Korean Immigrant's Health and Healthcare Practices in Rural America: A Systematic Review

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Abstract

Purpose: A systematic review of the literature was conducted to determine Korean Immigrants' health and healthcare practices.

Method: A systematic review of relevant studies was conducted between 2005 and 2013 using CINAHL Complete and Science Direct within the EBSCOhost Discovery Service and the Cochran Library as outlined in the Preferred Reporting Items for Systematic Reviews and Meta-Analyses. Original research articles discussing the health and healthcare among Korean immigrants in the United States were reviewed. Key terms included Korean immigrants, rural, Texas, healthcare, research, and Koreans.

Findings: Using various combinations of the key terms, the search produced 243 potential relevant records with only 25 being eligible for review. No studies represented rural regions. Furthermore, only one study was conducted in Texas. Twenty-five records described the state of health and healthcare among Korean immigrants. Topics included socialization, healthcare utilization, cancer screening practices, a prevalence of depression, knowledge of hypertension and stroke, and level of physical activity.

Conclusions: Despite the review, Korean immigrant's health and healthcare are still largely unknown, especially when taking rurality into context. Health disparities are more likely to occur in rural medically underserved areas than in urban areas. The presence of such health disparities is even more probable among Korean immigrants. An increased knowledge of the

Korean culture is needed among healthcare practitioners to promote health and healthcare among these vulnerable populations.

Keywords: Korean, Texas, Rural, Health, Healthcare

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The United States is a multicultural nation with Asians being one of the fastest growing minority groups (Shive et al., 2007; Weir, Tseng, Yen, & Caballero, 2009). According to the 2010 U.S. Census Bureau (2012), over 14 million residents in the United States (US) are Asians, nearly 1.5 million of which are Koreans. Furthermore, with the continuing immigration of Asians, varying locales in the US are experiencing a population boom, especially among younger generations (Kandel, 2011). Rhoads (2012) reported that of the 50 states, TX had the greatest increase of immigrant Koreans. In addition, TX experienced a 22-fold increase in the number of Korean immigrants (KIs) from 1970 to 2009, most of whom reside in Dallas and Harris Counties. Many others reside in Bexar County and on military bases (Rhoads, 2012). The population growth of KIs necessitates a better understanding of KIs' health and healthcare.

Background and Significance

Federal initiatives continue to focus on decreasing health disparities among all ethnicities, including Asian Americans and Pacific Islanders (AAPI). Healthy People 2020 (U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion, n.d.) included 1,200 objectives in 42 topic areas. These areas of focus suggested that improving access to comprehensive, quality healthcare services, enabling patients to locate healthcare providers whom they trust, and promoting and providing health equity will diminish many of the

existing health disparities. Furthermore, the goal of the Texas Health and Human Services (THHS, 2010) was to "promote the health, responsibility, and self-sufficiency of individuals and families" (p. 3).

Despite these initiatives, quality health and healthcare among specific subgroups of AAPIs such as KIs are lacking (Han, Kang, Kim, Ryu, & Kim, 2007; Park & Grindel, 2007; Weir et al., 2009). Furthermore, KIs tend to seek social and psychological support as well as healthcare advice from other Koreans (Lee, Hann, Yang, & Fawcett, 2011; Lee, Lee, & Im, 2011; Yang & Yang, 2011) rather than from professional healthcare providers of Western medicine, potentially contributing to the existing health disparity (Sin, Fitzpatrick, & Lee, 2010). Additionally, KIs have traditionally defined their health based on quality of life (QOL) rather than on quantity of life. A life worth living was a direct function of being in harmony with one's immediate surroundings (Choe, Padilla, Chae, & Kim, 2001) whether at work, school, or home. Choe et al. (2001) also reported that factors such as helplessness and powerlessness affected QOL and KIs' willingness to seek healthcare. KIs viewed their health as "good" when symptom free and consequently did not seek screening and preventive healthcare (Han et al., 2007; Ihara, 2009; Yoo & Kim 2008). The general lack of health screening, preventive medicine, and health maintenance among KIs potentially increases the incidences of chronic illnesses (Frisbie, Cho, & Hummer, 2001; Jang, Kim, & Chiriboga, 2005; Ko et al., 2011). Therefore, the purpose of this analysis was to systematically review the evidence on the health and healthcare perceptions, behaviors, and practices among KIs.

Korean Immigrants in Rural TX

According to the Migration Policy Institute (MPI, n.d.) the majority of American KIs lived in CA (31%). Three other states had five to 10 percent of KIs (TX, NY, and VA). Furthermore,

the population of KIs in TX had increased dramatically since the liberalization of the US immigration law in 1965 (Rhoads, 2012). Consequently, Koreans constituted over one percent of the total population of foreign-born residents in Texas. According to ZipAtlas (2012), the majority of immigrants lived in urban areas; yet five of the top ten TX towns (Cresson, Coppell, Harker Heights, Campbellton, and Copperas Cove) with the highest percentage of KIs were located in rural TX. The percentage of KIs in these locales ranged from 1.11 to 2.17 percentage of the total population per town.

Rurality and Health Disparity

According to the Rural Policy Research Institute (RPRI, 2007) health panel, no universal definition for *rurality* exists. Furthermore, the definition for rurality defined by the intended outcomes varied. Consequently, multiple definitions for rurality produced some degree of vagueness and ambiguity in relevant research (Vanderboom & Madigan, 2007). For the purpose of this paper, *rurality* is defined as, "all population, housing, and territory [that is] not included within an urban area" (U.S. Census Bureau, 2010, para. 3) and has a population of fewer than 50,000 people (U.S. Census Bureau: American FactFinder2, 2010).

Optimal healthcare for people living in rural areas can be difficult to obtain because of significant barriers (Brems, Johnson, Warner, & Roberts, 2006) such as sociocultural and structural factors (Graves, 2008). Specific examples included cultural beliefs, language difficulties, financial constraints, and minimal availability of healthcare resources (Graves, 2008). Additionally, rural healthcare providers faced challenges in delivering appropriate healthcare. Such challenges included residents' unwillingness to participate in health prevention or screening programs (Brems et al., 2006; Brown, Ojeda, Wyn, & Levan, 2000). Without appropriate healthcare, health disparities increased, resulting in a higher morbidity and mortality

(Andrulis, 2003; Brown et al., 2000; Jones, 2010). The National Institutes of Health (NIH, *n.d.*) reported that despite the improvement of overall health in America, disproportionate levels of health disparity continue to exist for various ethnic minorities and rural dwellers. For the purpose of this paper, *health disparity* is defined as ". . . differences in the incidence, prevalence, mortality, and burden of diseases and other adverse health conditions that exist among specific population groups. . . ." (NIH, *n.d.*, p. 12).

Method

This literature review was conducted as outlined by the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) to provide a clear path for conducting and reporting literature review (Liberati et al., 2009) and guides the process for systematic literature searches. The goal is to assist authors in transparent reporting of systematic reviews and meta-analyses. The process includes a 27-item checklist, and depending on the review objectives, these items may be modified.

The CINAHL Complete, ERIC, Health/Psychosocial Instrument, Health Source: Nursing/Academic Edition, SocINDEX with Full-text, Science Direct, and TX Reference Center databases within the EBSCOhost Discovery Service (EBSCOhost), and the Cochran Library were searched for articles published between 2005 and 2013 to obtain the most current data on KIs using the terms *Korean immigrants*, *Texas*, *rural*, and *health care*. Additionally, the subject terms *Koreans*, *research*, and *United States* were added during the search. The search included three rounds. Articles were deemed appropriate when appraised for the relevance and quality of the study. During round one, articles were searched based on the key terms, excluding those that were not original research. During round two, abstracts were screened for eligibility. In round three, full-text articles were obtained for further review. Both qualitative and quantitative studies

were included. During the collection of articles, duplicate records were removed. Most of the records were extracted during the perusal of titles and abstracts. The remaining records were obtained by reading the article to ascertain eligibility.

Findings

The selection of records to be reviewed was accomplished during the search process. When all the key terms (*Korean immigrants*, *Texas*, *rural*, *health care*) were included in the search, no eligible records were found. Therefore, various combinations of the key and subject terms were utilized. Two-hundred and forty-three articles were identified. After removing duplicate articles, 216 records were eligible for screening; however, all but 25 articles were excluded due to irrelevance. No articles were discovered with the key terms *Korean immigrants*, *rural*, and *Texas*. Furthermore, no research articles were found on KIs' health and healthcare in rural US. Overall, the majority of the records failed to satisfy the basic requirements of relevancy to the key terms and was excluded. More specifically, the excluded records either failed to be exclusive to Koreans, did not qualify as original research (editorials, personal commentaries, or newspaper clippings) conducted in the US, were not established within the required time frame, or some combination of the above.

Of the 25 studies reviewed (Appendix), 19 were quantitative (Bernstein, Park, Shin, Cho, & Park, 2011; Choi, Wilbur, & Kim, 2011; Donnelly & Kim, 2008; Eun, Lee, Kim, & Fogg, 2009; Han et al., 2010; Hofstetter et al., 2010; Hwang & Zerwic, 2006; Jang et al., 2005; Jang, Park, Cho, Roh, & Chiriboga, 2012; Jo, Maxwell, Wong, & Bastani, 2008; Kim, 2011; Kim & Menon; 2009; Kim et al., 2011; Kim, Kim, & Gulick, 2009; Lee, Eun, Lee, Nandy, 2011; Lee, Kim, & Han, 2009; Lee & Yoon, 2011; Maxwell, Jo, Crespi, Sudan, & Bastani, 2010; Shin, 2011; Yang, 2007), four were qualitative (Jo, Maxwell, Yang, Bastani, 2010; Sin et al., 2010;

Sin, Jordan, & Park, 2011; Yoo & Zippay, 2012), one was a retrospective analysis (Han et al., 2007), and one used mixed-method (Yoo & Kim 2008). Various topics of these 25 articles included hypertension/stroke (Han et al., 2010; Hwang & Zerwic, 2006; Kim et al., 2011), tobacco smoking among KIs (Hofstetter et al., 2010; Kim et al., 2009), the perspectives of church leaders in assisting KIs with resources for health and healthcare (Jo et al., 2010; Yoo & Zippay, 2012), cancer behaviors and health beliefs among KIs (Eun et al., 2009; Jo et al., 2008; Kim & Menon, 2009; Lee, Eun et al., 2011; Lee, Kim et al., 2009; Maxwell et al., 2010), depressive disorders (Bernstein et al., 2011; Donnelly & Kim, 2008; Jang et al., 2012; Kim, 2011; Sin et al., 2011), enabling factors affecting health perceptions (Lee & Yoon, 2011), and physical activities for promotion of general well-being (Choi et al., 2011; Shin, 2011; Yang, 2007). Multi-generational cardiovascular health perceptions (Sin et al., 2010) and healthcare utilization (Jang et al., 2005; Yoo & Kim, 2008) among KIs were also reported. One retrospective study on the recruitment barriers of KIs for health promotion studies was located (Han et al., 2007). All studies were conducted in geographic areas where large populations of KIs were located and Asian grocery stores, and faith and non-faith based organizations were available. Only one study was located in Central TX (Yang, 2007) with a large population of KIs. During the analysis, nine major categories emerged that could affect health and healthcare of KIs. These categories include (a) health, health perceptions, and healthcare, (b) knowledge of diseases, (c) culturally sensitive educational programs, (d) physical activities, (e) cancer screenings, (f) depression, (g) financial constraints, (h) English language competency, and (i) Korean organizations.

Health, Health Perceptions, and Healthcare

According to the Kaiser Family Foundation (KFF, 2008), Koreans tended to be healthier than other Asian immigrants. Conversely, KIs generally considered their own health to be fair to poor (Eun et al., 2009; Yang, 2007). Furthermore, KIs who were older, female, and less educated were more likely to view their health as poor (Jang et al., 2005). A variety of factors influenced KIs' health perceptions. For example, factors negatively influencing KIs' health perceptions included lower financial status, increased physical disability (Jang et al., 2012), lack of English competency, mistrust in the Western healthcare system (Jang et al., 2005), and length of US residency (Lee & Yoon, 2011; Yang, 2007). Conflicting results regarding the length of US residency as it related to KIs' health perceptions were discovered; longer residency both positively (Yang, 2007) and negatively (Lee & Yoon, 2011) correlated with poorer health (Yang, 2007), and might be related to the amount of acculturation. Poor psychological and physical health negatively impacted KIs' health perceptions; depression, loneliness, and decreased vitality resulted in lower perceived health (Lee & Yoon, 2011). Healthcare satisfaction and subjective perception of health affected healthcare utilization (Jang et al., 2005). Not surprisingly, KIs with more negative health perceptions and higher healthcare satisfaction were more likely to seek healthcare (Jang et al., 2005).

Since migrating to the US, KIs experienced increased illnesses such as cancer (Jo et al, 2008; McCracken et al., 2009), heart disease (Boo & Froelicher, 2012; Fitzpatrick et al., 2012; Jang & Kim, 2010), diabetes (Jang et al., 2012; So, Chin, & Lee, 2011), and depression (Bernstein et al., 2011; Donnelly & Kim, 2008; Jang et al., 2012; Yoo & Zippay, 2012). Furthermore, diabetes was significantly correlated to negative health perceptions (Jang et al., 2012).

Knowledge of Diseases

KIs' knowledge of risk factors and health promotion activities were varied and some knowledge was inaccurate. Knowledge of cardiovascular health (CVH; Sin et al., 2010) and strokes (Hwang & Zerwic, 2006) were different among the younger and older generations. Generally, KIs considered healthy diet, physical activity, less stress, and clean environment as important in promoting CVH. The younger generation considered walking and being spiritual as beneficial and nonfat food items such as jelly beans as harmful (Sin et al., 2010). On the other hand, older people perceived relaxation and laughter beneficial and loneliness and stress harmful (Sin et al., 2010). Younger KIs were more knowledgeable than the older generation on the risk factors for strokes; however, neither generation identified stroke risk factors such as diabetes, hypertension, and cardiovascular disease and non-stroke risk factors such as extreme weather and physical activities (Hwang & Zerwic, 2006). Furthermore, stress, which is not a risk factor for stroke, was incorrectly identified among both generations (Hwang & Zerwic, 2006). The younger generation was also more knowledgeable of stroke symptoms; however, vision changes and severe headache were least identified while chest pain, dyspnea, and hand tremors were incorrectly construed as stroke symptoms (Hwang & Zeric, 2006).

Culturally Sensitive Educational Programs

Many KIs lacked health screenings such as mammograms (Kim & Menon, 2009; Maxwell et al., 2010) and few with chronic medical conditions made lifestyle modifications (Han et al., 2010; Kim et al., 2011). However, culturally tailored educational interventions increased KIs' participation in health screenings and improved health and healthcare practices. Appointment reminders, explanations for mammogram follow-up tests, provisions of health information, and referrals for mammography increased health screenings (Maxwell et al., 2010), and bi-monthly

telephone counseling for medication adherence with hypertension (Han et al., 2010; Kim et al., 2011). Furthermore, telephone counseling decreased alcohol consumption and increased physical activity (Han et al., 2010; Kim et al., 2011). A stage-based, semi-structured, interactive program was not significant for increasing KIs' readiness for mammography; however, it was effective in increasing knowledge of breast cancer (Kim & Menon, 2009).

Physical Activities

KIs did not participate in leisure time physical activity; instead, KIs participated in transportation-related physical activity (walking and cycling) and household physical activity (Choi et al., 2011). Furthermore, KIs perceived physical activity positively influenced physical and mental health (Shin, 2011; Yang, 2007); exercise was a significant predictor for improved health (Yang, 2007), and with more vigorous activity, greater health improvement was noted (Shin, 2011).

Cancer Screenings

The low incidences of cancer screenings among KIs was affected by a variety of factors. Mammograms (Eun et al., 2009; Kim & Menon, 2009; Lee et al., 2009; Maxwell et al., 2010), cervical exams (Lee, Eun et al., 2011), and colorectal exams (Jo et al., 2008) were sporadic among KIs. Several facilitators and barriers for cancer screenings were noted. Facilitating factors such as having symptoms, financial means, transportation, and a trustworthy physician significantly increased the likelihood of obtaining cancer screenings (Jo et al., 2008). Barriers to cancer screenings included being unfamiliar with the process of obtaining mammograms (Kim & Menon, 2009), English language difficulties (Lee et al., 2009; Maxwell et al., 2010), and financial constraints (Jo et al., 2008; Lee et al., 2009; Maxwell et al., 2010). Additionally, KIs' perceptions for the seriousness and benefits of cancer screenings also influenced screening rates;

furthermore, age influenced these perceptions (Eun et al., 2009; Lee et al., 2009; Lee, Eun et al., 2011). Older women perceived significantly more seriousness to having cancer (Eun et al., 2009; Lee, Eun et al., 2011) and potentially more benefits to screenings (Lee et al., 2009; Lee, Hahn et al., 2011) compared to younger women; however, older women had lower screening rates than younger women (Eun et al., 2009). Furthermore, perceived benefits were greater among those who had mammograms in the past (Eun et al., 2009; Lee et al., 2009). Finally, perceived susceptibility to cancer also influenced screening rates (Lee et al., 2009).

Stress and Depression

Stress and depression are common among KIs. In fact, many KIs often used the words "depression" and "stress" interchangeably. Symptoms were related to feelings of introversion, loneliness, isolation (Sin et al., 2011), fatigue, appetite changes, and sleep disturbances (Donnelly & Kim, 2008). Depressive symptoms increased among KIs in poor physical health (Donnelly & Kim, 2008); depression was positively correlated with chronic diseases such as diabetes (Jang et al., 2012) and negative health behaviors, such as smoking (Kim et al., 2009). Depressive symptoms increased hostility and neglect and decreased signs of affection among parents of teenagers; fathers were affected to a greater degree than were mothers (Kim, 2011). Acculturative stress might affect depressive status (Bernstein et al., 2011; Sin et al., 2011), and KIs were almost twice as likely to experience stress as the general US population (Bernstein et al., 2011). In fact, lack of English proficiency and longer length of US residency significantly caused higher anxiety and depression in addition to decreased self-control and vitality (Lee & Yoon, 2011). Additionally, depression and racial discrimination had significant positive correlation (Bernstein et al., 2011). One-third of participants in one study (Bernstein et al., 2011) and one-fourth in another study (Jang et al., 2005) experienced some form of discrimination,

such as disrespect, due to race or ethnicity. On the other hand, social support and spirituality significantly improved psychological health and general well-being among KIs (Lee & Yoon, 2012).

Financial Constraints

Another factor influencing health and healthcare was financial constraints. Yoo and Kim (2008) explored barriers and challenges to health services among insured and uninsured KIs. Even though most participants had insurance, older KI women's insurance covered the cost of the mammograms while younger KI's insurance did not (Yoo & Kim, 2008). Furthermore, no significant differences were found in overall healthcare utilization among the insured and uninsured. High deductibles prevented accessing health services for those with insurance. Jo et al. (2008) reported a lack of insurance or inability to afford healthcare were major factors discouraging cancer screenings.

English Language Competency

Another factor that influenced health and healthcare among KIs was lack of English competency. The inability to speak English significantly impacted health perceptions which negatively influenced healthcare utilization (Jang et al., 2005; Lee et al., 2009). Furthermore, poor English speaking abilities were significantly associated with increased depression (Bernstein et al, 2011; Lee & Yoon, 2011).

Korean Organizations

Korean American churches assisted KIs in the promotion of health and healthcare utilization and provided socialization with other KIs. Churches provided not only spiritual guidance but also a sense of community belonging (Jo et al., 2010; Yoo & Zippay, 2012). Additionally, churches tried to meet KI's physical and mental health needs through health

promotion clinics, anger management seminars, and smoking cessation programs in addition to preserving Korean culture (Jo et al., 2010). Church attendance was found to be a significant predictor in increasing smoking cessation, in addition to decreased exposure to second hand smoke and smoking in homes (Hofstetter et al., 2010). However, Korean churches were largely not equipped to provide healthcare advice, did not have the clinical knowledge, and were not aware of available community resources to support KI's health and healthcare needs (Jo et al., 2010).

Discussion

A systematic review of literature on the health and healthcare of KIs living in the US revealed 25 records, none of which addressed health and healthcare for rural KIs. Most studies conducted on Asians were done in a locale where a large population of KIs resided, such as CA, IL, NY, MD, and WA. Furthermore, studies utilized self-reports and small sample sizes, which prevented generalizing the conclusions to the overall KI population.

Twenty of the results were self-reports, four were interviews, and one study used retrospective data analysis. Nine major categories emerged during the analysis that included health, health perceptions, and healthcare; knowledge of diseases; culturally sensitive educational programs; physical activities; cancer screenings; depression; financial constraints; English language competency; and Korean organizations. Factors identified that affected or had the potential to impact KIs' health included health perceptions, disease knowledge, financial constraints, English competency, and physical activity. In addition, perceptions, beliefs, age, perceived susceptibility for cancer, knowledge about healthcare system, and benefits of screening impacted cancer screening behaviors. Depression was associated with stress, poor health, and feelings potentially exacerbated by immigrant status, namely loneliness, isolation,

and discrimination. Culturally sensitive health promotion programs demonstrated improved health behaviors including cancer screening, medication adherence, decreased alcohol consumption, and increased exercise. Additionally, Korean churches provided spiritual guidance and promoted health, healthcare, and socialization.

Conclusions

The status and perceptions of health vary among different ethnicities. Variables such as race/ethnicity, socio-economic status, level of education, and gender are associated with health outcomes (Texas Department of State Health Services, 2010). Among the studies on health and healthcare disparities in minority groups, the dominant perception is that disparities continue to exist and no clear solution to the problem has been determined (Fowler-Brown, Ashkin, Corbie-Smith, Thaker, & Pathman, 2006). A better understanding of KIs' culture, including health and healthcare needs, is required to decrease health disparities. Exacerbations of current chronic health conditions, including mental disorders such as depression, can be reduced or even prevented with appropriate health education and readily available healthcare (Jang et al., 2012). Further exacerbating health and healthcare disparities is the fact that people living in rural regions tend to be poorer, older, and have poorer overall health than those residing in metropolitan areas (Agency for Healthcare Research and Quality, 2011). This would imply that to decrease health disparities among KIs living in rural regions, studies are needed. Additionally, health resources in rural communities specifically for Asian immigrants are desperately needed in order to promote a healthier lifestyle and healthcare utilization among KIs. The lack of evidence on KIs living in rural America should be a primary focus for future research. Furthermore, to achieve federal and state initiatives, a better knowledge of health awareness, health improvement, and health and healthcare among KIs is warranted.

References

Agency for Healthcare Research and Quality. (2011). *2010 National healthcare disparities report* (AHRQ Publication No. 11-0005). Washington, DC: Government Printing Office.

Andrulis, D. P. (2003). Reducing racial and ethnic disparities in disease management to improve health outcomes. *Disease Management & Health Outcomes*, *11*(12), 789-800. http://dx.doi.org/10.2165/00115677-200311120-00004

Bernstein, K. S., Park, S. Y., Shin, J., Cho, S., & Park, Y. (2011). Acculturation, discrimination and depressive symptoms among Korean immigrants in New York City. *Community Mental Health Journal*, *47*, 24-34. http://dx.doi.org/10.1007/s10597-009-9261-0

Boo, S. & Froelicher, E. S. (2012). Suboptimal attainment of cardiovascular disease prevention guideline goals in Korean women. *Asian Nursing Research*, *6*, 49-54. http://dx.doi.org/10.1016/j.anr.2012.05.002

Brems, C., Johnson, M. E., Warner, T. D., & Roberts, L. W. (2006). Barriers to health care as reported by rural and urban interprofessional providers. *Journal of Interprofessional Care*, 20(2), 105-118. http://dx.doi.org/10.1080/13561820600622208

Brown, E. R., Ojeda, V. D., Wyn, R., & Levan, R. (2000). *Racial and ethnic disparities in access to health insurance and health care*. Retrieved from http://escholarship.org/uc/item/4sf0p1st

Choe, M., Padilla, G. V., Chae, Y. R., & Kim, S. (2001). Quality of life for patients with diabetes in Korea - I: The meaning of health-related quality of life. *International Journal of Nursing Studies*, *38*(6), 673-682. http://dx.doi.org/10.1016/s0020-7489(00)00115-2

Choi, J., Wilbur, J., & Kim, M. J. (2011). Patterns of leisure time and non-leisure time physical activity of Korean immigrant women. *Health Care for Women International*, *32*, 140-153. http://dx.doi.org/10.1080/07399332.2010.508131

Donnelly, P. L. & Kim, K. S. (2008). The patient health questionnaire (PHQ9-K) to screen for depressive disorders among immigrant Korean American elderly. *Journal of Cultural Diversity*, *15*(1), 24-29.

Eun, Y., Lee, E. E., Kim, M. J., & Fogg, L. (2009). Breast cancer screening beliefs among older Korean American women. *Journal of Gerontological Nursing*, *35*(9), 40-50. http://dx.doi.org/10.3928/00989134-20090731-09

Fitzpatrick, A. L., Steinman, L. E., Tu, S., Ly, K. A., Ton, T. G. N., Yip, M., & Sin, M. (2012). Using photovoice to understand cardiovascular health awareness in Asian elders. *Health Promotion Practice*, *13*(1), 48-54. http://dx.doi.org/10.1177/1524839910364381

Fowler-Brown, A., Ashkin, E., Corbie-Smith, G., Thaker, S., & Pathman, D. E. (2006). Perception of racial barriers to health care in the rural south. *Journal of Health care for the Poor and Underserved*, *17*(1). 86-100. http://dx.doi.org/10.1353/hpu.2006.0022

Frisbie, W. P., Cho, Y., & Hummer, R. A. (2001). Immigration and the health of Asian and Pacific Islander adults in the United States. *American Journal of Epidemiology*, *153*(4), 372-380. http://dx.doi.org/10.1093/aje/153.4.372

Graves, B. A. (2008). Rural health care access: Issues for consideration in rural health research. *Online Journal of Rural Nursing and Health Care*, *8*(2). 2-4

Han, H., 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 Health*, *9*, 137-146. http://dx.doi.org/10.1007/s10903-006-9022-x

Han, H., Kim, J., Kim, K. B., Jeong, S., Levine, D., Li, C., Song, H., & Kim, M. T. (2010). Implementation and success of nurse telephone counseling in linguistically isolated Korean American patients with high blood pressure. *Patient Education and Counseling*, *80*(1), 130-134. http://dx.doi.org/10.1016/j.pec.2009.10.012

Hofstetter, C. R., Ayers, J. W., Irvin, V. L., Sim, D. E. K., Hughes, S., Reighard, F., & Hovell, M. F. (2010). Does church participation facilitate tobacco control? A report on Korean immigrants. *Journal of Immigrant Minority Health*, *12*, 187-197. http://dx.doi.org/10.1007/s10903-009-9228-9

Hwang, S. Y. & Zerwic, J. J. (2006). Knowledge of stroke symptoms and risk factors among Korean immigrants in the United States. *Research in Nursing & Health*, *29*, 337-344. http://dx.doi.org/10.1002/nur.20144

Ihara, E. S. (2009). Ethnicity matters: The socioeconomic gradient in health among Asian Americans. *Journal of Sociology & Social Welfare*, *36*(2), 125-144.

Jang, S. & Kim, D. (2010). Trends in the health status of older Koreans. *Journal of American Geriatrics Society*, *58*, 592-598. http://dx.doi.org/10.1111/j.1532-5415.2010.02744.x

Jang, Y., Kim, G., & Chiriboga, D. A. (2005). Health, healthcare utilization, and satisfaction with service: Barriers and facilitators for older Korean Americans. *Journal of American Geriatrics Society*, *53*, 1613-1617. http://dx.doi.org/10.1111/j.1532-5415.2005.53518.x

Jang, Y., Park, N. S., Cho, S., Roh, S., & Chiriboga, D. A. (2012). Diabetes and depressive symptoms among Korean American older adults: The mediating role of subjective health perceptions. *Diabetes Research and Clinical Practice*. Advance online publication. http://dx.doi.org/10.1016/j.diabres.2012.03.018

Jo, A. M., Maxwell, A. E., Wong, W. K., & Bastani, R. (2008). Colorectal cancer screening among underserved Korean Americans in Los Angeles County. *Journal of Immigrant Minority Health*, *10*, 119-126. http://dx.doi.org/10.1007/s10903-007-9066-6

Jo, A. M., Maxwell, A. E., Yang, B., & Bastani, R. (2010). Conducting health research in Korean American churches: Perspectives from church leaders. *Journal of Community Health*, *35*, 156-164. http://dx.doi.org/10.1007/s10900-009-9213-1

Jones, C. M. (2010). The moral problem of health disparities. *Health Policy and Ethics*, *100*(S1), S47-S51. http://dx.doi.org/10.2105/AJPH.2009.171181

Kaiser Family Foundation. (2008). *Race, ethnicity & health care* (No 7745). Retrieved from http://www.kff.org/minorityhealth/upload/7745.pdf

Kandel, W. A. (2011). *The U.S. foreign-born population: Trends and selected characteristics*. Retrieved from http://www.fas.org/sgp/crs/misc/R41592.pdf

Kim, E. (2011). Korean American parental depressive symptoms and parental acceptance-rejection and control. *Issues in Mental Health Nursing*, *32*, 114-120. http://dx.doi.org/10.3109/01612840.2010.529239

Kim, J. H. & Menon, U. (2009). Pre- and post-intervention differences in acculturation, knowledge, beliefs and stages of readiness for mammograms among Korean American women. *Oncology Nursing Forum*, *36*(2), E80-E92.

Kim, M. T., Han, H., Hedlin, H., Kim, J., Song, H. J., Kim, K. B., & Hill, M. N. (2011). Teletransmitted monitoring of blood pressure and bilingual nurse counseling-sustained improvements in blood pressure control during 12 months in hypertensive Korean Americans. *The Journal of Clinical Hypertension*, *13*(8), 605-612. http://dx.doi.org/10.1111/j.1751-7176.2011.00479.x

Kim, S. S., Kim, S., & Gulick, E. E. (2009). Cross-cultural validation of a smoking abstinence self-efficacy scale in Korean American men. *Issues in Mental Health*, *30*(2), 122-130. http://dx.doi.org/10.1080/01612840802370582

Ko, K. D., Lee, K. Y., Cho, B., Park, M. S., Son, K. Y., Ha, J. H., & Park, S. M. (2011). Disparities in health-risk behaviors, preventive health care utilizations, and chronic health conditions for people with disabilities: The Korean National Health and Nutrition Examination Survey. *Archives of Physical Medicine and Rehabilitation*, *92*(8), 1230-1237. http://dx.doi.org/10.1016/j.apmr.2011.03.004

Lee, E. E., Eun, Y., Lee, S. Y., & Nandy, K. (2011). Age-related differences in health beliefs regarding cervical cancer screening among Korean American Women. *Journal of Transcultural Nursing*, *23*(3), 237-245. http://dx.doi.org/10.1177/1043659612441015

Lee, H., Hann, H. W., Yang, J. H., & Fawcett, J. (2011). Recognition and management of HBV infection in a social context. *Journal of Cancer Education*, *26*, 516-521. http://dx.doi.org/10.1007/s13187-011-0203-5

Lee, H., Kim, J., & Han, H. (2009). Do cultural factors predict mammography behavior among Korean immigrants in the USA? *Journal of Advanced Nursing*, *65*(12), 2574-2584. http://dx.doi.org/10.1111/j.1365-2648.2009.05155.x

Lee, H., Lee, O. J., & Im, M. Y. (2011). Participatory research to address issue of HBV vaccination and liver cancer: Integration of a participatory research into a church-based health survey. Presented in *2005 Western Institute of Nursing Conference*. Retrieved from http://hdl.handle.net/10755/157954

Lee, K. H. & Yoon, D. P. (2011). Factors influencing the general well-being of low-income Korean immigrant elders. *Social Work*, *56*(3), 269-279. http://dx.doi.org/10.1093/sw/56.3.269

Liberati, A., Altman, D. G., Tetzlaff, J., Murlow, C., Gøtzsche, P. C., Ioannidis, J. P. A., . . . Moher, D. (2009). The PRISMA statement for reporting systematic reviews and meta-analyses of studies that evaluate healthcare interventions: Explanation and elaboration. *BMJ*, 339-365. http://dx.doi.org/10.1136/bmj.b2700

Maxwell, E., Jo, A. M., Crespi, C. M., Sudan, M., & Bastani, R. (2010). Peer navigation improves diagnostic follow-up after breast cancer screening among Korean American women: Results of a randomized trial. *Cancer Causes Control*, *21*(11), 1931-1940. http://dx.doi.org/10.1007/s10552-010-9621-7

McCracken, M., Olsen, M., Chen, Jr, M. S., Jemal, A., Thun, M., Cokkinides, V., . . . Ward, E. (2009). Cancer incidence, mortality, and associated risk factors among Asian Americans of Chinese, Filipino, Vietnamese, Korean, and Japanese ethnicities. *CA: A Cancer Journal for Clinicians*, *57*(4), 190-205. http://dx.doi.org/10.3322/canjclin.57.4.190

Migration Policy Institute. (n.d.). *State proportion of the Korean-born population in the United States*. Retrieved from http://www.migrationinformation.org/USFocus/display.cfm?ID=793

National Institutes of Health. (n.d.). *NIH health disparities strategic plan and budget fiscal years 2009-2013*. Retrieved from http://www.nimhd.nih.gov/documents/NIH_Health_Disparities_Strategic_Plan_and_Budget_2009-2013.pdf

Park, W. & Grindel, C. G. (2007). Korean American mother and daughter communication on women's health topics. *Journal of Cultural Diversity*, *14*(1), 4-11.

Rhoads, E. M. (2012, March 01). Koreans. *Handbook of Texas Online in Texas State Historical Association*. Retrieved from http://www.tshaonline.org/handbook/online/articles/pjk01

Rural Policy Research Institute Health Panel. (2007, March). *Choosing rural definitions: Implications for health policy* (Issue Brief #2). Retrieved from http://www.rupri.org/Forms/RuralDefinitionsBrief.pdf

Shive, S. E., Ma, G. X., Tan, Y., Toubbeh, J. I., Parameswaran, L., & Halowich, J. (2007). Asian American subgroup differences in sources of health information and predictors of screening behavior. *Californian Journal of Health Promotion*, *5*(2*)*, 112-127.

Shin, C. (2011). Health and physical activity of Korean American adults. *Med-surg Matters*, *20*(2), 14-18. http://dx.doi.org/10.1097/FCH.0b013e3181f3b2d3

Sin, M., Fitzpatrick, A. L., & Lee, K. (2010). Cardiovascular health perceptions in multigenerational Korean immigrant. *Family and Community Health*, *33*(4), 254-261. http://dx.doi.org/10.3109/01612840.2010.536611

Sin, M., Jordan, P., & Park, J. (2011). Perceptions of depression in Korean American immigrants. *Issues in Mental Health Nursing*, *32*(3), 177-183. http://dx.doi.org/10.3109/01612840.2010.536611

So, E. S., Chin, Y. R., & Lee, I. S. (2011). Relationship between health-related behavioral and psychological factors and cardiovascular and cerebrovascular disease comorbidity among Korean adults with diabetes. *Asian Nursing Research*, *5*, 205-209. http://dx.doi.org/10.1016/j.anr.2011.11.002

Texas Department of State Health Services. (2010). *Texas chronic disease burden report* (Publication No. E81-11194). Retrieved from http://www.dshs.state.tx.us/chronic/pdf/CDBR2010.pdf

Health and Human Services. (2010, July 2). Texas Health and Human Services System strategic plan 2011-2015. *Health and Human Services System Strategic Plan 2011-2015*, *1*. Retrieved from https://www.hhsc.state.tx.us/about_hhsc/strategic-plan/2011-2015/2011-15-Volume-I.pdf

U.S. Census Bureau. (2010). *2010 census urban and rural classification and urban area criteria* (Fact Sheet). Retrieved from http://www.census.gov/geo/reference/ua/urban-rural-2010.html

U.S. Census Bureau. (2012, March 26). *2010 census urban area FAQs* (Fact Sheet). Retrieved from https://www.census.gov/geo/reference/ua/uafaq.html

U.S. Census Bureau: American FactFinder2. (2010). Retrieved from http://factfinder2.census.gov/faces/nav/jsf/pages/index.xhtml

U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion, (n.d.) Healthy People 2020. Washington, DC: HHS. Retrieved from http://www.HealthyPeople.gov/2020/topicsobjectives2020/overview.aspx?topicid=1

Vanderboom, C. P. & Madigan, E. A. (2007). Federal definitions of rurality and the impact on nursing research. *Research in Nursing & Health*, *30*, 175-184. http://dx.doi.org/10.1002/nur.20194

Weir, R. C., Tseng, W., Yen, I. H., & Caballero, J. (2009). Primary health-care delivery gaps among medically underserved Asian American and Pacific Islander populations. *Public Health Reports*, *124*, 831-840.

Yang, K. (2007). Self-assessments of health by Korean immigrant women. *Health Care for Women International*, *28*(4), 329-338. http://dx.doi.org/10.1080/07399330601179836

Yang, J. H. & Yang, B. S. (2011). Alternative view of health behavior: The experience of older Korean women. *Qualitative Health Research*, *21*(3), 324-332. http://dx.doi.org/10.1177/1049732310379238

Yoo, G. J., & Kim, B. W. (2008). Korean immigrants and health care access: Implications for the uninsured and underinsured. *Research in the Sociology of Health Care*, *25*, 77-94. http://dx.doi.org/10.1016/s0275-4959(07)00004-x

Yoo, J. A., & Zippay, A. (2012). Social networks among lower income Korean elderly immigrants in the U.S. *Journal of Aging Studies*, *26*, 368-376. http://dx.doi.org/10.1016/j.jaging.2012.03.005

ZipAtlas. (2012). Retrieved from http://zipatlas.com/us/tx/city-comparison/percentage-korean-population.htm