = Norwegian journal of epidemiology*, 19(1), 5–16.
- Chuang, K. Y., & Yang, C. C. (2010). Helping you to help me: Exploring supportive interaction in online health community. *Proceedings of the American Society for Information Science and Technology*, 47(1), 1–10.
doi:10.1002/meet.14504701140
- Cobb, S. (1976). Presidential Address-1976. Social support as a moderator of life stress. *Psychosomatic Medicine*, 38(5), 300–314.
- Cohen, C., Teresi, J., & Blum, C. (1994). The role of caregiver social networks in Alzheimer's disease. *Social Science & Medicine*, 38(11), 1483–1490.
doi:10.1016/0277-9536(94)90110-4
- Cohen, S. (1998). Psychosocial models of the role of social support in the etiology of physical disease. *Department of Psychology*. Retrieved from <http://repository.cmu.edu/psychology/262>
- Cohen, S. (2004). Social Relationships and Health. *American Psychologist*, 59(8), 676–684. doi:10.1037/0003-066X.59.8.676
- Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin*, 98(2), 310–357. doi:10.1037/0033-2909.98.2.310
- Conway, M. T. (2006). The subjective precision of computers: A methodological comparison with human coding. *Journalism & Mass Communication Quarterly*, 83(1), 186–200.

- Corbin, J., & Strauss, A. (2008). *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory*. SAGE.
- Cotten, S. R. (2001). Implications of Internet Technology for Medical Sociology in the New Millennium. *Sociological Spectrum*, 21(3), 319–340.
doi:10.1080/027321701300202019
- Courtright, C. (n.d.). Health information-seeking among Latino newcomers: an exploratory study. text. Retrieved April 14, 2013, from
<http://informationr.net/ir/10-2/paper224.html>
- Cross, R., Rice, R. E., & Parker, A. (2001). Information seeking in social context: structural influences and receipt of information benefits. *IEEE Transactions on Systems, Man, and Cybernetics, Part C: Applications and Reviews*, 31(4), 438–448. doi:10.1109/5326.983927
- Deering, M. J., & Harris, J. (1996). Consumer health information demand and delivery: implications for libraries. *Bulletin of the Medical Library Association*, 84(2), 209–216.
- Denzin, N. K. (2001). *Interpretive Interactionism*. SAGE.
- Derosé, K. P., Bahney, B. W., Lurie, N., & Escarce, J. J. (2009). Review: Immigrants and Health Care Access, Quality, and Cost. *Medical Care Research and Review*, 66(4), 355–408. doi:10.1177/1077558708330425
- Dervin, B., Ellyson, S., Hawkes, G., Guagnano, G., & White, N. (1984). *Information needs of California*. Davis, CA: Institute of Governmental Affairs.

- Dunkel-Schetter, C., & Skokan, L. A. (1990). Determinants of Social Support Provision in Personal Relationships. *Journal of Social and Personal Relationships*, 7(4), 437–450. doi:10.1177/0265407590074002
- Fidel, R., & Green, M. (2004). The many faces of accessibility: engineers' perception of information sources. *Information Processing & Management*, 40(3), 563–581. doi:10.1016/S0306-4573(03)00003-7
- Flaxbart, D. (2001). Conversations with Chemists. *Science & Technology Libraries*, 21(3-4), 5–26. doi:10.1300/J122v21n03_02
- Fox, S., & Fallows, D. (2003). Internet health resources. *TPRC*.
- Fox, S., & Rainie, L. (2000). Pew Internet and American Life Project. The online health care revolution: How the web helps Americans to take better care of themselves.
- Fox, S., & Rainie, L. (2002). *Vital decisions: how Internet users decide what information to trust when they*.
- Freimuth, V. S., Stein, J. A., & Kean, T. J. (1989). *Searching for Health Information: The Cancer Information Service Model*. University of Pennsylvania Press.
- Frey, L. R., Botan, C. H., & Kreps, G. L. (2000). *Investigating Communication: An Introduction to Research Methods*. Allyn & Bacon.
- Gellis, Z. D. (2003). Kin and Nonkin Social Supports in a Community Sample of Vietnamese Immigrants. *Social Work*, 48(2), 248–258. doi:10.1093/sw/48.2.248
- Glass, T. A., de Leon, C. F. M., Seeman, T. E., & Berkman, L. F. (1997). Beyond single indicators of social networks: A LISREL analysis of social ties among the elderly.

Social Science & Medicine, 44(10), 1503–1517. doi:10.1016/S0277-9536(96)00270-5

Goldsmith, D. J. (2008). *Communicating Social Support* (1st ed.). Cambridge University Press.

Goldsmith, J. (2001). How will the internet change our health system? *EC Hein (Ed.), Nursing issues in the 21st century: Perspectives from the literature*, 295–308.

Gollop, C. J. (1997). Health information-seeking behavior and older African American women. *Bulletin of the Medical Library Association*, 85(2), 141–146.

Granovetter, M. (1973). The Strength of Weak Ties. *Chicago Journals*, 78(6), 1360–1380.

Guendelman, S., Schauffler, H., & Samuels, S. (2002). Differential access and utilization of health services by immigrant and native-born children in working poor families in California. *Journal of Health Care for the Poor & Underserved*, 13(1), 12–23.

Hallmark, J. (2001). Information-Seeking Behavior of Academic Meteorologists and the Role of Information Specialists. *Science & Technology Libraries*, 21(1-2), 53–64. doi:10.1300/J122v21n01_06

Han, E., Song, H., & Kim, S. (n.d.). Doctor Visits among Korean Americans in Los Angeles County. *Asian American And Pacific Islander Journal Of Health*, 4, 1–3.

Han, Eugene, Song, H., & Kim, S. H. (1996). Doctor Visits among Korean Americans in Los Angeles County. *Asian American and Pacific Islander journal of health*, 4(1-3), 146–148.

- Han, H.-R., Kang, J., Kim, K. B., Ryu, J. P., & Kim, M. T. (2007). Barriers to and Strategies for Recruiting Korean Americans for Community-Partnered Health Promotion Research. *Journal of Immigrant and Minority Health*, 9(2), 137–146. doi:10.1007/s10903-006-9022-x
- Harley, E. (2004). Nursing students benefit from practising on mannequins. *Nursing Times*, 100(27), 16–16.
- Hektor, A. (2003). Information activities on the Internet in everyday life. *The New Review of Information Behaviour Research*, 4(1), 127–138. doi:10.1080/14716310310001631480
- Helgeson, V. S., & Cohen, S. (1996). Social support and adjustment to cancer: Reconciling descriptive, correlational, and intervention research. *Health Psychology*, 15(2), 135–148. doi:10.1037/0278-6133.15.2.135
- Hern, M. J., Weitkamp, T., Hillard, P. J. A., Trigg, J., & Guard, R. (1998). Promoting Women's Health Via the World Wide Web. *Journal of Obstetric, Gynecologic, & Neonatal Nursing*, 27(6), 606–610. doi:10.1111/j.1552-6909.1998.tb02629.x
- Hesse, B. W., Nelson, D. E., Kreps, G. L., Croyle, R. T., Arora, N. K., Rimer, B. K., & Viswanath, K. (2005). Trust and sources of health information: the impact of the Internet and its implications for health care providers: findings from the first Health Information National Trends Survey. *Archives Of Internal Medicine*, 165(22), 2618–2624 %U

<http://search.ebscohost.com/login.aspx?direct=true&db=mnh&AN=16344419&site=ehost-live>.

- Holahan, C. J., & Moos, R. H. (1981). Social support and psychological distress: A longitudinal analysis. *Journal of Abnormal Psychology, 90*(4), 365–370.
doi:10.1037/0021-843X.90.4.365
- Hong, M., Casado, B. L., & Harrington, D. (2011). Validation of Korean Versions of the Lubben Social Network Scales in Korean Americans. *Clinical Gerontologist, 34*(4), 319–334. doi:10.1080/07317115.2011.572534
- Hong, T. (2006). Contributing Factors to the Use of Health-Related Websites. *Journal of Health Communication, 11*(2), 149–165. doi:10.1080/10810730500526679
- House, J. S. (1981). *Work stress and social support*. Addison-Wesley Longman, Incorporated.
- House, J. S., & Kahn, R. (1985). Measures and concepts of social support. In *Social support and health*. Orlando, FL: Academic Press.
- Hudson, J. C., & Watts, E. (1996). Hispanic Preferences for Health Care Providers and Health Care Information. *Health Marketing Quarterly, 14*(1), 67–83.
doi:10.1300/J026v14n01_06
- Hurh, W. M. (1998). *The Korean Americans*. Greenwood Publishing Group.
- Israel, B., & Rounds, K. (1987). Social networks and social support: A synthesis for health educators. *Advances in Health Education and Promotion, 2*, 311–351.

- Jang, Y., & Chiriboga, D. A. (2010). Living in a Different World: Acculturative Stress Among Korean American Elders. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, 65B(1), 14–21.
doi:10.1093/geronb/gbp019
- Jang, Y., Kim, G., & Chiriboga, D. A. (2006). Health Perception and Depressive Symptoms Among Older Korean Americans. *Journal of Cross-Cultural Gerontology*, 21(3-4), 91–102. doi:10.1007/s10823-006-9026-y
- Jeong, W. (2004). Unbreakable ethnic bonds: information-seeking behavior of Korean graduate students in the United States. *Library & Information Science Research*, 26(3), 384–400. doi:10.1016/j.lisr.2004.04.001
- Jo, A. M., Maxwell, A. E., Rick, A. J., Cha, J., & Bastani, R. (2009). Why are Korean American physicians reluctant to recommended colorectal cancer screening to Korean American patients? Exploratory interview findings. *Journal of Immigrant and Minority Health*, 11(4), 302–309.
- Johnson, B., & Turner, L. (2003). Data Collection Strategies in Mixed Methods Research. In *Handbook of Mixed Methods in Social & Behavioral Research*. SAGE.
- Johnson, J. D., & Case, D. O. (2012). *Health Information Seeking*. Peter Lang Pub Incorporated.
- Johnson, J. H., & Sarason, I. G. (1979). *Moderator Variables in Life Stress Research*.
- Johnson, T. J., & Kaye, B. K. (2004). Wag the Blog: How Reliance on Traditional Media and the Internet Influence Credibility Perceptions of Weblogs Among Blog Users.

Journalism & Mass Communication Quarterly, 81(3), 622–642.

doi:10.1177/107769900408100310

Juon, H.-S., Seung-Lee, C., & Klassen, A. C. (2003). Predictors of regular Pap smears among Korean-American women. *Preventive Medicine*, 37(6 Pt 1), 585–592.

Kagawa-Singer, M., Wellisch, D. K., & Durvasula, R. (1997). Impact of Breast Cancer on Asian American and Anglo American Women. *Culture, Medicine and Psychiatry*, 21(4), 449–480. doi:10.1023/A:1005314602587

Kakai, H., Maskarinec, G., Shumay, D. M., Tatsumura, Y., & Tasaki, K. (2003). Ethnic differences in choices of health information by cancer patients using complementary and alternative medicine: an exploratory study with correspondence analysis. *Social Science & Medicine*, 56(4), 851–862.

Kari, J., & Savolainen, R. (2003). Towards a contextual model of information seeking on the Web. *The New Review of Information Behaviour Research*, 4(1), 155–175. doi:10.1080/14716310310001631507

Kim, J. A., Yang, S. J., Kwon, K. J., & Kim, J. H. (2011). Predictive factors of depression among Asian female marriage immigrants in Korea. *Nursing & Health Sciences*, 13(3), 275–281. doi:10.1111/j.1442-2018.2011.00615.x

Kim, J., & Menon, U. (2009). Pre- and postintervention differences in acculturation, knowledge, beliefs, and stages of readiness for mammograms among Korean American women. *Oncology Nursing Forum*, 36(2), E80–92. doi:10.1188/09.ONF.E80-E92

- Kim, K. C., & Hurh, W. M. (1993). Beyond assimilation and pluralism; syncretic sociocultural adaptation of Korean immigrants in the US. *Ethnic and Racial Studies*, 16(4), 696–713. doi:10.1080/01419870.1993.9993804
- Kim, M. J., Cho, H.-I., Cheon-Klessig, Y. S., Gerace, L. M., & Camilleri, D. D. (2002). Primary health care for Korean immigrants: sustaining a culturally sensitive model. *Public Health Nursing (Boston, Mass.)*, 19(3), 191–200 %U <http://search.ebscohost.com/login.aspx?direct=true&db=mnh&AN=11967105&site=ehost-live>.
- Kim, S. (2002, October 31). The Effects of Socioeconomic Status, Social Support, and Acculturation on the Mental and Physical Health among Korean American Older Adults in Chicago Metropolitan Area. Retrieved April 14, 2013, from <http://etd.lsu.edu/docs/available/etd-1029102-194713/>
- Kim, W., & Keefe, R. H. (2009). Examining Health-Related Factors Among an Ethnically Diverse Group of Asian-American Mental Health Clients. *Journal of Evidence-Based Social Work*, 6(1), 17–28. doi:10.1080/15433710802633288
- Kim, Y. Y. (1988). *Communication and Cross-cultural Adaptation: An Integrative Theory*. Multilingual Matters Limited.
- Kim, Y. Y. (2001). *Becoming Intercultural: An Integrative Theory of Communication and Cross-Cultural Adaptation*. SAGE.

- Kline, R. B. (1998). Software Review: Software Programs for Structural Equation Modeling: Amos, EQS, and LISREL. *Journal of Psychoeducational Assessment*, 16(4), 343–364. doi:10.1177/073428299801600407
- Koh, H. C. (2003). Cultural Perspectives on Korean American Cancer Control. *Korean and Korean-American studies bulletin*, 13(1/2), 16–39.
- Koh, J. Y., & Bell, W. G. (1987). Korean Elders in the United States: Intergenerational Relations and Living Arrangements. *The Gerontologist*, 27(1), 66–71.
doi:10.1093/geront/27.1.66
- Krause, N. (2004). Stressors Arising in Highly Valued Roles, Meaning in Life, and the Physical Health Status of Older Adults. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, 59(5), S287–S297.
doi:10.1093/geronb/59.5.S287
- Kreps, G. L. (2006). Communication and Racial Inequities in Health Care. *American Behavioral Scientist*, 49(6), 760–774.
- Kreps, G. L., & Sparks, L. (2008). Meeting the health literacy needs of immigrant populations. *Patient education and counseling*, 71(3), 328–332.
doi:10.1016/j.pec.2008.03.001
- Krikelas, J. (1983). Information-Seeking Behavior: Patterns and Concepts. *Drexel Library Quarterly*, 19, 5–20.
- Ku, L., & Matani, S. (2001). Left Out: Immigrants' Access To Health Care And Insurance. *Health Affairs*, 20(1), 247–256. doi:10.1377/hlthaff.20.1.247

- Laireiter, A., & Baumann, U. (1992). Network structures and support functions: Theoretical and empirical analyses. In *The Meaning and Measurement of Social Support* (Eds.). Hemisphere, New York. Retrieved from http://scholar.google.com/scholar?hl=en&as_sdt=0,47&q=Laireiter+%26+Baumann,+1992
- Lara, M. E., Leader, J., & Klein, D. N. (1997). The association between social support and course of depression: Is it confounded with personality? *Journal of Abnormal Psychology, 106*(3), 478–482. doi:10.1037/0021-843X.106.3.478
- Lee, S.-K., Sobal, J., & Frongillo, E. A. (2003). Comparison of Models of Acculturation The Case of Korean Americans. *Journal of Cross-Cultural Psychology, 34*(3), 282–296. doi:10.1177/0022022103034003003
- Lehto-Järnstedt, U.-S., Ojanen, M., & Kellokumpu-Lehtinen, P. (2004). Cancer-specific social support received by newly diagnosed cancer patients: validating the new Structural-Functional Social Support Scale (SFSS) measurement tool. *Supportive Care in Cancer, 12*(5), 326–337. doi:10.1007/s00520-004-0620-7
- Lesser, V. M., Yang, D. K., & Newton, L. D. (2011). Assessing Hunters' Opinions Based on a Mail and a Mixed-Mode Survey. *Human Dimensions of Wildlife, 16*(3), 164–173. doi:10.1080/10871209.2011.542554
- Lewis, M. A., & Rook, K. S. (1999). Social control in personal relationships: Impact on health behaviors and psychological distress. *Health Psychology, 18*(1), 63–71. doi:10.1037/0278-6133.18.1.63

- Lincoln, Y. S., & Guba, E. (1985). *Naturalistic Inquiry*. SAGE.
- Liu, X., Liang, J., & Gu, S. (1995). Flows of social support and health status among older persons in China. *Social Science & Medicine*, 41(8), 1175–1184.
doi:10.1016/0277-9536(94)00427-U
- Lorence, D., Park, H., & Fox, S. (2006). Racial disparities in health information access: resilience of the digital divide. *Journal of Medical Systems*, 30(4), 241–249.
- Lubben, J., & Gironde, M. (2003). Centrality of social ties to the health and well-being of older adults. In *Social Work and Health Care in an Aging Society: Education, Policy, Practice, and Research*. Springer Publishing Company.
- Ma, G. X. (1999). *The Culture of Health: Asian Communities in the United States*. ABC-CLIO.
- Marmot, M. G., & Syme, S. L. (1976). Acculturation and Coronary Heart Disease in Japanese-Americans. *American Journal of Epidemiology*, 104(3), 225–247.
- Marsden, P. V., & Campbell, K. E. (1984). Measuring Tie Strength. *Social Forces*, 63(2), 482–501. doi:10.1093/sf/63.2.482
- Matthews, A. K., Sellergren, S. A., Manfredi, C., & Williams, M. (2002). Factors Influencing Medical Information Seeking Among African American Cancer Patients. *Journal of Health Communication*, 7(3), 205–219.
doi:10.1080/10810730290088094
- Maxwell, J. (2012). *Qualitative Research Design: An Interactive Approach*. SAGE.

- McDonnell, D. D., Lee, H. J., Kim, Y. B., Kazinets, G., & Moskowitz, J. M. (2008). Cancer coverage in a mainstream and Korean American online newspaper: lessons for community intervention. *Patient Education & Counseling*, 71(3), 388–395.
- McLeod SD. (1998). The quality of medical information on the internet: A new public health concern. *Archives of Ophthalmology*, 116(12), 1663–1665.
doi:10.1001/archopht.116.12.1663
- McMichael, C., & Manderson, L. (2004). Somali Women and Well-Being: Social Networks and Social Capital among Immigrant Women in Australia. *Human Organization*, 63(1), 88–99.
- Min, J. W., Moon, A., & Lubben, J. E. (2005). Determinants of psychological distress over time among older Korean immigrants and Non-Hispanic White elders: Evidence from a two-wave panel study. *Aging & Mental Health*, 9(3), 210–222.
doi:10.1080/13607860500090011
- Min, P.G. (1993). The structure and social functions of Korean immigrant churches in the United States. *International Migration Review*, 26, 1370–1394.
- Min, Pyong Gap. (1993). Korean Immigrants in Los Angeles. In *Immigration and entrepreneurship: culture, capital, and ethnic networks* (pp. 185–204). Transaction Publishers.

- Min, Pyong Gap, & Kim, D. Y. (2005). Intergenerational Transmission of Religion and Culture: Korean Protestants in the U.S. *Sociology of Religion*, 66(3), 263–282.
doi:10.2307/4153099
- Moon, A. (1996). Predictors of morale among Korean immigrant elderly in the USA. *Journal of Cross-Cultural Gerontology*, 11(4), 351–367.
doi:10.1007/BF00115801
- Moon, J.-H., & Pearl, J. H. (1991). Alienation of Elderly Korean American Immigrants as Related to Place of Residence, Gender, Age, Years of Education, Time in the U.S., Living with or without Children, and Living with or without a Spouse. *The International Journal of Aging and Human Development*, 32(2), 115–124.
doi:10.2190/41M0-0QUC-ABUE-MDBG
- Morse, J. M., Barrett, M., Mayan, M., Olson, K., & Spiers, J. (2008). Verification Strategies for Establishing Reliability and Validity in Qualitative Research. *International Journal of Qualitative Methods*, 1(2), 13–22.
- Mullen, P. D., Hersey, J. C., & Iverson, D. C. (1987). Health behavior models compared. *Social Science & Medicine*, 24(11), 973–981. doi:10.1016/0277-9536(87)90291-7
- Nelson, D., Kreps, G., Hesse, B., Croyle, R., Willis, G., Arora, N., ... Alden, S. (2004). The Health Information National Trends Survey (HINTS): Development, Design, and Dissemination. *Journal of Health Communication*, 9(5), 443–460.
doi:10.1080/10810730490504233

- Nguyen, G. T., & Bellamy, S. L. (2006). Cancer information seeking preferences and experiences: disparities between Asian Americans and Whites in the Health Information National Trends Survey (HINTS). *Journal Of Health Communication, 11 Suppl 1*, 173–180 %U <http://mutex.gmu.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=mnh&AN=16641082&site=ehost-live>.
- Niederdeppe, J., Hornik, R. C., Kelly, B. J., Frosch, D. L., Romantan, A., Stevens, R. S., ... Schwartz, J. S. (2007). Examining the Dimensions of Cancer-Related Information Seeking and Scanning Behavior. *Health Communication, 22*(2), 153–167. doi:10.1080/10410230701454189
- O'Reilly, B. K. (1995). The Social Support Appraisals Scale: construct validation for psychiatric inpatients. *Journal of clinical psychology, 51*(1), 37–42.
- O'Reilly, P., & Emerson Thomas, H. (1989). Role of support networks in maintenance of improved cardiovascular health status. *Social Science & Medicine, 28*(3), 249–260. doi:10.1016/0277-9536(89)90268-2
- Oak, S., & Martin, V. (2000). American/Korean contrasts: Patterns and expectations in the US and Korea. *Hollym Intl.*
- Oh, K. M., Kreps, G. L., Jun, J., Chong, E., & Ramsey, L. (2012). Examining the health information-seeking behaviors of Korean Americans. *Journal of health communication, 17*(7), 779–801. doi:10.1080/10810730.2011.650830

- Orth-Gomér, K., Rosengren, A., & Wilhelmsen, L. (1993). Lack of social support and incidence of coronary heart disease in middle-aged Swedish men. *Psychosomatic Medicine*, 55(1), 37–43.
- Orth-Gomér, Kristina, & Johnson, J. V. (1987). Social network interaction and mortality: A six year follow-up study of a random sample of the swedish population. *Journal of Chronic Diseases*, 40(10), 949–957. doi:10.1016/0021-9681(87)90145-7
- Park, H., Nguyen, T., & Park, H. (2012). Validation of multidimensional scale of perceived social support in middle-aged Korean women with diabetes. *Asia Pacific Journal of Social Work and Development*, 22(3), 202–213. doi:10.1080/02185385.2012.691719
- Park, S.-Y., & Bernstein, K. S. (2008). Depression and Korean American Immigrants. *Archives of Psychiatric Nursing*, 22(1), 12–19. doi:10.1016/j.apnu.2007.06.011
- Patrick, K. (2000). Information technology and the future of preventive medicine: Potential, pitfalls, and policy. *American Journal of Preventive Medicine*, 19(2), 132–135.
- Patterson, W. (2000). *The Ilse: First-generation Korean Immigrants in Hawaii, 1903-1973*. University of Hawaii Press.
- Peterson, J., Atwood, J. R., & Yates, B. (2002). Key Elements for Church-Based Health Promotion Programs: Outcome-Based Literature Review. *Public Health Nursing*, 19(6), 401–411. doi:10.1046/j.1525-1446.2002.19602.x

- Phillips, L. R., & Crist, J. (2008). Social Relationships Among Family Caregivers A Cross-Cultural Comparison Between Mexican Americans and Non-Hispanic White Caregivers. *Journal of Transcultural Nursing*, 19(4), 326–337.
doi:10.1177/1043659608322499
- Pourat, N., Lubben, J., Yu, H., & Wallace, S. (2000). Perceptions of Health and Use of Ambulatory Care Differences between Korean and White Elderly. *Journal of Aging and Health*, 12(1), 112–134. doi:10.1177/089826430001200106
- Rees, C. E., & Bath, P. A. (2001). Information-seeking behaviors of women with breast cancer. *Oncology nursing forum*, 28(5), 899–907.
- Reeves, T., & Bennett, C. E. (2004). *We the people: Asians in the United States* (Vol. 17). US Department of Commerce, Economic and Statistics Administration, US Census Bureau. Retrieved from <http://census.gov/prod/2004pubs/censr-17.pdf>
- Rice, R. E., & Tarin, P. (1993). Staying Informed: Scientific Communication and Use of Information Sources within Disciplines. *Proceedings of the ASIS Annual Meeting*, 30, 160–64.
- Rieh, S. Y. (2004). On the Web at home: Information seeking and Web searching in the home environment. *Journal of the American Society for Information Science and Technology*, 55(8), 743–753. doi:10.1002/asi.20018
- Rimal, R. N., Flora, J. A., & Schooler, C. (1999). Achieving Improvements in Overall Health Orientation Effects of Campaign Exposure, Information Seeking, and

- Health Media Use. *Communication Research*, 26(3), 322–348.
doi:10.1177/009365099026003003
- Roberts, C. S., Cox, C. E., Shannon, V. J., & Wells, N. L. (1994). A Closer Look at Social Support as a Moderator of Stress in Breast Cancer. *Health & Social Work*, 19(3), 157–164. doi:10.1093/hsw/19.3.157
- Rogler, L. (1994). International migrations: A framework for directing research. *American Psychologist*, 49(8), 701–708.
- Ryu, H., Young, W., & Park, C. (2001). Korean American health insurance and health services utilization. *Research in Nursing & Health*, 24(6), 494–505.
- Schnoll, R. A., & Harlow, L. L. (2001). Using Disease-Related and Demographic Variables to Form Cancer-Distress Risk Groups. *Journal of Behavioral Medicine*, 24(1), 57–74. doi:10.1023/A:1005686404723
- Schumacker, R. E., & Lomax, R. G. (2004). *A Beginner's Guide to Structural Equation Modeling*. Psychology Press.
- Sharf, B. F. (1997). Communicating Breast Cancer On-Line: Support and Empowerment on the Internet. *Women & Health*, 26(1), 65–84. doi:10.1300/J013v26n01_05
- Shin, H., Song, H., Kim, J., & Probst, J. C. (2005). Insurance, Acculturation, and Health Service Utilization Among Korean-Americans. *Journal of Immigrant Health*, 7(2), 65–74. doi:10.1007/s10903-005-2638-4

- Shin, J. K. (2002). HELP-SEEKING BEHAVIORS BY KOREAN IMMIGRANTS FOR DEPRESSION. *Issues in Mental Health Nursing*, 23(5), 461–476.
doi:10.1080/01612840290052640
- Sillence, E., Briggs, P., Harris, P. R., & Fishwick, L. (2007). How do patients evaluate and make use of online health information? *Social Science & Medicine*, 64(9), 1853–1862. doi:10.1016/j.socscimed.2007.01.012
- Sohn, L. (2004). The Health and Health Status of Older Korean Americans at the 100-Year Anniversary of Korean Immigration. *Journal of Cross-Cultural Gerontology*, 19(3), 203–219. doi:10.1023/B:JCCG.00000034219.97686.69
- Sohng, K.-Y., Sohng, S., & Yeom, H.-A. (2002). Health-Promoting Behaviors of Elderly Korean Immigrants in the United States. *Public Health Nursing*, 19(4), 294–300. doi:10.1046/j.1525-1446.2002.19409.x
- Starker, J. (1986). Methodological and Conceptual Issues in Research on Social Support. *Psychiatric Services*, 37(5), 485–490.
- Sugisawa, H., Liang, J., & Liu, X. (1994). Social Networks, Social Support, and Mortality Among Older People in Japan. *Journal of Gerontology*, 49(1), S3–S13. doi:10.1093/geronj/49.1.S3
- Sung, C. L. (1999). Asian Patients' distrust of western medical care: one perspective. *The Mount Sinai journal of medicine, New York*, 66(4), 259–261.
- Thoits, P. A. (1995). Stress, Coping, and Social Support Processes: Where Are We? What Next? *Journal of Health and Social Behavior*, 35, 53. doi:10.2307/2626957

- Tilden, V. P. (1985). Issues of conceptualization and measurement of social support in the construction of nursing theory. *Research in Nursing & Health*, 8(2), 199–206. doi:10.1002/nur.4770080214
- Tomas, W., & Znaniecki, F. (1981). *The Polish peasant in Europe and America: A classic work in immigration history*. Urbana, IL: University of Illinois Press.
- Turner, J. W., Grube, J. A., & Meyers, J. (2001). Developing an optimal match within online communities: an exploration of CMC support communities and traditional support. *Journal of Communication*, 51(2), 231–251. doi:10.1111/j.1460-2466.2001.tb02879.x
- Turner, R. J. (1981). Social Support as a Contingency in Psychological Well-Being. *Journal of Health and Social Behavior*, 22(4), 357. doi:10.2307/2136677
- Uchino, B. N. (2004). *Social support and physical health: understanding the health consequences of relationships*. Yale University Press.
- Valle, R., Yamada, A.-M., & Barrio, C. (2004). Ethnic differences in social network help-seeking strategies among Latino and Euro-American dementia caregivers. *Aging & Mental Health*, 8(6), 535–543. doi:10.1080/13607860410001725045
- Vaux, A., & Harrison, D. (1985). Support network characteristics associated with support satisfaction and perceived support. *American Journal Of Community Psychology*, 13(3), 245–268.

- Vaux, Alan. (1987). Appraisals of social support: Love, respect, and involvement. *Journal of Community Psychology*, 15(4), 493–502. doi:10.1002/1520-6629(198710)15:4<493::AID-JCOP2290150407>3.0.CO;2-4
- Viel, H. (1985). Dimensions of social support: A conceptual framework for research. *Social Psychiatry*, 20(4), 156–162.
- Walther, J. B., & Boyd, S. (2002). Attraction to computer-mediated social support. *Communication technology and society: Audience adoption and uses*, 153188.
- Warner, D., & Procaccino, J. D. (2004). Toward wellness: Women seeking health information. *Journal of the American Society for Information Science and Technology*, 55(8), 709–730. doi:10.1002/asi.20016
- Wathen, C. N. (2006). Health information seeking in context: how women make decisions regarding hormone replacement therapy. *Journal Of Health Communication*, 11(5), 477–493.
- Weihs, K., Fisher, L., & Baird, M. (2002). Families, health, and behavior: A section of the commissioned report by the Committee on Health and Behavior: Research, Practice, and Policy Division of Neuroscience and Behavioral Health and Division of Health Promotion and Disease Prevention Institute of Medicine, National Academy of Sciences. *Families, Systems, & Health*, 20(1), 7–46. doi:10.1037/h0089481
- Wellman, B., & Wortley, S. (1990). Different strokes from different folks: Community ties and social support. *Chicago Journals*, 96(3), 558–588.

- White, L., & Cant, B. (2003). Social networks, social support, health and HIV-positive gay men. *Health & Social Care in the Community*, 11(4), 329–334.
doi:10.1046/j.1365-2524.2003.00431.x
- Wierzbicki, S. (2004). *Beyond the immigrant enclave: Network change and assimilation*. LFB Scholarly Publishing.
- Wong, L., & Mock, M. (1997). Asian American Young Adults. In *Working With Asian Americans: A Guide for Clinicians*. Guilford Press.
- Wong, S. T., Yoo, G. J., & Stewart, A. L. (2006). The Changing Meaning of Family Support Among Older Chinese and Korean Immigrants. *The Journals of Gerontology Series B: Psychological Sciences and Social Sciences*, 61(1), S4–S9.
- Wu, M. C., Kviz, F. J., & Miller, A. M. (2009). Identifying Individual and Contextual Barriers to Seeking Mental Health Services Among Korean American Immigrant Women. *Issues in Mental Health Nursing*, 30(2), 78–85.
doi:10.1080/01612840802595204
- Xu, Y. (Calvin), Tan, B. C. Y., & Yang, L. (2006). Who will you ask? An empirical study of interpersonal task information seeking. *Journal of the American Society for Information Science and Technology*, 57(12), 1666–1677.
doi:10.1002/asi.20339
- Ybarra, M., & Suman, M. (2008). Reasons, assessments and actions taken: sex and age differences in uses of Internet health information. *Health Education Research*, 23(3), 512–521. doi:10.1093/her/cyl062

- Zhou, M., & Kim, S. (2006). Community Forces, Social Capital, and Educational Achievement: The Case of Supplementary Education in the Chinese and Korean Immigrant Communities. *Harvard Educational Review*, 76(1), 1–29.
- Zimet, G. D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988). The Multidimensional Scale of Perceived Social Support. *Journal of Personality Assessment*, 52(1), 30–41. doi:10.1207/s15327752jpa5201_2

CURRICULUM VITAE

Wonsun Kim received her Bachelor of Arts from Seoul Women's University in South Korea in 2007. She attended the New Mexico State University in 2005 as an exchange student. She went on to receive her Master of Arts in Communication from the Michigan State University in 2010. She then received her Doctorate in Communication from George Mason University in 2013.