Quality of Life and Depression of Korean American Cancer Patients and Their Family Caregivers

by

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DEDICATION

This dissertation is dedicated to all Korean American cancer patients and their family caregivers.

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Abstract

Purpose: Despite the high cancer incidence and mortality among Korean Americans, little is known about their quality of life (QOL) and depression after a cancer diagnosis. The purpose of this dissertation was to describe the quality of life and depression in Korean American cancer patients and their family caregivers and to examine factors related to these outcomes. The study was guided by socio-cultural stress coping theoretical framework.

Methods: Data were collected from Korean American cancer patients and one of their family caregivers living in Midwest (N=60 dyads). Matched *t*-tests and one-sample *t*-tests were used to examine differences between patients and caregivers and comparative samples in other studies. Multiple regression was used to examine predictors among selected variables to QOL and depression.

Results: The review of existing literature indicated that the key variables related to QOL and depression were social support, communication, and acculturation. The descriptive study found no differences between patients and caregivers on selected variables. Patients had better overall QOL than other groups of cancer patients but family caregivers had lower overall QOL than other groups of family caregivers of cancer patients. From multiple regression analyses, higher social support and less negative appraisal of illness predicted better overall QOL in patients. Less negative appraisal of illness also predicted less depression among patients. Older age, endorsing more modern values, and less traditional Korean values predicted better overall QOL in caregivers. Furthermore, having higher modern values also predicted less depression among family caregivers.

Conclusion: Based on the research findings, clinicians need to be more culturally sensitive to the needs of Korean American cancer patients and their family caregivers. Health professionals need to be aware that somatic complaints may be a sign of depression. Collaborating with ethnic community agencies that provide Koreans with assistance may help to improve patients' and caregivers' sources of formal and informal social support. Future research needs to focus on development of interventions that will improve patient's positive perception of the illness and assist their caregivers to gain more self-reliance, autonomy, and confidence which will help to increase their QOL and lower their incidence of depression.

CHAPTER 1

Introduction

This dissertation paper consists of five chapters: Introduction (Chapter 1), Review of literature (Chapter 2), Descriptive study of Korean American cancer patients and their family caregivers (Chapter 3), Predictors associated with Korean American cancer patients' and their family caregivers' well-being and depression (Chapter 4), and Summary of the three papers (Chapter 5). The introduction chapter will include: background and significance, theoretical framework, purpose of the dissertation, specific aims, and significance of nursing and healthcare.

Background and Significance

Cancer is the leading cause of death for Asian Americans (Heron, 2012). Korean Americans have a cancer profile that differs from Western Americans and other Asian American racial groups. Korean Americans experience the highest rates of lung, stomach, colorectal, and liver cancer (McCracken et al., 2007). Also compared to many other ethnic groups that have immigrated to the United States, Korean Americans have a short immigration history, with the majority of Korean Americans immigrating to the U.S. within the past 50 years (Hurh & Kim, 1984). Research indicates that being both a recent immigrant and having cancer can lead to higher depression (Baider, Kaufman, Ever-Hadani, & De-Nour, 1996), lower life expectancy, and lower quality of life (Çiftçi, Reid-Marks, & Shawahin, 2014). In fact, Korean Americans are 4 times more likely to have depression than Whites and African Americans (Jang & Chiriboga, 2010; Min, Moon, & Lubben, 2005) and they have the lowest quality of life when compared to other Asian American ethnic groups (Kim, Ashing-Giwa, Singer, & Tejero, 2006).

Immigrants go through a long-term process to learn to live interculturally with the host society (Berry, Phinney, Sam, & Vedder, 2006; Berry, 2005). The process requires learning a new language and social interactions, and adopting new customs. This process takes longer for first-generation immigrants than 2nd generation immigrants (born in the host country). In fact, 90% of Korean American immigrants who immigrated about 20 years ago still believe that they have limited English skills (Sohn, 2004). They also have difficulties seeking formal government services and interacting socially because they feel linguistically isolated (Sohn, 2004). Aside from language, Korean Americans are least likely to have health insurance when compared to other Asian minority groups (Huang, Li, Tsai, & Begier, 2013; McCracken et al., 2007) which limits access to medical care.

Despite these immigration-related factors and the higher cancer risk in Korean Americans, few studies have examined factors associated with the quality of life and depression of Korean American cancer patients and their family caregivers. Literature support that cancer patients and their family caregivers influence each other's level of quality of life and depression (Northouse, 2005; Northose, Katapodi, Song, Zhang, & Mood, 2010; Segrin, Badger, Dorros, Meek, & Lopez, 2007) and that it is important to assess both patients' and their family caregivers' responses to the cancer. Among Korean Americans, family members, like spouses or children, are the major caregivers that provide physical and emotional support to patients (Chun, Knight, & Youn, 2007). However, Korean American caregivers' perspective on caregiving is embedded with their beliefs in filial piety, which indicates that caregiving is an obligation rather than voluntary choice (Han, Choi, Kim, Lee, & Kim, 2008). Korean American family caregivers describe their caregiving experience as being “trapped” rather than being “burdened” and suggest that their level of appraisal caregiving also needs to be assessed.

Current literature has not examined whether Korean American family caregivers’ cultural values or appraisal of caregiving influence their level of quality of life and depression. Therefore, by assessing factors related to both patients’ and family caregivers’ quality of life and depression, we will have more knowledge and a better understanding about their cancer and caregiving experiences. This information will provide direction to the future development of culturally appropriate interventions.

Theoretical Framework

The proposed research is guided by the socio-cultural stress coping model by Aranda and Knight (1997). The model is an adapted model from Lazarus and Folkman’s stress coping model (Lazarus & Folkman, 1984). The original stress coping model by Lazarus and Folkman provides a framework for identifying which antecedent factors are associated with patient and caregiver outcomes. The model has been used in caregiving studies specifically in various types of cancer research (Northouse, Mood, Templin, Mellon, & George, 2000; Northouse, Templin, Mood, & Oberst, 1998). According to the model, individuals who have encountered a threatening situation, such as cancer, appraise the degree of threat (primary appraisal) and their resources to cope with the situation (secondary appraisal) (Lazarus & Folkman, 1984). Based on available resources, individuals reappraise their situation as either more or less threatening. Thus, this process can extend over time and can affect patients’ and caregivers’ adjustment to illness and quality of life (Kershaw et al., 2008). Positive or negative appraisals of the illness and caregiver burden associated with it, can affect an individual's subsequent quality of life and the amount of depression they experience.

Aranda and Knight (1997) expanded the original stress coping model to include ethnicity and culture which they contend play significant roles in each stage of the stress and coping processes of individuals. These factors can influence the appraisal of stressful events (caregiving and illness), the perception and use of family support, and coping behaviors (Aranda & Knight, 1997; Knight et al., 2002). By using the socio-cultural stress coping model, researchers can examine how Korean American cancer patients' and their family caregivers' own ethnic values influence their appraisal of illness or caregiving, acculturation stress, social support, communication, quality of life, and depression.

Purpose

The purpose of this dissertation is to: 1) describe and identify variables that are related to Korean American cancer patients' and their family caregivers' quality of life (QOL) and depression, based on a review of the literature, 2) describe demographic, medical, and cultural characteristics of Korean American cancer patients and their family caregivers who were interviewed for this dissertation research, 3) compare patients' and caregivers' scores on selected variables, 4) determine whether patients' and caregivers' QOL and depression levels differ from other comparison groups of cancer patients and family caregivers; and 5) examine factors associated with the QOL and depression of Korean American cancer patients and their family caregivers.

Specific Aims

I. The specific aim for manuscript one, *Correlates of Quality of Life and Depression in Korean American Cancer Patients and Their Family Caregivers: Review of Literature, is:*

Aim 1: To conduct an integrative review of literature to describe and identify variables related to quality of life and depression of Korean American cancer patients and their family caregivers.

II. The specific aims for manuscript two, *Quality of Life and Depression of Korean American Cancer Patients and their Family Caregiver: A Descriptive Study*, are:

Aim 2: describe the level of multidimensional QOL, depression, ethnic values, acculturative stress, social support, and the communication style of Korean American cancer patients and their family caregivers.

Aim 2: compare patients' and family caregivers' scores on these study variables.

Aim 2: determine whether patients' and caregivers' QOL and depression levels differ from other comparison groups of cancer patients and family caregivers of cancer patients.

III. The specific aim for manuscript three, *Factors Associated with Quality of Life and Depression Among Korean American Cancer Patients and Their Family Caregivers,* is:

Aim 3: To determine the amount of variance that ethnic values, acculturative stress, social support, communication style, and perception of the illness/caregiving have on Korean American cancer patients' and family caregivers' quality of life (QOL) and depression.

Significance for Nursing and Health Care

This dissertation examined factors related to the quality of life and depression among Korean American cancer patients and their family caregivers. Since this particular group of cancer patients and their family caregivers has not been studied within a cultural context, a cross-sectional, descriptive study design was used. This study will provide a better understanding about Korean Americans' cancer and caregiving experiences and provide more knowledge and guidance to clinicians and researchers as they develop culturally appropriate interventions and social services.

Changes in current health care delivery in the U.S. has created challenges for both patients and caregivers. Due to early discharges and rising cost of health care, much of the care of cancer patients has shifted to family caregivers who lack proper preparation for their roles (van Ryn et al., 2011). Without proper preparations, caregivers can experience more emotional distress, less ability to provide high quality care in home, and less self-efficacy (Porter, Keefe, Garst, McBride, & Baucom, 2008). In addition to the negative aspects, Korean Americans have additional struggles when seeking formal health services because most of them are not provided in their own language. Therefore, Korean American cancer patients and family caregivers who have language barriers when seeking health information can have greater stress that ultimately affects their quality of life and depression.

This dissertation focuses on the quality of life and depression of Korean American cancer patients and their family caregivers who are living in the U.S. Each of the three manuscripts in the dissertation address the importance focusing on this minority group and the need to provide information that can be used by clinicians and researchers to better understand the cultural issues related to the cancer experience and intervention development.

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CHAPTER II

Correlates of Quality of Life and Depression in Korean American Cancer Patients and Their Family Caregivers: Review of Literature

Introduction

Oncologists increasingly recognize the importance of shifting their approach to care from a patient-centered only focus to a patient- and family-centered focus (Institute of Medicine, 2013; Institute for Patient- and Family- Centered Care, 2014). This focus on the patient and the family is particularly relevant for cancer treatment since many family caregivers provide complex cancer care at home and patients need support during cancer treatment (Honea et al., 2008; Williams, 2014). Studies have shown that during treatment, both patients' and caregivers' physical and mental health is affected (Badr & Carmack Taylor, 2009; Y. Kim, Duberstein, Sörensen, & Larson, 2005; Taylor et al., 2008). In fact, the physical and mental health of the cancer patient, i.e. quality of life (QOL), affects that of the caregiver and vice versa (Given et al., 2004; Northouse, 2005; Segrin, Badger, Dorros, Meek, & Lopez, 2007). This bi-directional influence underscores the importance of understanding QOL of both patients and caregivers across all segments of the population in order to provide high quality patient-and family-centered care.

Whether QOL among cancer patients and their caregivers is experienced similarly across subpopulations remains an open question. Most of QOL studies with cancer patients in the U.S.

have focused on non-Hispanic white populations, with far fewer focusing on other cultural groups. Despite the fact that the Asian population will likely increase by 2050 and comprise 9% of the population (J. Kim & Knight, 2008; Kong, 2007; Sohn, 2004), scant attention has been paid to Asian Americans and even less to Korean Americans. This is particularly troubling because cancer is the leading cause of death among Korean Americans (McCracken et al., 2007), and this group also has the lowest screening rates (Wong, Gildengorin, Nguyen, & Mock, 2005). Further, Korean Americans also have the lowest quality of life and lower levels of acculturation, when compared to other Asian cancer patients (J. Kim, Ashing-Giwa, Singer, & Tejero, 2006). In terms of the actual experience of having cancer, Korean Americans reported difficult adjustment due to the language barriers they face in the U.S. Relatively speaking, Korean Americans have a short immigration history, which means that many of the elderly have limited English ability (Kang, Basham, & Kim, 2013). This in turn hinders their understanding of health information and their ability to communicate with health care professionals in English (Gee & Ponce, 2010; New California Media, 2003; Mui, Kang, Kang, & Domanski, 2007).

Korean Cultural Values and Physical and Psychological Well-Being

Cultural norms have an influence on the QOL of Korean American cancer patients and their family caregivers and influence their physical and psychological QOL (Kagawa Singer, Valdez Dadia, Yu, & Surbone, 2010). After a cancer diagnosis, both Korean American cancer patients and their family caregivers are at higher risk for poorer physical quality of life (QOL), which may, in part, be influenced by their Korean cultural norms. These norms are based on Confucianism, which delineates gender and familial roles. Traditionally, men are the breadwinners of the family and decision makers for the family (S. Park & Bernstein, 2008). Women are obligated to cook for the family, raise children, keep their houses clean, and help financially. Women also perform physical caregiving duties to patients and are known to have a higher caregiver burden (Casado & Sacco, 2012). Even when they are diagnosed with cancer, family members are expected to continue their roles (Tam Ashing, Padilla, Tejero, & Kagawa-Singer, 2003), which can affect their QOL and as a consequence, those with cancer can experience lower physical QOL.

In addition to a higher risk of poorer QOL overall, Korean American cancer patients and their family caregivers are at high risk for poorer psychological QOL (S. Kim et al., 2008; Rhee et al., 2008). First, depression is common among cancer patients and family caregivers (Northouse, Katapodi, Schafenacker, & Weiss, 2012). Second, Korean Americans in the general population are four times more likely to have depression compared to Whites or African Americans (Jang & Chiriboga, 2010). The combination of higher prevalence of depression among Korean Americans, and the known impact of cancer on QOL, suggests that Korean Americans with cancer may be especially susceptible to experiencing depression. However, because depression is stigmatized in the Korean culture as a condition caused by evil spirits or character weakness (H. Lee, Hanner, Cho, Han, & Kim, 2008), Korean Americans tend to not seek mental health services (S. Park, Cho, Park, Bernstein, & Shin, 2013). As such, those suffering from depression are reluctant to talk about their concerns or to seek professional help (S. Park et al., 2013).

Given the small number studies in this area, little is known about the QOL of Korean American cancer patients and their family caregivers. To begin to understand and plan culturally/ethnically appropriate interventions to support them, more information is needed on their QOL and factors that affect it. The purpose of this study is to conduct an integrative review of the current research literature to provide a better understanding of the physical and psychological QOL among Korean American cancer patients and family caregivers and the factors affecting their QOL and depression.

Literature Search

This integrative review conducted focused searches using PubMed, CINAHL, Google Scholar, and EBSCO databases. Searches were conducted using the following key words alone or in combination with other key words, but only within the context of Korean Americans and Asian Americans: *Korean-American or Asian-American cancer patients' or caregivers' experience, quality of life (physical, mental, or psychological), and caregiving.* The search was limited to research published from January 1990 to January 2014. Both English and Korean language studies were retrieved. The search focused on two areas: 1) studies pertaining solely to quality of life of Korean American cancer patients, with or with no mention of caregivers and 2) studies pertaining more broadly to quality of life of Asian American cancer patients, with or without a discussion of caregivers.

Data Evaluation

For primary sources that included a variety of methods (i.e. qualitative, quantitative, and mixed-method), study quality was assessed. Each study was rated on a 2-point scale (high or low) based on the relevance of findings to the purpose of the review (Whittemore & Knafl, 2005).

Data Analysis

Data from all studies included in the integrative review were extracted. Specifically, the extracted data included the most commonly measured variables in the study, as well as their relationship to the QOL of Korean American cancer patients and their family caregivers. The extracted data had three major measured variables related to QOL: social support, communication, and acculturation.

Presentation of Findings

A total of 14 studies were retrieved from the search: 7 quantitative studies, 6 qualitative studies, and 1 mixed-method study (see consort diagram in Fig. 2.1). Table 1 provides details about the 14 studies. Three studies consisted of Korean Americans only, nine studies included Korean American with other Asian American ethnic groups, and two studies compared native Koreans (i.e., Korean nationality) to Korean Americans. Of the 14 studies, only one included family caregivers (J. Lim, 2014). The number of Korean-Americans in the studies ranged from a low of five (S. Lee et al., 2013) to a high of 71 (J. Lim & Ashing-Giwa, 2013; J. Lim & Paek, 2013). The mean age of the patients was 56 years and 54 years for caregivers. A majority of participants had higher than high school degree or college education and had average income level of less than $25,000. The average length of stay in the U.S. was 21.8 years and 98% were born in Korea. Of the fourteen studies reviewed, most studies were focused on patients with breast cancer (n=10), fewer studies included gynecologic cancer along with breast cancer (n=3), and one study assessed Korean Americans presenting with different types of cancer. The three most common variables which influenced the level of QOL were social support, communication, and acculturation.

Several socioeconomic indicators predicted or were related to QOL and depression. Korean Americans generally had lower income but higher education than their native Koreans (J. Lim & Yi, 2009; J. Lim & Zebrack, 2008). Korean Americans had the lowest income compared to other

Asian ethnic groups (Japanese, Chinese, Filipino, and other small Asian groups) and had the lowest QOL level (J. Kim et al., 2006). Lower income predicted higher psychological distress and higher income predicted higher QOL (J. Lim & Yi, 2009). Education was directly related with physical and mental QOL (J. Lim & Ashing-Giwa, 2013). Having a language barrier was a primary indicator of the level of Korean Americans' acculturation which ultimately influenced their QOL; and language barrier was negatively related with QOL and social network involvement (J. Kim et al., 2006; J. Lim, J. Yi, & B. Zebrack, 2008). Greater length of stay in U.S. was positively related with higher social network size, social involvement, and less language barrier (J. Lim et al., 2008).

Social Support Perceptions of Korean American Cancer Patients and Caregivers

Social support is a major factor that can improve cancer survivors' health and QOL (physical and psychological well-being) and it can help both patients and caregivers to adjust to the illness (Ell, Nishimoto, Mantell, & Hamovitch, 1988; Northouse, Mood, Templin, Mellon, & George, 2000). Similarly, a few studies have also verified the importance of social support for Korean American cancer patients and their caregivers. In a study of QOL among Korean American gynecological and breast cancer patients, researchers found that higher perceived social support was one of the factors that positively influenced their higher level of well-being ($p < .01$) (J. Lim & Zebrack, 2008). Social support was negatively associated with psychological distress ($p < .05$) and those who had higher spirituality had better overall QOL because of their higher perceived social support (J. Lim & Yi, 2009). Furthermore, those who had positive social network also had better emotional support (J. Lim, J. Yi, & B. Zebrack, 2008). These studies all suggest that social support is a key factor related to Korean American cancer patients' QOL.

Seven qualitative studies found that family was perceived as both a major source of support and a major source of stress for Korean American cancer patients. Perceived stress can be attributed to patients' adherence to ethnic values that emphasize the importance of fulfilling role expectations even after receiving a cancer diagnosis. Perceiving family as a source of stress was also associated with patients' belief that their family members did not know what they were really going through (Ashing Giwa et al., 2004; Choi, Jun, & Anderson, 2012; H. Lee & Jin, 2013; S. Lee et al., 2013; J. Lim, Gonzalez, Wang-Letzkus, Baik, & Ashing-Giwa, 2013; Tam Ashing et al., 2003). For example, a breast cancer survivor said "My family expects me to work and function the same as before the surgery. It saddens me" (Tam Ashing et al., 2003, p. 45).

For elderly Korean American cancer patients, seeking support from family members was challenging because they did not want to become a burden to their children by relying on them too much and felt cancer was their battle to wage alone (Choi et al., 2012; H. Lee & Jin, 2013). For example, a cancer survivor in New York said "My children and grandchildren went to school and work, while I received a year-long anticancer drug in my house. I had to stay home alone all day long with no connection with the community and I felt extremely lonely and depressed" (H. Lee & Jin, 2013, p. 368). Direct quotes provided in Table 2.

Only one study examined social support among Korean American patients and their caregivers (J. Lim, 2014). This study found that only breast cancer patients who used more social support from extended family, friends, and neighbors, or sought more spiritual support, or used reframing as a coping strategy had better mental-related QOL. For QOL related to physical health, only breast cancer patients who used higher mobilizing or reframing coping skills had better physical-related QOL. In contrast to findings for patients, family caregivers' level of social support, mobilizing coping, spirituality, or reframing coping did not influence their own physical-related QOL; only mobilizing coping was related to family caregivers' own mental-related QOL. In dyadic analysis, higher use of mobilizing coping (having family to ask and accept community's help) acquired by the cancer patients or family members negatively predicted his or her partner's QOL (J. Lim, 2014). The authors explained that this could have resulted from their Confucianism value that Asians hesitate to ask and accept help from someone other than their family members or due to limited social networks that hindered the expression of emotions which ultimately affected their mental QOL.

Communication and Cancer

Being able to disclose or openly communicate cancer-related concerns between caregivers and patients can increase intimacy in their relationship, which is another factor that affects QOL of cancer patients and caregivers (Manne & Badr, 2010). Three quantitative studies described the relationship between communication and physical and mental QOL. Lim (2014) found that cancer patients and family caregivers who communicated effectively within the family improved both cancer patients' ($p < 0.001$) and family caregivers' ($p < 0.05$) own physical QOL; effective communication also had a significant effect on patients' mental QOL ($p < 0.01$). In the dyadic relationship, cancer patients who communicated effectively within the family was associated with family members' increase in physical QOL. Similarly, among 71 Korean American breast cancer patients, there was a direct relationship between family communication and mental and physical QOL ($p < 0.05$) (J. Lim & Paek, 2013) and a direct relationship between social support and family communication ($p = 0.002$) (J. Lim & Ashing-Giwa, 2013). However, no significant relationship was found between Korean American cancer survivors’ confidence in communicating with physicians and their QOL.

In a qualitative study by Choi et al. (2012), Korean American breast cancer patients reported that although their main emotional support came from family members, they had difficulty communicating with their adult children. One important reason for this is that adult children were more fluent in English than Korean and first-generation immigrant cancer patients were more fluent in Korean. Because of this language barrier, first-generation Korean American cancer patients said that they did not receive as much emotional support from their family as they had wanted.

Studies have reported that due to the stigma associated with cancer, Korean American cancer patients were reluctant to talk about their feelings related to cancer with others who were healthy (Choi et al., 2012; S. Lee et al., 2013). Patients were ashamed of having cancer and avoided others so that they would not have to deal with negative expressions or questions such as “how much longer (can you live)?” (S. Lee et al., 2013). These feelings of shame and the need to protect themselves from others were reported mainly by women, who adhered to cultural norms that prevented them from sharing their experiences (Im, Lee, Park, & Salazar, 2002).

Acculturation

Level of acculturation to the host culture is highly related to the level of an individual’s QOL (Janz et al., 2009). This relationship was also evident in Korean American cancer patients such that: 1) higher acculturation influenced their multi-dimensional QOL through better social support and fewer depressive symptoms (J. Lim et al., 2008) and 2) higher acculturation was directly related to higher social support (J. Lim & Ashing-Giwa, 2013). In both studies, acculturation was measured with cultural identity, knowledge, language, and food consumption. However, studies also indicated that, Korean American cancer patients were much less acculturated as compared to Chinese cancer patients with comparable lengths of stay in the United States (J. Lim & Ashing-Giwa, 2013). Research also indicates that those who completed surveys in English were more acculturated than those who completed them in their own native language. Among Asians (Chinese, Filipino, Japanese and others), Korean Americans had the highest rate of completing surveys in their own language, suggesting they had lower levels of acculturation (J. Kim et al., 2006; J. Lim et al., 2008).

During the process of acculturation, immigrants experience acculturative stress that is associated with lower mental health status (confusion, anxiety, and depression), higher psychosomatic symptom level, and identity confusion (Berry, Kim, Minde, & Mok, 1987). Immigrants who are diagnosed with cancer reported even more stress from a variety of sources in addition to the stress of being an immigrant. With a cancer diagnosis, Korean Americans experienced more stress from 1) a lack of knowledge related to understanding U.S. health system (i.e. health insurance) and finding resources, 2) language barriers related to understanding health related materials after surgery, chemotherapy instructions, or side effects from clinicians and 3) a lack of support and recovery time from their own ethnic community because most of the patients and members from their own community worked and felt unsupported by the larger culture community. Patients felt that the larger community and Western culture, specifically, had different thoughts and ways of expressing oneself due to different values (i.e. individualistic vs. collectivistic value). Patients, therefore, were not able to get emotional support from them (Choi et al., 2012; H. Lee & Jin, 2013; S. Lee et al., 2013; J. Lim, Baik, & Ashing-Giwa, 2012; J. Lim et al., 2013; J. Lim et al., 2008). The search revealed no studies that examined acculturation level among family caregivers.

Discussion

This integrative review identified 14 studies focused on factors affecting the QOL of Korean American cancer patients and their family caregivers. The most common factors or topics that were studied were social support, communication, and acculturation, which all demonstrated significant relationships to QOL. More specifically, higher family support, better family communication, and higher level of acculturation, were associated with higher quality of life among Korean Americans. The central findings of this review are that both cancer patients and family caregivers: 1) were not able to receive health information in their own language, 2) received inadequate social support from both their own ethnic community and the western community, 3) had difficulty communicating with their children, 4) experienced acculturative stress, and 5) experienced the stigma of having cancer which hindered effective communication.

These findings are consistent with a literature review of studies of Asian American breast cancer survivors living in the U.S. (Wen, Fang, & Ma, 2014). In the literature review, quantitative studies found that cultural health beliefs, immigration stress, acculturation level, English proficiency, social support, and spirituality were associated with Asian American breast cancer survivors' quality of life. From qualitative studies, cancer survivors reported lack of physical and emotional support, lack of knowledge and language barrier during cancer survivorship.

The integrative review also revealed a lack of studies describing the QOL of family caregivers of Korean American cancer patients. Although there was insufficient number of studies for the present review, the importance of assessing family caregivers is evident from other studies of Korean American caregivers facing chronic illness. For example, other studies found that Korean American caregivers had higher levels of depression, burden, and anxiety than White Americans caregivers (E. Lee & Farran, 2004; Youn, Knight, Jeong, & Benton, 1999). Another study reported differences between the type of support preferred by Korean national caregivers and Korean American caregivers. Korean Americans wanted more emotional support and Korean caregivers wanted more instrumental support (Chun, Knight, & Youn, 2007). An important source of stress for Korean American caregivers is that caregiving is viewed as an obligation in Korean American culture, which means that instead of using the word "burden" to describe the negative experience of caregiving typically used by Western caregivers, Koreans describe the experience as one of being "trapped" (Han, Choi, Kim, Lee, & Kim, 2008).

To understand more about Asian caregivers of cancer patients, additional studies were retrieved. These studies indicated that majority of native Korean (67%) and Taiwanese (75.9%) family caregivers of cancer patients had high levels of depression (Rhee et al., 2008; Tang, Li, & Liao, 2007) and that they also reported more depressive symptoms and lower QOL than the control group (Jong et al., 2011). Factors that negatively influenced or lowered Asian caregivers' QOL were: financial problems, lack of family and community support, negative impact on health, and lack of education regarding symptom management (Jong et al., 2011; S. Park et al., 2010). Factors that increased or were negatively related to Asian caregiver's burden were old age, female gender, low income level, low education level, unmarried marital status, and lack of other caregiver support (C. Park et al., 2012).

Similar to Korean American cancer patients, Asian caregivers who identified a religious affiliation had a more positive view of their caregiving role (C. Park et al., 2012). Interestingly, Korean native caregivers of cancer patients who had more burden due to a 'disrupted schedule' had higher QOL (Jong et al., 2011). They also reported more positive and closer relationships with patients and changed priorities in life (C. Park et al., 2012). Both studies suggested that family caregivers in Korea who are influenced by Confucianism perceive caregiving as a repayment to their parents or filial duty. Thai family caregivers of cancer patients reported having a similar caregiving perspective that emphasized filial duty (Meecharoen, Northouse, Sirapo-ngam, & Monkong, 2013). The findings of this integrative review, as well as the findings from the additional studies of Asian caregivers, demonstrate the importance of cultural roles and values in understanding their experience as caregivers.

Limitations of Existing Literature

This review is constrained by a number of limitations in the existing literature on the QOL of cancer patients and caregivers. First, only three studies (Choi et al., 2012; H. Lee & Jin, 2013; J. Lim et al., 2008) focused exclusively on Korean American cancer survivors. Although the remaining studies included Korean American as one subgroup of Asian Americans, analyzing the experiences of only Korean American cancer survivors was challenging. Second, the majority of the studies were focused on breast cancer survivors (Ashing Giwa et al., 2004; Choi et al., 2012; J. Kim et al., 2006; S. Lee et al., 2013; J. Lim et al., 2012; J. Lim et al., 2013; J. Lim, 2014; J. Lim & Ashing-Giwa, 2013; J. Lim & Paek, 2013; Tam Ashing et al., 2003), which limited our understanding of the relationship between support, communication and acculturation among patients coping with other types of cancer. Third, there was only one study (J. Lim, 2014) that included family caregivers and this study did not have an adequate sample size. In fact, very few of the cited studies had an adequate number of Korean Americans in their samples. Finally, the research designs in prior studies were limited to secondary analyses, cross-sectional or qualitative designs, limiting our understanding of the experience of these patients and caregivers over time.

Direction for Future Research

Given the paucity of research on Korean American cancer patients and their caregivers, there is a clear need for more research including descriptive, exploratory, and longitudinal studies that focus only on Korean Americans, especially since this population is projected to increase. Also, more studies are needed that will include family caregivers of cancer patients since the family of Korean American cancer patients is their main source of social support. In conclusion, future research needs to 1) describe the level of QOL of both Korean American caregivers and cancer patients, 2) describe how caregivers perceive their roles as caregivers, 3) identify factors that affect patient's and caregivers' QOL, and 4) identify their needs for care from health care professionals.

Implications for Practice

Understanding and acknowledging the cultural background of Korean American cancer patients and their family caregivers is essential to improve their QOL. Based on the concept of Confucianism and filial piety, Korean American cancer patients and their family caregivers may not seek professional help to build social support, improve communication skills, or report feelings of depression or stress. Clinicians may want to pay closer attention to the quality of family communication as families prefer to resolve conflicts internally or they may try to avoid even talking about conflict issues. Therefore, providing a safe environment for both cancer patients and their family caregivers to talk about health-related issues is important. It is also important for health professionals to understand that Korean Americans may prefer to make medical decisions as a family rather than leave these decisions to the patient only. This will have implications for issues of confidentiality within the family and information sharing. In addition, clinicians will need to be aware that many elderly Korean Americans have language barriers, which prevents them from understanding health information available only in English.

Since most Korean Americans rely on their own ethnic community centers and churches for social support to extend their social networks and to access health services, clinicians or public health nurses may need to work with those ethnic community-based organizations to provide culturally effective nursing interventions. Collaborating with Korean American community centers is critical since they have individuals who can use English, Korean, or both languages to help patients and caregivers. Since community centers could have already established good rapport and relationships with patients and caregivers, providing education or support groups through community centers can provide safe environment for patients and caregivers to talk about their emotions or ask for help. For second-generation caregivers or patients who prefer to join non-Korean American organizations, an organization like the Cancer Support Community can be a useful resource where they can receive psychosocial care at no cost.

Finally, acknowledging the importance of providing culturally appropriate programs at non-profit organizations is imperative. Western-oriented therapy or support groups focus on open communication, talk about conflicts, and emphasize individuals as compared to the family (Leong & Lau, 2001)—features of therapeutic approaches that are more difficult for people from Asian cultures. Modifications of this form of therapy (such as a greater emphasis on spirituality) are needed to enhance the effectiveness of therapy or support group for Korean Americans or other ethnic groups who follow Confucianism values.

In summary, by 2050, the expected Asian population in the US will reach 9% overall and will be higher in specific localized areas of the country. If health care providers do not make an effort to learn and acknowledge the various cultural values, the health disparity of minority cancer patients and their family caregivers may increase. Health care providers will need to identify and understand the strengths and challenges facing racial and ethnic minority cancer patients and their family caregivers to improve their quality of life.

Table 2.1 Findings from Studies in the Integrative Review

Authors/ Date	**Study Sample/ Mean Age (*M*)**	**Type & Stage of Cancer (Korean Americans Only)**	**Design**	**Instruments or Interview Topics**	**Study Findings Only Related to Korean Americans (KA)**
Ashing et al., 2003	N=34 patients Korean Americans: n = 11, *M* = 56 years Chinese: n = 10, *M* = 56 years Mixed Asian group: n = 13, *M* = 53 years	Breast Cancer Stage 0, I & II = 10, Stage III & IV = 0, Unknown = 1	Qualitative (semi-structured and focus group)	• Health care access • Cultural, socio-ecological factors • Barriers to health care and psychosocial care • Role of the health care system • Patient-physician relationship • Medical adherence	Faith in God was major coping mechanism. Family members were the major social support but also caused stress by needing to meet their role expectations even after diagnosis. More fearful of pain than death. Preferred doctors to decide the treatment and perceived that asking too many questions could result in negative relationship with their doctor. Cancer decreased intimate relationships.
Ashing et al., 2004	N=101 patients Korean Americans: n = 11, *M* = 56 years Chinese: n = 10, *M* = 56 years Asian bilingual: n = 13, *M* = 53 years Caucasians: n = 12, *M* = 55 years	Breast Cancer Stage 0, I & II = 10, Stage III & IV = 0, Unknown = 1	Qualitative (focus group interview)	• Health beliefs • Health socialization • Relationships • Quality of care • Socio-ecological factors	KA felt physically and psychologically supported by other cancer survivors. Having Korean neighbors asking about their health status made survivors feel supported. Survivors emphasized having strong positive attitudes was important. Women had decreased sex desire but felt obligated to satisfy their partners.

Table 2.1 Demographic and Findings of Studies in the Integrative Review *(Continued)*

Authors/ Date	**Study Sample/ Mean Age (*M*)**	**Type & Stage of Cancer (Korean Americans Only)**	**Design**	**Instruments or Interview Topics**	**Study Findings Only Related to Korean Americans (KA)**
Kim et al., 2006	N=206 patients Korean Americans: n = 29, *M* = 53 years Chinese Americans: n = 85, *M* = 54 years Filipino Americans: n = 39, *M* = 55 years Japanese Americans: n = 26, M = 57 years Mixed Asian group: n = 27, M = 52 years	Breast Cancer Stage 0, I & II = 25, Stage III & IV = 4	Quantitative (Cross-sectional)	• FACT-B • BCS • SAS • ULSS • SSS	KAs had the least college education and health insurance. They had the lowest scores for all HRQOL subscales, least likely to be acculturated, and most likely to be stressed than other Asian American ethnic groups. KAs had the second lowest social support score following Chinese-Americans. Being KA was associated with poor HRQOL when covariates were controlled.
Lim et al., 2008	N=51 patients Korean Americans: N = 51, *M* = 56 years	47 breast cancer, 4 gynecologic cancer. Stage 0, I & II = 42, Stage III & IV = 7, Not reported = 2	Quantitative (cross-sectional)	• QOL-CS • BSI-18 • MOS SSS • SNI • AAMAS	The study found significant relationships among acculturation, social support, depressive symptoms, and multi-dimensional QOL. Higher acculturation was associated with positive network structures and lower depressive symptoms, which ultimately resulted in better QOL. Acculturation influenced QOL through social support

AAMAS: Asian American Multidimensional Acculturation Scale; BCS: Breast Cancer Subscale; BSI-18: Brief Symptom Inventory-18; FACT-B: Functional Assessment of Cancer Therapy-Breast; MOS SSS: Medical Outcomes Study Social Support Survey; QOL-CS: Quality of Life- Cancer Survivor; SAS: Short Acculturation Scale; SNI: Social Network Index; SSS: Social Support Scale; ULSS: Urban Life Stressor Scale

Table 2.1 Demographic and Findings of Studies in the Integrative Review *(Continued)*

Authors/ Date	**Study Sample/ Mean Age (*M*)**	**Type & Stage of Cancer (Korean Americans Only)**	**Design**	**Instruments or Interview Topics**	**Study Findings Only Related to Korean Americans (KA)**
Lim & Zebrack (2008)	N=161 patients Korean Americans: n = 51, *M* = 56 years Koreans living in Korea: n = 110, *M* = 51 years	47 breast cancer, 4 gynecologic cancer. Stage 0, I & II = 42, Stage III & IV = 7, Not reported = 2	Quantitative (cross-sectional)	• QOL-CS • BSI-18 • MOS SSS • SNI	Korean Americans had smaller networks, and less involvement with social ties than their native Korean cancer survivors. Network involvement did not influence Korean Americans' QOL but influenced native Korean cancer survivors' QOL. Social support positively influenced Korean Americans' QOL outcomes and network diversity positively influenced Korean Americans' perceived social support.
Lim & Yi (2009)	N=161 patients Korean Americans: n = 51, *M* = 56 years Koreans living in Korea: n = 110, *M* = 51 years	47 breast cancer, 4 gynecologic cancer. Stage 0, I & II = 42, Stage III & IV = 7, Not reported = 2	Quantitative (cross-sectional)	• SF-36 • BSI-18 • QOL-CS (spiritual well-being subscale) • MOS SSS	Social support was a partial mediator between spirituality and QOL which was observed for only Korean Americans. Higher religiosity was related to fewer depressive symptoms and lower anxiety levels. Higher spirituality was related to better physical QOL. 70% of Korean Americans were affiliated with Christianity and only 2% indicated no religion.

BSI-18: Brief Symptom Inventory-18; MOS SSS: Medical Outcomes Study Social Support Survey; QOL-CS: Quality of Life- Cancer Survivor; SF-36: Short-Form Health Survey; SNI: Social Network Index

Table 2.1 Demographic and Findings of Studies in the Integrative Review *(Continued)*

Authors/ Date	**Study Sample/ Mean Age (*M*)**	**Type & Stage of Cancer (Korean Americans Only)**	**Design**	**Instruments or Interview Topics**	**Study Findings Only Related to Korean Americans (KA)**
Choi et al., (2012)	N=11 patients Korean Americans: n = 11 (10 cancer survivors, 1 family member of cancer survivor) Age range: 35-67 years	Breast Cancer Stages not reported	Qualitative (participatory observation and in-depth interviews)	• Cancer experience • Underserved nursing care • Acculturation factors • Combined supports altogether	Survivors had acculturation barriers from limited English ability, different values, lack of health information in Korean, and communication barriers within 1st and 2nd generations. The barriers contributed to survivors' feel lonely, isolated, a lack of emotional and social support, and disconnected from the healthcare system
Lim et al., (2012)	N=206 patients Korean Americans: n = 29, *M* = 53 years Mixed group of Asian Americans: n = 177, *M* = 54 years 11 Korean Americans participated in the focus group.	Breast cancer Survey group: Stage 0, I & II = 25, Stage III & IV = 4 Focus group: Stage 0, I & II = 8, Stage III & IV = 3	Quantitative (cross-sectional) & Qualitative	• SAS • MHLC • ADQ Health behaviors: self-report about diet, exercise, and stress management Treatment-related decisions: self-report	Korean American cancer survivors were less acculturated than Asian American cancer survivors. Survivors' belief system consisted of gender role, family support, and trust or beliefs about God. Survivors emphasized the importance of positive doctor-patient relationship.
Lim and Paek (2013)	N=157 patients Korean Americans: n = 71, *M* = 54 years Chinese Americans: n = 86, *M* = 55 years	Breast cancer Stage 0, I & II = 58, Stage III & IV = 12, Not reported = 1	Quantitative (cross-sectional)	• FACES-FCS • DCS • PEP-PIS • SF-36	Korean Americans were less likely to receive decisional support than Chinese Americans. Family communication was directly associated with health-related QOL.

ADQ: Adherence Determinants Questionnaire; DCS: Decisional Conflict Scale; PEP-PIS: FACES-FCS: Family Adaptability and Cohesion Evaluation Scales-Family Communication Scale; MHLC: Multidimensional Health Locus of Control; Perceived Efficacy in Patient-Physician Interaction Scale; SAS: Short Acculturation Scale; SF-36: Short-Form Health Survey

Table 2.1 Demographic and Findings of Studies in the Integrative Review *(Continued)*

Authors/ Date	**Study Sample/ Mean Age (*M*)**	**Type & Stage of Cancer (Korean Americans Only)**	**Design**	**Instruments or Interview Topics**	**Study Findings Only Related to Korean Americans (KA)**
Lee & Jin (2013).	N=24 patients Korean Americans: N = 24 (9 from Minnesota, 15 from New York), *M* = 67 years	10 breast cancer, 5 stomach cancer, 4, colorectal cancer, 3 cervical cancer, and 2 prostate cancer. Stage 0, I & II = 18, Stage III & IV = 2, Unknown = 4	Qualitative	• Factors contributing to depression • Coping strategies for depression	Depression factors were different from the two states. Survivors from New York showed in need of social support and survivors from Minnesota needed more knowledge related to cancer. Similar coping strategies (i.e., social and religious support) to relieve depression were observed from the two states.
Lim & Ashing-Giwa (2013)	N=157 patients Korean Americans: n = 71, *M* = 54 years Chinese Americans: n = 86, *M* = 55 years	Breast Cancer Stage 0, I & II = 58, Stage III & IV = 12, Not reported = 1	Quantitative (cross-sectional)	• MOS SF-36 • FACES IV-FCS • FACC • FACES-III • MOS SSS • AAMAS	Korean Americans were less acculturated and less flexible in family functioning than Chinese Americans. Family communication was associated with survivors' physical QOL, social support was directly associated with family communication, and acculturation was directly related to social support.

AAMAS: Asian American Multidimensional Acculturation Scale; FACES-FCS: Family Adaptability and Cohesion Evaluation Scales-Family Communication Scale; FACC: Family Avoidance of Communication about Cancer; FACES-III: Family Adaptability and Cohesion Evaluation Scales-III; MOS SF-36: Medical Outcomes Study Short-Form Health Survey; MOS SSS: Medical Outcomes Study Social Support Survey

Table 2.1 Demographic and Findings of Studies in the Integrative Review *(Continued)*

Authors/ Date	**Study Sample/ Mean Age (*M*)**	**Type & Stage of Cancer (Korean Americans Only)**	**Design**	**Instruments or Interview Topics**	**Study Findings Only Related to Korean Americans (KA)**
Lee et al., (2013)	N=12 patients Korean Americans: n = 5 Chinese Americans: n = 4 Mean age of all survivors = 50 years old 3 oncologists that were born in Korea, India, and the U.S.	Breast cancer Stage 0, I & II = 7, Stage III & IV = 2 (Stages not reported by ethnicity)	Qualitative	For cancer survivors: • Physical health • Recurrence • Work • Depression • Anxiety • Stress • Talking about feelings • Social support For oncologists: • Issues that Asian women with breast cancer face • Patient-physician interaction when talking about fear and distress • Insights of patients participating support group.	Korean-American cancer Survivors' perceived stress from work and had limited resources to cope. Family was their main source of support but they did not want to burden them. Survivors had body-image issues and stigma associated with cancer. Survivors wanted culturally appropriate support groups. A Korean American oncologist reported that patients were reluctant to talk about cancer and noticed intergenerational issues between the survivor and family caregiver relationship.

Table 2.1 Demographic and Findings of Studies in the Integrative Review *(Continued)*

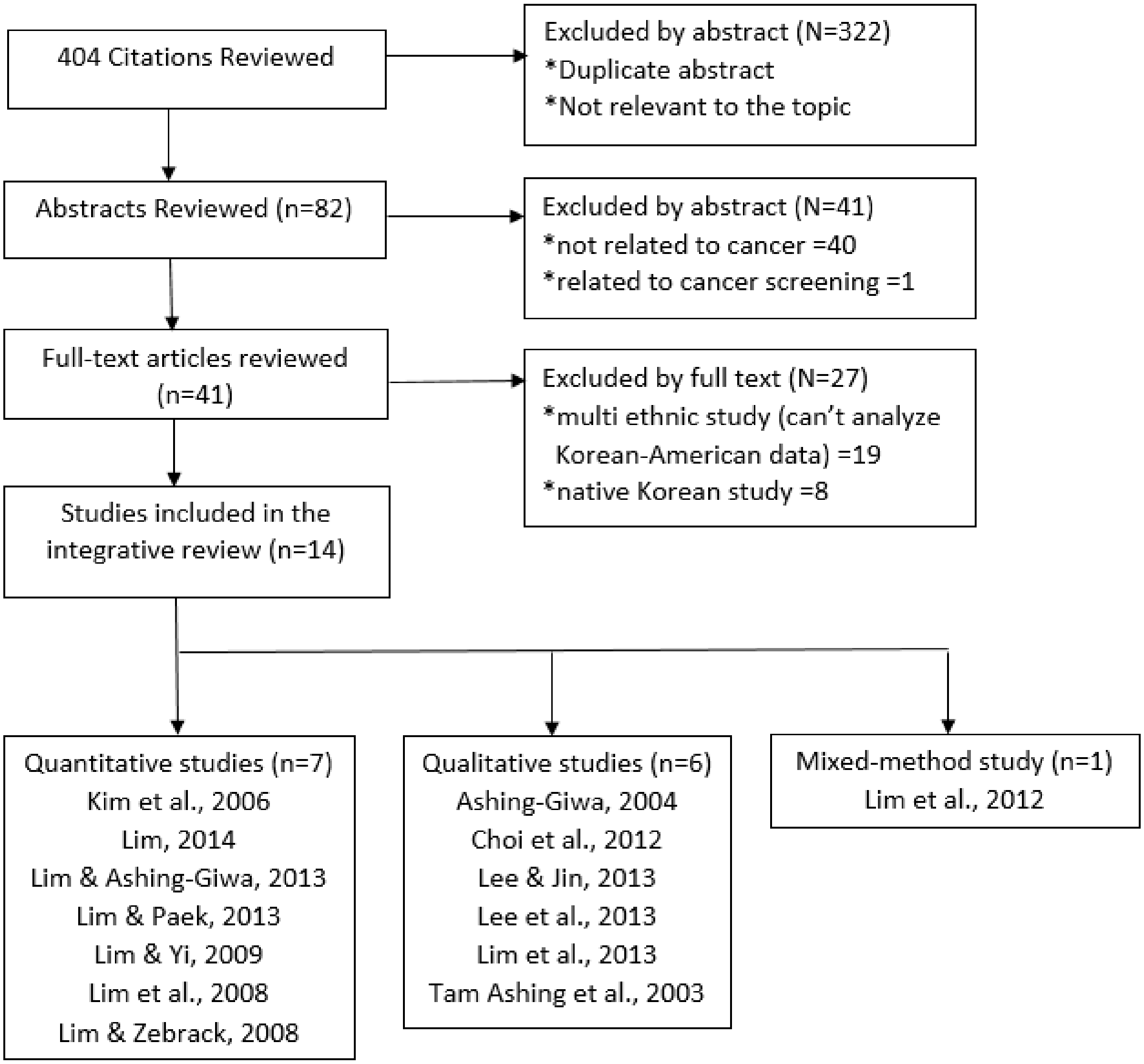
Authors/ Date	**Study Sample/ Mean Age (*M*)**	**Type & Stage of Cancer (Korean Americans Only)**	**Design**	**Instruments or Interview Topics**	**Study Findings Only Related to Korean Americans (KA)**
Lim (2014)	N=32 dyads Korean Americans: n = 14 dyads, (14 cancer survivors, 14 family members), *M* for survivors = 57.9 years, *M* for caregiver = 53.5 years Chinese Americans: n = 18 dyads, (18 cancer survivors, 18 family members), *M* for survivors = 55.9 years, *M* for caregiver = 51.6 years	Breast cancer Stage 0, I & II = 13, Stage III & IV = 1	Quantitative (Cross-sectional)	• MOS SF-36 • FACES IV-FCS • FACC • F-COPES	Results were combined with Chinese Americans. Cancer survivors' and family members' general communication positively predicted their own QOL. Cancer survivors' use of mobilizing, reframing coping, and spiritual support positively predicted their own QOL. Cancer survivors' higher score for general communication increased their family members' physical-related QOL. Cancer survivors' and family member's use of mobilizing coping was a negative predictor of his or her partner's QOL.

FACES-FCS: Family Adaptability and Cohesion Evaluation Scales-Family Communication Scale; FACC: Family Avoidance of Communication about Cancer; F-COPES: Family Crisis Oriented Personal Evaluation Scale; MOS SF-36: Medical Outcomes Study Short-Form Health Surve

Table 2.2 Qualitative Findings of Key Variables

Variables	Topics	Findings
Social support (Tam Ashing et al., 2003; Ashing-Giwa et al., 2004; Choi et al., 2012; Lee et al., 2013; Lee & Jin, 2013; Lim et al. 2013)	Family	"I believe that cooperation and love from family and husband have helped me a lot" "Families don't understand. They say they understand, but they expect us to be the same people as before the disease" "My family expects me to work and function the same as before the surgery" "I have been devoted to my family…I just tolerate everything as many Korean women do" "My children were busy…I was totally alone and felt tremendous loneliness and depression" "Even after getting chemo, I still had to take care of my children, so that was hard" "My children are barriers for me" "I am sure the fear is the same, or even more because they don't have as much family support in this country, but we don't hear as much (from Korean American oncologist)"
	Spirituality	"It has helped me stay strong" "It helped decrease pain through praying" "Religious beliefs protected me from being depressed" "I felt that everything would go well if I left it up to God… It also influenced my feelings about the doctor. I came to trust my doctor" "I have just realized that I can only hold onto God while I am alive… I don't need any people"
Communication (Ashing et al., 2003; Choi et al., 2012	Healthcare system	"I realized that (American) doctors are very friendly. It's frustrating that I can't communicate with them well" "We, first-generation Korean Americans, prefer Korean speaking doctors because of the language barrier" "I had a few consultation sessions with a doctor before surgery… It was a little regretful because I did not get any detailed information"
	Communication barriers among 1st vs. 2nd generation	"My mother is very emotional person… doesn't talk much… I think my thoughts become Americanize (from young adult breast cancer patient)"
Acculturative Stress (Choi et al, 2012; Lim et al., 2012)	Living as immigrant	"Most of immigrants have acculturative stress when they immigrate….I had stress from living together with my sister's family to save money" "Americans don't seem to share their emotions with immigrants like us. They don't try to talk to us first"
	Language barrier	"I felt stressed due to the language problem…. So I wonder if I would not have gotten cancer if I had stayed in Korea"

Figure 2.1 Consort Diagram



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Chapter III

Quality of Life and Depression of Korean American Cancer Patients and their Family Caregiver: A Descriptive Study

Introduction

Cancer is the leading cause of death for Asian Americans whereas heart disease is the leading cause of death for Whites, African-Americans, and American Indians (Heron, 2012). Among various groups of Asian Americans, Korean American is one of the fastest growing ethnic groups in the U.S. (Hoeffel, Rastogi, Kim, & Shahid, 2012) and, similar to other Asian groups, cancer is their leading cause of death. Despite a high cancer-related mortality, of the major Asian ethnic groups in the U.S., Korean Americans are least likely to have cancer screenings and health insurance (Huang, Li, Tsai, & Begier, 2013; McCracken et al., 2007).

Despite the significance of cancer to Korean Americans, few studies have assessed how cancer affects their quality of life (QOL) or depression; even fewer have assessed the well-being of family caregivers (Choi, Jun, & Anderson, 2012; H. Lee & Jin, 2013; Lim, 2014; Lim, Yi, & Zebrack, 2008; Lim & Zebrack, 2008). Research suggests that it is important to assess family caregivers as well as patients, because: 1) family caregivers are frequently identified as the main source of support to cancer patients (Girgis, Lambert, Johnson, Waller, & Currow, 2013), and 2) patients and family caregivers affect one another’s adjustment to cancer (Lim, 2014;

Northouse, Mood, Templin, Mellon, & George, 2000). Most studies of caregivers of cancer patients have focused on the Caucasian population. Accordingly, there is a need for more studies with caregivers of other cultural groups (Northouse, Katapodi, Song, Zhang, & Mood, 2010) and, specifically, with Korean American caregivers.

In addition to examining QOL and depression among Korean American cancer patients and their family caregivers, more research is needed on factors that may influence their cancer and caregiving experiences as reflected in their QOL and depression. Factors that warrant particular attention are their ethnic values, level of acculturative stress, available social support, and communication style. With regard to ethnic values, each individual has their own distinctive ethnic values with associated norms and expectations (Helman, 2014). Ethnic values also affect the way an individual conceptualizes health and can influence how it is manifested as a health problem or mental disorder (Aldwin & Greenberger, 1987). Little is known about whether and how Korean ethnic values (collectivistic) or modern, Western values (individualistic) impact QOL and depression for cancer patients and their caregivers.

Further, the concept of acculturative stress that occurs during adaptation to a new culture (Berry, Kim, Minde, & Mok, 1987) has been associated with lower mental health status, higher psychosomatic symptom, and identity confusion. High levels of acculturative stress ultimately affects individual's level of QOL and depression (Berry et al., 1987). Social support as the network of family, friends, neighbors, and community members who provide psychological, physical, and financial help when needed (National Cancer Institute, 2015), has been positively associated with both physical and mental QOL of Korean American cancer patients and family caregivers (J. Kim & Knight, 2008; Lim & Yi, 2009; Lim et al., 2008).

Finally, communication style is highly influenced by an individual's culture and ethnicity (Gudykunst, 2000). Korean immigrants' communication styles are influenced by two cultural values- individualism (low-context) vs. collectivism (high-context) after immigration. Using high-context communication style indicates that most of the information in messages are in the physical context or internalized in person and considered as indirect whereas low-context communication style messages are more clear and effective (Gudykunst, 2000). What is unknown is whether these two communication styles (individualistic or collectivistic) influence Korean American cancer patients' and their family caregivers' levels of QOL and depression.

The purpose of this study is to address these gaps in the research literature by examining perceptions of quality of life and level of depression reported by Korean American cancer patients and their family caregivers. The study also explored cultural, stress, and communication factors that are relevant to their illness/caregiving experiences. The specific objectives are to 1) describe the level of multidimensional QOL, depression, ethnic values, acculturative stress, social support, and communication style of Korean American cancer patients and their family caregivers, 2) compare patients' and family caregivers' scores on these study variables, and 3) determine whether patients' and caregivers' QOL and depression levels differ from other comparison groups of cancer patients and family caregivers of cancer patients.

Theoretical Framework

A socio-cultural stress and coping framework (Aranda & Knight, 1997), adapted from stress coping model by Lazarus and Folkman (1984), was used for the conceptualization of this study and guided the selection of variables. The stress-coping framework has been used to guide research in a number of cancer studies with cancer patients and their family caregivers (Kershaw et al., 2008; Northouse et al., 2007) and social-cultural stress coping framework has been used in Korean American caregiving studies (Chun, Knight, & Youn, 2007; J. Kim & Knight, 2008).

Methods

This descriptive, cross-sectional study was conducted to describe perceptions of quality life and depression of Korean American cancer patients and their family caregivers. Additional factors of interest are: ethnic values, acculturative stress, social support, communication style, and appraisals of illness and caregiving.

Subject Recruitment

Patients were eligible for the study if they met the following criteria: 1) self-identified as a Korean American, 2) had a confirmed diagnosis of any type of cancer within the past 5 years, 3) aged 18 years or older at diagnosis, 4) able to speak English or Korean, and 5) had a family caregiver willing to participate in the study. Family caregivers were eligible if they met the following criteria: 1) identified by the patient as her/his primary source of emotional and physical support, 2) self-identified as a Korean American, 3) 18 years of age or older, and 4) speak English or Korean. In this study “family caregiver” refers to the family member or significant other, regardless of relationships by blood or marriage, who provide physical or emotional care (or both) to the person with cancer. If either the patient or family caregiver was unwilling or unable to participate in the study, the dyad (patient and caregiver) was not eligible to participate in the study.

The study was approved by the Institutional Review Board (IRB) at the University of

Michigan. Participants were recruited by advertising the study at Korean American health community agencies, ethnic churches and temples, senior apartments, and in local Korean American newspapers. Referrals were also obtained from Korean American physicians in Chicago, Illinois (urban and suburban areas) and in Ann Arbor, Michigan. Those responding to the advertisement or who were referred by their primary care physicians were reached by telephone for initial screening to determine their eligibility. After determining eligibility, a detailed explanation of the study was provided. Participants willing to participate in the study were given the option to complete questionnaires in person with the researcher or by mail and whether to complete questionnaires in English or Korean. Those opting to complete questionnaires in-person were scheduled for a meeting at the dyads' preferred time and location. Participants signed an IRB-approved consent form prior to completing questionnaires. Participants who wanted questionnaires mailed to them, were sent packets including the questionnaire and consent forms. Patients and caregivers were instructed to complete instrument packets separately. Participants received $15 for completing the questionnaire.

Instruments

Study scales (Ethnic Values and Communication Style) were translated from English to Korean using a rigorous translation and back-translation procedure by three Korean-English bilingual experts (Brislin, 1970). Any discrepancies from the translated version to original version were discussed by the experts and revised as needed to enhance clarity and meaning of questions. The internal consistency reliability of the scales and subscales ranged from 0.59 to 0.95 (Table 3). In this study, the majority of participants (95.8%) used Korean-version instruments.

Demographics and Individual Characteristics

The questionnaire was adapted for this study to obtain information about participants' sociodemographic and acculturation characteristics. For acculturation characteristics, questions related to years living in U.S., place of birth, principal language, and primary care physician's principal language were asked. In addition, medical characteristics for patients were collected including: cancer stage, type of cancer, year of cancer diagnosis, types of current treatment, and comorbidity. For family caregivers, number of hours of involved in caregiving per week were collected.

Quality of life

The Functional Assessment of Cancer Therapy-General (FACT-G, version 4) scale was used to measure quality of life of patients. The scale was develop by Cella and colleagues (1993) to assess four dimensions of QOL: physical, social/family, emotional, and functional. A slightly modified version of the FACT-G was used to assess the QOL of family caregivers (with permission of FACIT.org). The FACT-G contains 24 items with higher scores on the scale indicating a higher QOL (scores ranging from 0 to 108). Reliability and validity assessments of the scale have been reported by Cella and colleagues (1993) and others (Overcash, Extermann, Parr, Perry, & Balducci, 2001). The FACT-G has been translated in many languages including Korean using translation and back-translation procedures (Cella et al., 1993). The Cronbach alpha internal consistency reliability coefficient for the total Korean FACT-G scale (version 4) was 0.89 and subscales ranged from 0.78 to 0.90 when tested with 193 Korean women with breast cancer (E. Lee, Chun, Kang, & Lee, 2004).

Depression

The Kim Depression Scale for Korean Americans (KDSKA) was used to measure participants' level of depression (M. Kim, 2002). The KDSKA measures four domains of depression: *affective, cognitive, behavioral*, and *somatic*. Items in the *affective* subscale included "I felt sad or miserable without knowing why" or "I felt hopeless." For *cognitive* subscale, items such as "I felt ugly and stupid" or "I felt nervous and all my nerves were on edge" were included. For the *behavioral* subscale, an item such as, "I got angry or irritated more easily than usual" was included. Items in the *somatic* subscale included "I felt sick here and there without specific reason" or "my chest felt heavy, as if a rock was lying on it." The scale has 21 items and each item is a 4-point Likert-type scale and the sum score of all items can ranges from 0 to 63. In this study, one item was deleted "I thought about suicide" due to IRB recommendation because the sample was being recruited from community settings rather than affiliated with a health clinic. Given that the scale is in the early development stage, no cut-off points has been established for its use as a clinical tool. The scale had excellent reliability (Cronbach's alpha coefficient 0.94) when used in a sample of 154 first-generation Korean Americans (M. Kim, 2002). Strong construct validity was verified by confirmatory factor analysis between the factors and their indicators being statistically significant (M. Kim, 2002). Also, concurrent validity was obtained from statistical significant and positive correlations between four subscales of KDSKA and two other established depression scales: the Center for Epidemiological Studies Depression Scale and the Health Opinion Survey (M. Kim, 2002).

Ethnic values

Ethnic value was measured with Korean Traditionalism scale and Modern Value scale based on the interviews with Korean-American parents (B. Kim, 1980). The 7-item Korean

Traditionalism Value subscale (KTV) measures obedience, respect for authority, and the maintenance of social ties with family members using a Likert-type scale. Scores on the seven items are summed with higher scores indicating greater endorsement of Korean traditional values. The 4-item Modern Value scale measures self-reliance, autonomy, and assertiveness; high scores indicate greater endorsement of modern values. The Korean Traditional Values reflects the collectivistic orientation and Modern Values reflect an individualistic orientation. For this study, scales were translated and back translated into Korean by experts. Internal consistency reliability using Cronbach's alpha was 0.77 for KTV and 0.77 for KMV. In a sample of 61 Korean students living in the U.S, the KTV scale had an internal consistency reliability using Cronbach's alpha of 0.68 and 0.64 for Modern Value scale (Aldwin & Greenberger, 1987).

Social support

The Personal Resource Questionnaire 2000 (PRQ 2000) was used to measure perceived social support from others. PRQ 2000 was modified by Weinert (2003) from Personal Resource Questionnaire 85 (PRQ 85) (Weinert, 1987). The scale is comprised of 15 items, with possible scores that can range from 15 to 105, with higher scores indicating more perceived social support. PRQ 2000 was translated into Korean by Sung, Kim, and Lee (2012) and the internal consistency reliability based on Cronbach's alpha was 0.93 when assessed with 93 primary family caregivers of Korean elders with dementia.

Communication style

The Survey of Asian American Communication (SAAC) (Gudykunst, 2000) is a 34 item assessment written in English that measures 7 domains of Asian American communication styles. The SAAC was developed by combining four communication styles from Norton (1983) and three communication styles from Gudykunst and colleagues (1996). The two domains, *inferring meaning* and *interpersonal sensitivity,* were measured in this study. Both domains assess high-context communication style; that is, most of the information that is communication in interactions is either in the physical context or internalized in the person (Gudykunst, 2000). This type of communication is generally used by those who hold collectivistic values such as Korean Americans rather than those who hold individualistic orientations such as Caucasians (Cha, 1994). Each item is a 7-point Likert-type scale with higher scores reflecting higher use of higher-context communication style. For this study, *inferring meaning* and *interpersonal sensitivity* domains were translated and back translated into Korean by experts; internal consistency reliability using Cronbach's alpha was 0.87. In previous work, the internal consistency reliability using Cronbach's alpha of the subscales was 0.88 for *inferring meaning* and 0.61 for *interpersonal sensitivity* when assessed with a sample of 210 Asian American college students (Park & Kim, 2008).

Acculturative stress

The 12-item Acculturative Stress Scale (ASS) (Snyder, 1987) was used to assess the level of stress related to language difficulties, economic and social conflicts due to immigration, cultural value, and role conflicts caused from the acculturation process. ASS uses a 4-point Likert type scale with higher scores indicating greater acculturative stress. Three of 12 items in the scale were deleted to increase the reliability of scale when used in this study. Deleted items were "Not having enough money to pay debts", "To think of the welfare of family and friends left in Korea", and "To understand the values and culture in the U.S." The internal consistency coefficient of the 12-item Korean version of the scale was 0.84 when assessed in a study with

205 elderly Korean immigrants (≥ 60 years) (H. Han, Kim, Lee, Pistulka, & Kim, 2007) and was 0.76 in a study that assessed a sample of 147 Korean immigrants (Shin, Han, & Kim, 2007).

Appraisal of illness

The Health Self-Rating Scale in the Health and Activity Survey was developed by Northern Illinois University (Northern Illinois University, 1956) and used to measure patients' own level of perceived health status. The scale consists of 4 items and uses a three-point Likert type rating format with higher scores indicating greater appraisal of health status. The scale was translated into Korean by H. Kim and Park (1997). The internal consistency reliability alpha coefficient of the scale was 0.75 when assessed in a study of native Korean women with breast cancer (Tae, Heitkemper, & Kim, 2012).

Appraisal of caregiving

The Caregiver Reaction Assessment (CRA) is a 24-item scale that measures both positive and negative aspects of the caregiving experience with five subscales. Four subscales assess negative aspect of caregiving: 1) Disrupted schedule; 2) Financial problems; 3) Lack of family support; and 4) Health problems; one positive aspect of caregiving subscale is caregiver's self-esteem (Given et al., 1992). Higher scores of negative aspects of subscales represent a greater caregiver burden and higher caregiver's self-esteem represents less caregiving burden. Positive items in self-esteem subscale were reversed in this study to measure the degree of negative burden among caregivers. Each item is measured on a five-point Likert type scale. For each subscale, a total score was calculated as the average of the subsequent item scores ranging between 1 and 5. The subscales had internal consistency of Cronbach's alpha coefficient ranging from 0.80 to 0.90 when tested with 377 caregivers of persons with physical impairments and Alzheimer's disease (Given et al., 1992). The Korean version of CRA (CRA-K) scale was translated and validated with concurrent and known-group validity from 990 caregivers of cancer patients in South Korea (Yang et al., 2013). The internal consistency of Cronbach's alpha coefficients of subscales ranged from 0.68 to 0.79.

Statistical analysis

Descriptive statistics were used to examine the overall quality of life, depression, ethnic values, social support, communication style, acculturative stress and appraisal for patients and family caregivers. Matched *t*-tests were used to examine whether patients and family members differed on domains of QOL, depression, and other major variables. One-sample *t*-tests were used to determine whether participants' scores on the QOL, depression and other study instruments differed from comparative samples in other studies that involved similar sample populations.

Results

Sample and Individual Characteristics

The sample consisted of Korean American cancer patients currently living in the U.S. and one of their family caregivers. A total of 74 dyads were recruited to the study and, of these dyads, 3 dyads were ineligible. Of the 71 eligible dyads, 3 dyads (4%) refused and 8 dyads (11%) agreed to participate but did not complete the questionnaire packet. Sixty dyads completed the questionnaires (enrollment rate = 84.5%). A majority of participants (75%) completed the questionnaire through mail and 25% completed at their preferred location with the researcher.

The average age of patients was 62 ± 13.3 years (range, 31-85 years) and the average age of their family caregivers was 56 ± 17.5 (range, 22-85 years). A majority of patients (68.3%)

and half of family caregivers were females (53.3%). The caregivers of Korean American cancer patients consisted of spouses (71.7%), adult daughter (15%), friends (3.3%), adult son (1.7%), parent (1.7%), sibling (1.7%), and relatives (1.7%). Most patients and family caregivers had at least some college education or higher but half of them reported family incomes below $30,000 per year. Majority of patients were not employed (60%) whereas, half of the family caregivers worked (48.3%) outside of the home. For family caregivers, average hours of caregiving they provided per week was between 16-20 hours (Table 1). However, about 20% of caregivers provided over 50 hours of caregiving per week.

A little over half of patients had early-stage disease (56.4%) and 30% had advanced disease (see table 2). The most common types of cancer were breast, colorectal and stomach (see Table 1). About a half of patients completed treatment (55%) and some were receiving treatment which included chemotherapy (20%), hormone therapy (11.6%), surgery (6.7%), and radiation therapy (6.7%). Thirty-eight percent of patients had at least one comorbidity (Table 2).

Acculturation Characteristics

Over 95% of the cancer patients and 87% of their family caregivers were born in Korea. The average length of residence in the USA for both patient and family caregiver was about 25 years. The majority of participants spoke their native language at home (patients 88%; caregivers 86%) and said their physician spoke Korean (patients 62%; caregivers 82%).

Description of Patients' and Family Caregivers' Scores on Quality of Life, Depression, and Other Study Variables

The mean overall QOL score for patients was 80.9 and 79.3 for caregivers (see Table 3). Their scores on four domains for QOL are also listed in Table 3. The mean overall depression score for patients was 14.3 and for caregivers was 12.5. The mean subscale scores for the depression scale are listed in Table 3.

The mean Korean traditional value score for patients was 29.2 and 28.4 for caregivers. The mean modern value score for patients was 17.0 and for caregivers was 16.5. Patients and caregivers had similar levels of acculturative stress, 18.0 for patients and 17.9 for caregivers. The level of perceived social support for patients was 88.3 and for their caregivers was 85.5. The mean of patients' communication style was 53.6 and 52.4 for caregivers. The level of perceived health status was 18.0 for patients. The level of perceived caregiving burden for disrupted schedule subscale was 2.8, 2.2 for lack of family support subscale, 2.4 for health problem subscale, 2.8 for financial problems, and 3.7 for self-esteem.

Comparison of Patients' and Caregivers' Scores on Major Variables

A number of matched *t*-tests were conducted to compare patients' and family caregivers' scores on the major study variables (see Table 3). Patients did not differ significantly from family caregivers on the QOL score (overall) or on the four domains of QOL. There was no significant difference in their overall depression scores or on the depression subscale scores. No significant differences were also noted for their scores on the ethnic value scales, social support scale, communication style, and acculturative stress.

Comparisons of Participants' Scores to Other Study Findings

Comparisons with patients' QOL scores. A series of one-sample *t*-tests were conducted to compare patients' QOL scores to those scores reported in other published samples. One comparison study was comprised of Korean American breast cancer patients with either early stage disease (n=25) or advanced stage disease (n=4) (J. Kim, Ashing-Giwa, Singer, & Tejero, 2006). The other comparison study involved a large sample of U.S. adult cancer patients (N=2,236) with majority sample being non-Hispanic White or Black (Brucker, Yost, Cashy, Webster, & Cella, 2005).

As compared to the Korean American sample of breast cancer patients in Kim et al.'s (2006) study, patients in the current study reported significantly higher total QOL, and higher social and functional well-being. For the second comparison with the large U.S. national adult cancer patients (Brucker et al., 2005), Korean-American patients in this study did not differ from the national sample of cancer patients on overall QOL scores or the physical, social, and emotional well-being subscales. There was a significant difference in their functional well-being scores, with the U.S. sample reporting significantly lower functional well-being (Table 4).

Comparisons to family caregivers' QOL score. The QOL scores of the Korean American family caregivers in this study were compared to those of family caregivers of cancer patients from other studies who also completed the same modified FACT-G scales used in this study. The first comparison was with family caregivers of patients with newly diagnosed prostate cancer and majority of them were Non-Hispanic White (Northouse et al., 2007). Korean American family caregivers' QOL in this study had significantly lower overall QOL scores as well as lower physical, social, and functional well-being subscales than did family caregivers in the comparative study (Table 5). There was no significant difference in emotional well-being scores between the two groups of caregivers.

For the second comparison, family caregivers in this study were compared to family caregivers of cancer patients with several forms of cancers, with breast cancer being the most common type of cancer of patients (Dockham et al., 2015). Family caregivers' QOL in this study did not differ from the family caregivers with mixed type of cancer for the overall QOL scores nor for physical, social, and function well-being subscales. There was a significant difference in their emotional well-being scores (Table 5), with caregivers in the Dockham et al. (2015) study reporting significantly lower emotional well-being.

Comparison to patients' and family caregivers' depression scores. A series of one-sample *t*-tests were conducted to compare patients' and family members' depression scores to those scores reported in a previous study of first-generation Korean American immigrants without cancer (N=154) (M. Kim, 2002). Patients in this study reported significantly lower scores on the behavioral subscale (e.g., get angry, did not feel like talking) and higher scores on the somatic subscale (e.g., chest felt heavy, mind pain, no sexual desire) than the sample of Korean American immigrants without cancer (M. Kim, 2002). Similarly, family caregivers in this study also reported significantly lower behavioral subscale scores and higher somatic subscale scores than the sample of Korean American immigrants without cancer.

Discussion

Characteristics of Korean American Cancer Patients and Caregivers

This study provided information about the characteristics of Korean American cancer patients and their family caregivers living in the U.S. Over 30% of patients and their caregivers were living well below U.S. poverty line ($24,250 for a family of 4) (United States Deparment of Health and Human Services, 2015) and additional 20% were living close to the poverty line. However, over 60% of the participants had college or higher education which exceeded the U.S. general population's education attainment (34%) (United States Department of Education, National Center for Education Statistics, 2014). Having higher education attainment but living poor is a common situation for Asian Americans with a history of immigration as they are less able to transfer their education credentials to the U.S. labor market. Further, elderly Korean Americans is one of the ethnic groups that live in poverty (Asian American Foundation [AAF], 2008). A report from AAF (2008) indicates that more than a quarter of Korean American seniors live in poverty suggesting that this older ethnic group could have considerable financial difficulties as they seek medical care during cancer treatment. Therefore, more ethnically focused assessment is needed in this group to identify financial barriers or limitations in seeking and accessing medical care.

Comparisons between patients' and caregivers on study variables

Results from the series of matched *t*-tests indicated that patients did not differ significantly from caregivers in QOL, depression, ethnic values, social support, communication style, and acculturative stress. Their similar scores may be related to the fact that both were feeling the effects of the illness, and each person's response can affect the other (Segrin, Badger, Dorros, Meek, & Lopez, 2007). Also, the majority of both patients and caregivers had lived in the U.S. for comparable number of years, were born in South Korea, and spoke Korean as their mother language. This suggest that these similarities of experience may account for their comparable levels of ethnic values, availability of social support, communication style, and the level of acculturative stress.

Differences between study findings and other comparative studies

Comparisons of findings from the current to prior studies were difficult for two reasons: 1) few studies assessed Korean American cancer patients and their caregivers, and 2) comparison studies often used different instruments. Nevertheless, it was important to examine findings from other studies to give a context to the findings in this study.

Patient's QOL findings. The one-sample *t*-tests indicated that Korean American cancer patients' overall QOL, social and functional well-being in this study were better as compared to Korean American breast cancer patients' QOL in a study by J. Kim et al. (2006). Patients' scores in this study were also better when compared to the national adult cancer patients' QOL in the study by Brucker et al. (2005). The higher overall QOL among Korean American cancer patients in the current study versus the J. Kim et al. (2006) study could be related to differences in the gender and age of the patients in the two samples. In the study by J. Kim et al. (2006), the patients were younger and consisted of female cancer patients, being younger and female were related to lower QOL in prior studies (Parker, Baile, Moor, & Cohen, 2003). There are mixed findings in prior studies on the QOL of Korean American patients. One prior study indicated that Korean American cancer patients had the lowest QOL compared to other Asian ethnic groups (J. Kim et al., 2006), while another study reported that they have higher overall QOL (Lim & Ashing-Giwa, 2013). Further studies are needed with larger sample to understand the status of QOL of Korean American cancer patients.

Caregivers' QOL findings. Korean American caregivers in this study reported significantly higher emotional well-being than caregivers of patients with mixed type of cancer but lower overall QOL scores and physical, social, and functional well-being than spousal caregivers of prostate cancer patients. The findings with caregivers from this study are consistent with prior findings in a study by Pinquart & Sorenson (2005) that ethnic minority caregivers have poorer physical health but better psychological health than White caregivers. Also, the findings from this study are different from results obtained in studies with Caucasian caregivers from a Western population that caregivers typically report better physical QOL and lower emotional QOL than their cancer patients (Northouse et al., 2002).

Traditional female gender roles in Korean culture expect caregivers to manage physical demands including household chores, cooking for the family, and taking care of children (Pak, 2006; Pyong, 2001) which may have implication for assessments of physical and functional QOL. On top of all these expectations, more immigrant Korean American women work outside home to help family financially as compared to their native counterparts in Korea (Casado & Sacco, 2012). As a result, being Korean American woman and a caregiver may have caused physical burdens for these women that are similar to their cancer patients. Thus, it is likely that the lower level of physical and functional well-being of Korean American family caregivers, compared to caregivers in the U.S. is more related to their traditional Korean gender role and the multiple demands they face. Also, prior studies indicate that ethnic minority family caregivers provide longer hours of caregiving and greater number of caregiving tasks than White caregivers (Dilworth-Anderson, Williams, & Gibson, 2002; Pinquart & Sörensen, 2005). Therefore, Korean American caregivers' lower physical and functional well-being may result from the difficulty of fulfilling both their cultural role and caregiving role.

For emotional QOL, Korean American caregivers reported higher emotional well-being than Caucasian caregivers possibly due to their belief that their daily caregiving role is an obligation they need to accept and fulfill. It is important to note that filial piety is a Confucianism value strongly endorsed and expected by the Korean society. Hence, the Korean American caregiver may not hold negative emotional feelings as they believe they are fulfilling their expected caregiver role. Korean Americans can still experience caregiver burden because they typically describe caregiving experience as being “trapped” rather than “burdensome” (H. Han, Choi, Kim, Lee, & Kim, 2008). Compared to burden scores obtained using the same measure, caregivers in this study had higher negative burden (i.e., disrupted schedule, health problem, and financial problem) but lower positive caregiving aspect, self-esteem, than caregivers in a study of newly diagnosed colorectal cancer patients in the Netherlands (Nijboer, Triemstra, Tempelaar, Sanderman, & van den Bos, 1999). However, given their strong acceptance of filial piety in Korean American society, Korean American caregivers’ burden may not be manifested or reflected in their emotional well-being assessment.

Patients’ and caregivers’ depression finding. To author’s knowledge, this is the first study that compared the depression level between cancer patients and family caregivers of Korean Americans. Although there were no differences between them, when their depression levels were compared to Korean American elderly immigrants’ depression from M. Kim (2002) study, significant findings were found. Significant findings were that both cancer patients and family caregivers had higher somatic depressive symptoms and lesser behavioral depressive symptoms than Korean American elderly immigrants without cancer. The findings may indicate that having cancer and being a caregiver of a cancer patient are associated with depression, and it is more likely that the symptoms are expressed through somatic complaints. Also, in our study, there were more female patients and female caregivers than in the comparative sample and generally female exhibit more somatic depression associated with anxiety disorder than males (Silverstein, 1999).

Significantly lower behavioral depression in the current study than Korean American immigrants from M. Kim (2002) study can be due to comparative sample being younger and employed (more demands on their time) than being older and not employed. Sixty-nine percent of M. Kim (2002) study sample was employed (full-time 55%, part-time 14%) whereas 28.4% of patients (full-time 16.7%, part-time 11.7%) and 48.3% of caregivers (full-time 35%, part-time 13.3%) in this study were employed. Furthermore, in general, elderly Korean Americans have higher somatic complaint than younger Korean Americans (Pang, 2000). Therefore, older cancer patients and caregivers in this study showed fewer behavior symptoms (getting angry, wanting to stay away from people, talking less, and waking up late) but more somatic complaints (chest feeling heavy, feeling sick and there without specific reason).

This study helped to describe the characteristics of the caregivers of Korean American cancer patients. Findings indicated that the majority of caregivers in this study were spouses like Western caregivers (Northouse et al., 2010) rather than adult children, children-in law, or siblings which is more common among native Korean caregivers (Rhee et al., 2005; Song et al., 2011). The differences of caregiver types of Korean Americans as compared to native Koreans could be related to Korean Americans having limited social support in the U.S. Limited social support is common among elderly immigrants due to their short immigrant history (Kang, Basham, & Kim, 2013), fewer relatives, family members, and friends in the U.S. (S. Lee et al., 2013), and language and cultural barriers (Scheppers, Van Dongen, Dekker, Geertzen, & Dekker, 2006).

In addition, seeking help in Korean culture is viewed as putting burden on someone (J. Lim, 2014), a perception that persists in regardless of numbers of years lived in the U.S. (S. Lee et al., 2013). As a result, elderly patients or caregivers may have difficulty asking for support from outside of their family members. This suggests that Korean Americans may have limited types of caregivers during cancer and their quality and quantity of social support may not be sufficient or may be culturally constrained as compared to Western caregivers. The low quality of social support among Korean American caregivers was reported by J. Kim and Knight (2008) in which caregivers in their study provided more than 9 years of caregiving with an average of 43 caregiving hours per week. Low quantity of social support among Korean American caregivers is a concern because of the presence of lower QOL and higher depression among Korean American cancer patients (Lim et al., 2008; Lim & Zebrack, 2008) which could negatively impact the caregiver. Thus, intervention programs to enhance quality of social support and to expand social support systems may help to increase QOL and decrease depression.

There were several limitations in this study. First, the study relied on convenience sampling method which limits generalizability to Korean American cancer patients and family caregivers living in the United States. Additionally, recruitment locations were in urban and suburb areas in the Midwest, and involved two Korean American community centers that provided services in Korean. The presence of these Korean American centers could have affected the level of perceived social support. Therefore, generalizability of the study may be limited to geographic areas that have similar Korean community resources similar to this study. Second, the sample size was small and heterogeneous in regard to type and stage of cancer. Since Korean American cancer patients and their family caregivers are a small ethnic group in the U.S. population, less restrictive eligibility criteria regarding type and stage of cancer was necessary in order to obtain the sample for this study. Third, generalizability of the study can be limited to Korean American cancer patients and family caregivers or only those ethnic groups that share similar values.

Findings from this study suggest implications clinical practice and future research. From a clinical perspective, this study suggests that ethnic minority populations, particularly those who have recent immigration history to the U.S. like Korean Americans, which majority of them immigrated about 50 years ago, may have low quality and quantity of social support due to geographic distance and the presence of support resources in their country of origin. Therefore, a detailed assessment of patients' and caregivers' needs is necessary to provide effective support resources and ultimately increase their QOL and decrease depression. Another clinical implication is that clinicians need to be aware that Korean Americans express symptoms of depression through somatic complaints. Expressing depression through somatic complaints is a common feature in Korean culture because expressing emotional feelings verbally is discouraged (M. Kim, 2002). Therefore, clinicians will need to pay closer attention to patients' and caregivers' somatic complaints, such as back pain, headaches, indigestion, and chest pain.

More research is needed on Korean American cancer patients and their family caregivers to better understand cultural, acculturation and social support influences during the cancer experience and to effectively tailor nursing interventions to this population. In addition, future studies may need to identify culturally appropriate predictors of QOL and depression to develop more effective interventions for them.

In conclusion, the study added to the limited literature about Korean American cancer patients' and their family caregivers' characteristics, quality of life and depression. Even though their quality of life is generally good, they tend to have lower levels of support and would benefit from tailored interventions to help them manage the illness.

Table 3.1 Demographic Characteristics of Sample

Demographic Characteristics	Patients	Caregivers
	n=60	n=60
Age, Mean (SD)	61.6 (13.3)	56.2 (17.5)
Range	31-85	22-85
Gender, N (%)		
Male	19 (31.7)	28 (46.7)
Female	41 (68.3)	32 (53.3)
Education, N (%)		
Less Than high school	6(10)	5 (8.3)
Graduated high school	17(28.3)	13 (21.7)
College and more	37(61.7)	41 (68.3)
Missing	-	1(1.7)
Income, N (%)		
< $15,000	22(36.7)	20(33.3)
$15,001-30,000	10 (16.7)	12 (20.0)
$30,001-50,000	9 (15.0)	8 (13.3)
$50,001 or more	12 (20.0)	17 (28.3)
Missing	7 (11.7)	3 (5.0)
Marital status, N (%)		
Married/Partnered	49 (81.7)	50 (83.3)
Divorced	6 (10)	0 (0.0)
Widowed	1 (1.7)	0 (0.0)
Never married	1 (1.7)	9 (15.0)
Missing	3 (5.0)	1 (1.7)
Employment, N (%)		
Full-time	10 (16.7)	21 (35.0)
Part-time	7 (11.7)	8 (13.3)
Household	9 (15)	7 (11.7)
Retired	27 (45.0)	17 (28.3)
Others	5 (8.3)	6 (10.0)
Missing	2 (3.3)	1 (1.7)
Dyad relationship, N (%)		
Patient-Spouse/Partner	43 (71.7)	
Patient-Child	10 (16.7)	
Son	1 (1.7)	
Daughter	9 (15.0)	
Patient-Friend	2 (3.3)	
Patient-Parent	1 (1.7)	
Patient-Sibling	1 (1.7)	
Patient-Relatives	1 (1.7)	

Missing	2 (3.3)	
Current Living Status, N (%)		
Living together	53 (88.4)	56 (93.3)
Not living together	5 (8.3)	4 (6.7)
Missing	2 (3.3)	0 (0.0)
Hours of Caregiving per Week, N (%)		
0-10	-	20 (33.2)
11-20	-	10 (16.7)
21- 40	-	8 (13.4)
Over 50	-	14 (21.7)
Missing	-	9 (15.0)
Years Living in USA, N (%)		
< 10	6 (10.0)	10 (16.7)
11-20	17 (28.3)	13 (21.7)
> 21	34 (56.7)	36 (59.9)
Missing	3 (5.0)	1 (1.7)
Mother Language, N (%)		
Korean	53 (88.3)	52 (86.7)
English	1 (1.7)	3 (5.0)
Both (Korean & English)	4 (6.7)	5 (8.3)
Missing	2 (3.3)	0 (0.0)
Place of Birth, N (%)		
Korea	58 (96.7)	52 (86.7%)
USA	0 (0.0)	5 (8.3)
Other country	2 (3.3)	3 (5.0)
Primary Care Physician's Language, N (%)		
Speaks Korean	37 (61.7)	49 (81.6)
Speaks only English	19 (31.7)	10 (16.7)
Missing	4 (6.6)	1 (1.7)

Table 3.2 Medical Characteristics

Medical Characteristics	Patients
Type of Cancer, N (%)	
Breast	19 (31.6)
Colorectal	10 (16.6)
Stomach	7 (11.7)
Prostate	5 (8.3)
Thyroid	4 (6.7)
Lymphoma	4 (6.7)
Lung	3 (5.0)
Liver	2 (3.3)
Oral	2 (3.3)
Kidney	1 (1.7)
Leukemia	1 (1.7)
Skin	1 (1.7)
Ovarian	1 (1.7)
Stage, N (%)	
0	8 (13.3)
I	10 (16.7)
II	16 (26.7)
III	13 (21.7)
IV	5 (8.3)
Unknown	1 (1.7)
Missing	7 (11.7)
Years of Cancer Diagnosis, N (%)	
0	8 (13.3)
1	19 (31.7)
2	6 (10.0)
3	12 (20.0)
4	8 (13.3)
5	7 (11.7)
Current Treatment, N (%)	
No treatment	33 (55.0)
Chemotherapy	12 (20.0)
Hormone Therapy	7 (11.6)
Surgery	4 (6.7)
Radiation	4 (6.7)
Comorbidity, N (%)	
No Comorbidity	37 (61.7)
Have Comorbidity	23 (38.3)

Table 3.3 Patients' and Family Caregivers' Matched t-tests

		Patient		Family Caregiver			
Variable	Alpha*	Mean	SD	Mean	SD	Matched *t*	*p* value
Quality of life							
Physical	0.92	20.9	6.9	22.4	6.8	-1.31	0.23
Social	0.84	20.8	5.5	19.3	5.7	1.81	0.07
Emotional	0.85	18.4	4.6	18.0	5.8	0.47	0.39
Functional	0.86	20.8	5.0	19.4	6.4	1.36	0.30
FACT-G total	0.81	80.9	18.1	79.3	19.6	0.58	0.55
Depression	0.95	14.3	12.3	12.5	11.5	0.85	0.40
Affective	0.91	4.3	4.6	3.7	4.1	0.99	0.32
Cognitive	0.75	3.3	2.8	2.9	2.5	0.81	0.42
Behavioral	0.83	3.4	3.1	3.2	3.3	0.23	0.82
Somatic	0.61	2.9	2.0	2.4	2.2	1.20	0.24
Korean Traditional Value	0.77	29.2	4.3	28.4	4.1	1.23	0.27
Korean Modern Value	0.70	17.0	2.3	16.5	2.7	1.55	0.14
Social Support	0.93	88.3	13.4	85.5	13.3	1.60	0.27
Communication style	0.87	53.6	8.9	52.4	10.1	0.96	0.40
Acculturative Stress	0.71	18.0	4.8	17.9	5.8	0.05	0.96
Appraisal of Illness	0.77	7.8	2.2	-	-	-	-
Appraisal of Caregiving	0.83						
Disrupted schedule	0.72	-	-	2.8	0.82	-	-
Lack of family support	0.59	-	-	2.1	0.70	-	-
Health problems	0.81	-	-	2.4	0.94	-	-
Financial problems	0.68	-	-	2.8	1.03	-	-
Self-esteem	0.79	-	-	3.7	0.60	-	-

Note. Patients' and family caregivers' combined internal consistency reliability coefficient obtained in current study.

Table 3.4 Quality of Life One-Sample *t*-tests for Patients

	Current study X (SD)	Study 1 Korean American X (SD)	Study 2 U.S. cancer patients X (SD)	Study 1 *t* scores	Study 2 *t* scores
Quality of life					
Physical	20.9 (6.9)	19.3 (5.9)	21.3 (6.0)	1.84	-0.41
Social	20.8 (5.5)	17.9 (6.7)	22.1 (5.3)	4.14**	-1.72
Emotional	18.4 (4.8)	17.8 (5.3)	18.7 (4.5)	0.97	-0.49
Functional	20.8 (5.0)	17.1 (6.5)	18.9 (6.8)	5.72**	2.94*
FACT-G total	80.9 (18.1)	72.1 (19.9)	80.9 (17.0)	3.75**	0.01

Note. Study 1: Sample of 29 Korean American early-stage breast cancer patients; mean age 53 (Kim et al., 2006)

Study 2: Sample of 2,236 national adult cancer patients; majority were older than age 55, Non-Hispanic White (Brucker et al., 2005)

**p* < .005. ** *p* < .0005

Table 3.5 Quality of Life One-Sample *t*-tests for Caregivers

	Current study X (SD)	Study 1 Western caregivers X (SD)	Study 2 Western caregivers X (SD)	Study 1 *t* scores	Study 2 *t* scores
Quality of life					
Physical	22.4 (6.8)	25.3 (3.5)	22.8 (5.4)	- 3.24*	- 0.48
Social	19.3 (5.7)	22.8 (4.2)	18.7 (5.6)	- 4.56**	0.80
Emotional	18.0 (5.8)	17.0 (2.7)	15.3 (5.4)	1.30	3.52*
Functional	19.4 (6.4)	22.7 (4.5)	18.2 (5.7)	- 3.65*	1.59
FACT-G total	79.3 (19.6)	87.8 (11.6)	75.0 (16.7)	- 3.20*	1.59

Note. Study 1: Sample of 170 spousal caregivers of newly diagnosed prostate cancer patients; mean age 58 (Northouse et al., 2007)
Study 2: Sample of 37 caregivers of mixed types of cancer patients; mean age 53; (Dockham et al., 2015)
*$p < .005$. ** $p < .0005$

Table 3.6 Depression One-Sample *t*-tests

	Current study		Korean American immigrants		
	Patient X (SD)	Caregiver X (SD)	X (SD)	Patient *t* scores	Caregiver *t* scores
Total Depression	14.3 (12.0)	12.5 (11.2)	13.5 (11.1)	0.47	- 0.53
Affective	4.3 (4.6)	3.7 (4.0)	3.6 (4.0)	1.21	0.22
Cognitive	3.3 (2.8)	2.9 (2.5)	3.6 (2.7)	- 0.80	- 1.85
Behavioral	3.4 (3.2)	3.2 (3.2)	4.8 (3.8)	- 3.56**	- 3.74***
Somatic	2.9 (2.1)	2.4 (2.2)	1.7 (1.9)	4.17***	2.67*

Note. Study was compared to a sample of 154 first-generation Korean American immigrants; mean age 44 (Kim et al., 2002)
*$p < .01$. **$p < .001$. ***$p < .0005$

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Chapter IV

Factors Associated with Quality of Life and Depression among Korean American Cancer Patients and Their Family Caregivers

Introduction

By 2030, the incidence rate for cancer in ethnic minority groups is expected to increase by 99% compared to an increase of 31% for non-Hispanic whites (Smith, Smith, Hurria, Hortobagyi, & Buchholz, 2009). Asian Americans are expected to experience a 132% increase in cancer incidence by 2030 (Centers for Disease Control and Prevention, 2010). The expected increase of cancer among Asian Americans, coupled with the expected increase in cancer survival rates overall (American Cancer Society, 2014), indicates the need for more information about the experiences of Asian-American cancer patients and their family caregivers.

Among Asian Americans, Korean American is one of the fastest growing ethnic groups in the U.S. Korean Americans also have the lowest cancer screening rates among other Asian ethnic groups and are least likely to have health insurance (Huang, Li, Tsai, & Begier, 2013; McCracken et al., 2007). Korean American cancer patients also have the lowest quality of life (QOL) compared to other Asian ethnic groups (J. Kim, Ashing-Giwa, Singer, & Tejero, 2006) and Korean American immigrants are four times more likely to have depression than Whites or African Americans (Jang & Chiriboga, 2010). Unfortunately, there is little information about the social and cultural factors associated with Korean American cancer patients’ and their caregivers' QOL and depression (Lim, 2014). Prior studies report that, overall, ethnic minority family caregivers provide longer hours of caregiving, have fewer financial resources and lower levels of education. They also utilize more informal support than formal support than White caregivers and perceive caregiving as more of an obligation (Dilworth-Anderson, Williams, & Gibson, 2002; Pinquart & Sörensen, 2005). More specific information is needed concerning the caregiving experience of ethnic minority groups and, specifically, Korean American cancer patients and caregivers.

To address the gap in literature, we examined social and cultural factors that may be related to QOL and depression in Korean American cancer patients and their family caregivers. Factors hypothesized to influence QOL and depression were: ethnic values, level of acculturative stress, available social support, communication style for interacting with others and perception of the health and illness. *Ethnic values* influence cultural norms and expectations (Helman, 2014) and, thus, these values can their perceptions of health and/or illness (Aldwin & Greenberger, 1987). The current literature lacks information about cancer patients' and their caregivers' endorsement of Korean ethnic value (collectivistic) or modern value (individualistic) and further, the relationship between these factors and their level of QOL or depression. *Acculturative stress* is a type of stress that is manifested during cultural and psychological changes as people adapt to a new culture (Berry, Kim, Minde, & Mok, 1987). During this change, individuals can have high acculturative stress associated with learning the host culture's language and adopting new social norms and ways of interacting. These stressors have been associated with lower mental health status, higher psychosomatic symptoms, and identity confusion that ultimately influence the level of QOL and depression (Berry et al., 1987;

Berry, 2005).

Social support is the amount of psychological, physical, and financial help that family, friends, neighbors, and community members provide when needed (National Cancer Institute, 2015). For Korean Americans, higher social support is a key variable that positively influences both their physical and mental QOL (J.Kim & Knight, 2008; Lim & Yi, 2009). Finally, culture and ethnicity influences the way that individuals communicate with others (Gudykunst, 2000). Koreans who immigrate to a Western country, such as the United States, develop a communication style that is based on two cultural values – individualism (derived from Western values and characterized by a low-context style) and collectivism (derived from Confucianism values and characterized by a high-context style). In general, persons who use high-context communication obtain most of their information in the physical context and their messages tend to be communicated indirectly. In contrast, low-context messages tend to be communicated verbally and are thought to be clearer and more effective (Gudykunst, 2000). Little information is available about the impact of Korean American cancer patients' and their caregivers' use of high vs. low context communication on their levels of QOL and depression.

A final factor that was considered was Korean American cancer patients and their caregivers' *appraisal of the illness*. Perceptions of illness may be influenced by class, culture, and religion (Berger, 1998). Currently, there is no literature on whether and how ethnic values influence Korean American cancer patients' appraisal of illness and the relationship of these illness perceptions to their QOL and depression. Furthermore, Korean American caregivers may view their caregiving experience itself as positive, negative or a combination of both (Lawton, Kleban, Moss, Rovine, & Glicksman, 1989). For Korean Americans, perceptions of caregiving are embedded within their cultural value of filial piety, which implies that caregiving is an obligation rather than voluntary choice (Han, Choi, Kim, Lee, & Kim, 2008). More information is needed about how Korean American cancer patients and their family caregivers perceive the illness and caregiving and the relationship between these perceptions and level of QOL and depression.

To address the gap in the research literature pertaining to Korean American cancer patients and their family caregivers, this study's purpose was to examine factors associated with their quality of life and depression. Specific objectives were to determine whether and how ethnic values, acculturative stress, social support, communication style, and perception of the illness/caregiving are associated with Korean American cancer patients' and family caregivers' quality of life (QOL) and depression.

Theoretical Framework

The socio-cultural stress and coping framework (Aranda &Knight,1997) and the stress coping model (Lazarus & Folkman, 1984) were used to guide the selection of variables examined in this study. Due to the size of the sample in this study, conducting model testing with appraisal as a mediator was not feasible. However, selected variables were used to predict variance accounted for in quality of life and depression among Korean American cancer patients and their family caregivers.

Methods

This cross sectional, exploratory study examined several factors (ethnic values, social support, acculturative stress, communication style, and appraisals for illness/caregiving) in relation to Korean American cancer patients' and caregivers' quality of life and depression.

Subject Recruitment

Prior to starting recruitment, this study was approved by the Institutional Review Board (IRB) at the University of Michigan. Community settings were used to recruit participants by advertising the study at Korean American community health agencies, ethnic churches and temples, senior apartments, and in local Korean American newspapers. Referrals were also obtained from Korean American primary care physicians in Chicago, Illinois (urban and suburban areas) and in Ann Arbor, Michigan. Participants who responded to the advertisement or who were referred by their physicians were reached by telephone for initial screening to determine their eligibility. After determining eligibility, a detailed explanation of the study was provided. Participants willing to participate in the study were given the option to complete questionnaires in person with the researcher or by mail. They were also giving the choice of completing questionnaires in English or Korean. Those who wanted to complete questionnaires in-person were scheduled for a meeting with the investigator at a preferred time and location chosen by the patient-caregiver dyad. Participants signed an IRB-approved consent form prior to completing questionnaires. Participants who wanted questionnaires mailed to them were sent packets including the consent forms, questionnaires, and return envelopes. Patients and caregivers were directed to complete instrument packets separately. Each participants received $15 after completing and returning the questionnaire.

Patients were eligible for the study if they met the following criteria: 1) self-identified as a Korean American, 2) had a confirmed diagnosis of any type of cancer within the past 5 years, 3) aged 18 years or older at diagnosis, 4) able to speak English or Korean, and 5) had a family caregiver willing to participate in the study. Family caregivers were eligible if they met the following criteria: 1) identified by the patient as her/his primary source of emotional and/or physical support, 2) self-identified as a Korean American, 3) 18 years of age or older, and 4) speak English or Korean. In this study "family caregiver" refers to the family member or significant other, regardless of relationships by blood or marriage, who provide physical or emotional care (or both) to the person with cancer. If either the patient or family caregiver was unwilling or unable to participate in the study, the dyad was not eligible to participate in the study.

Measures

A rigorous translation and back-translation process was used to translate English versions of two questionnaires to Korean version (Ethnic Values and Communication Style). Any discrepancies from the translated version to original version were discussed by three Korean-English bilingual experts and revised as needed to improve clarity and meaning of questions. The remaining instruments were already translated to Korean by other researchers. The internal consistency reliability of the scales and subscales of the instruments ranged from 0.70 to 0.95 (Table 2). The majority of participants (95.8%) in this study used Korean-version instruments.

Demographics and Individual Characteristics

A questionnaire was designed for this study to obtain information on participants' sociodemographic and acculturation characteristics. Acculturation questions asked about number of years lived in the U.S., place (country) of birth, mother language, primary language at home and the language used by their primary physician. For patients, specific medical related information was collected: cancer stage, type of cancer, year of diagnosis, current treatment, and comorbidities. For caregivers, number of hours of involved in caregiving per week was collected.

Quality of life*.* The Functional Assessment of Cancer Therapy-General (FACT-G, version 4) (Cella et al., 1993) was used to measure quality of life of patients. The scale measures four dimensions of QOL: physical, social/family, emotional, and functional. For family caregivers' QOL, a slightly modified version of the FACT-G was used (with permission given from FACIT.org). The FACT-G consists of 24 items and higher scores representing higher QOL. Reliability and validity assessments for the scale were reported in previous studies (Cella et al., 1993; Overcash, Extermann, Parr, Perry, & Balducci, 2001). The Korean FACT-G (version 4) was translated by Cella et al. (1993). The scale was tested with 193 Korean women with breast cancer and the internal consistency reliability of the overall scale using Cronbach's alpha coefficient was 0.89 (Lee, Chun, Kang, & Lee, 2004).

Depression. The Kim Depression Scale for Korean Americans (KDSKA) was used to measure participants' level of depression (M. Kim, 2002). The KDSKA has four subscales measuring affective, cognitive, behavioral, and somatic depression. Items in the *affective* subscale include "I felt sad or miserable without knowing why" or "I felt hopeless." For the *cognitive* subscale, items such as "I felt ugly and stupid" or "I felt nervous and all my nerves were on edge" were included. For the *behavioral* subscale, items such as, "I got angry or irritated more easily than usual" were included. Items in *somatic* subscale "I felt sick here and there without specific reason" or "My chest felt heavy, as if a rock was lying on it" were included. The scale has 21 items and uses a 4 point Likert-type scale. The sum of all items can range from 0 to 63. For this study, an item "I thought about suicide" was removed on the recommendation of the University of Michigan IRB because the sample was recruited from community settings rather than affiliated with a health clinic. Given that the scale is in the early development stage, no cut-off point has been established for its use as a clinical tool. The scale had high reliability (Cronbach's alpha coefficient 0.97) when used in a sample of 205 elderly Korean immigrants (Han, Kim, Lee, Pistulka, & Kim, 2007). In addition, strong construct validity was reported when examined using confirmatory factor analysis between the factors and the indicators were found to be statistically significant (M. Kim, 2002). Also, concurrent validity was supported by the significant and positive correlations of four subscales of KDSKA with two other established depression scales: the Center for Epidemiological Studies Depression Scale and the Health Opinion Survey (M. Kim, 2002).

Ethnic values. Korean Traditionalism Value (KTV) scale and Modern Value scale were used to measure two ethnic values. Scales were adapted by Aldwin and Greenberger (1987) based on the interviews with Korean American parents (B. Kim, 1980). The KTV (traditional) has 7 items and measures obedience, respect for authority, and the maintenance of social ties with family members. Scores on the seven items are summed with higher scores indicating greater endorsement of Korean traditional values or collectivistic values. The Modern Value scale has 4 items and measures self-reliance, autonomy, and assertiveness. Higher scores on this scale indicate greater endorsement of modern values or individualistic values. For the study, scales were translated and back translated into Korean. Internal consistency reliability using Cronbach's alpha was 0.77 for KTV and 0.70 for Modern Value scale. In a sample of 61 Korean students living in the U.S., the internal consistency reliability using Cronbach's alpha was 0.68 for KTV scale and 0.64 for Modern Value scale (Aldwin & Greenberger, 1987).

Social support. The Personal Resource Questionnaire 2000 (PRQ 2000) was used to measure level of perceived social support from others. PRQ 2000 was modified by Weinert (2003) from Personal Resource Questionnaire 85 (PRQ 85) (Weinert, 1987). The scale has 15 items with and higher scores represent more perceived social support. Korean version of PRQ 2000 was translated by Sung, Kim, and Lee (2012) had an internal consistency reliability using Cronbach’s alpha of 0.93 when tested with 93 primary family caregivers of Koran elders with dementia.

Communication style. The Survey of Asian American Communication (SAAC) (Gudykunst, 2000) was used to measure the level of high-context communication styles. SAAC has 7 domains combining four communication styles from Norton (1983) and three communication styles from Gudykunst et al. (1996). For this study, two styles were measured, *inferring meaning* and *interpersonal sensitivity*. These styles are considered indicators of high-context communication which means that most of the information is communicated in the physical context or internalized within the person (Gudykunst, 2000). A high-context communication style is often used by those who hold collectivism values, such as, Korean Americans, while a low-context style is frequently used by those who hold individualism values, such as Caucasian Americans (Cha, 1994). Each scale has 5 items and uses a 7-point Likert-type scale; higher scores reflect higher use of high-context communication style. For this study, the two scales were translated and back translated into Korean and internal consistency reliability using Cronbach’s alpha was 0.87. Park and Kim (2008) assessed these communication styles with a sample of 210 Asian American college students and reported an internal consistency reliability using Cronbach’s alpha of 0.88 for *inferring meaning* and 0.61 for *interpersonal sensitivity*.

Acculturative stress. The Acculturative Stress Scale (ASS) (Snyder, 1987) was used to measure the level of stress-related language difficulties, economic and social conflicts due to immigration, cultural values, and role conflicts resulting from the acculturation process. ASS has 12 items and each item uses a 4-point Likert-type scale with higher scores indicating greater acculturative stress. For this study, 3 items were removed from the Acculturative Stress Scale to increase the reliability of the scale. Removed items were "Not having enough money to pay debts," "To think of the welfare of family and friends left in Korea," and "To understand the values and culture in the U.S." With these items removed, the final Cronbach alpha of our 9-item version was 0.71. Some of the items that were kept in the scale were, "Not being able to communicate in English," "To lose contact with Korea," and "To have accented speech in English." The internal consistency coefficient of the 12-item Korean version of the scale was 0.84 with a sample of 205 elderly Korean immigrants (Han et al., 2007) and 0.76 with a sample of 147 Korean immigrants (Shin, Han, & Kim, 2007).

Appraisal of illness. The Health-Self Rating scale in the Health and Activity Survey (Northern Illinois University, 1956) was used to measure patients' perception of their own health status. The scale has 4 items and each item has a three-point Likert-type rating format. Higher scores represent less negative appraisal of health status. The English-language version of the scale was translated into Korean by H. Kim and Park (1997). The internal consistency reliability alpha coefficient of the scale was 0.77 in this study and 0.75 with a sample of Korea women with breast cancer living in Korea (Tae, Heitkemper, & Kim, 2012).

Appraisal of caregiving. The Caregiver Reaction Assessment (CRA) (Given et al., 1992) was used to measure positive and negative perception of caregiving. There are 24 items in the scale that make up 5 subscales. Subscales that measure negative perceptions, *disrupted schedule, financial problems, lack of family support*, and *health problem*s, were used in this study. Higher scores on the negative perceptions of subscales indicate higher caregiver burden. For this study, four negative subscales were used to measure the level of caregiving burden. For each subscale, a total score was calculated as the average of the subsequent item scores ranging from 1 to 5. The four subscales were summed and higher scores indicate more negative perceptions of caregiving. The internal consistency reliability alpha coefficient of the scale was 0.73 in this study. The Korean version of CRA was translated and validated with concurrent and known-group validity with a sample of 990 caregivers of cancer patients in South Korea (Yang et al., 2013) and the internal consistency reliability alpha coefficient of the scale was 0.73.

Statistical Analysis

Descriptive statistics were used to examine the level of overall QOL, depression, ethnic values, social support, communication style, acculturative stress and appraisals for illness (patients) and caregiver (family caregivers). Pearson correlations were used to examine relationships among variables (ethnic values, social support, communication style, acculturative stress and appraisals) and to QOL and depression. Multiple regression was used to examine predictors using the major variables (ethnic values, acculturative stress, social support, communication style, and appraisals) in relation to overall QOL and depression. Demographic variables, age, income, education, employment status, and relationship to patient or caregiver were included as covariates in patients' and caregivers' analysis. Specifically for patients, cancer stage, currently receiving treatment, and comorbidity were added as covariates in the analysis in addition to demographic variables and major variables. For caregivers, hours of caregiving was included as a possible covariate in the analysis. Because of a high intercorrelations (*r* = -0.77 for patients, *r* = -0.75 for caregivers) between QOL and depression, separate regression analyses were conducted for each dependent variables, QOL and depression, to avoid multicollinearity of the variables. All analyses were conducted using SPSS 22.0 (IBM Corporation, 2013).

Results

Sample and Individual Characteristics

A total of 74 dyads (Korean American cancer patients and one of their family caregivers) were recruited and, of these dyads, 71 dyads were eligible to participate in the study. Of the eligible dyads, 11 dyads either refused or initially agreed to participate but then did not complete the questionnaire packet. The actual number of dyads who participated and completed the questionnaires was 60 (enrollment rate = 84.5%). Seventy-five percent of dyads completed questionnaires by mail (45) and the rest (15) completed in the presence of the investigator.

As indicated in Table 1, the mean age of Korean American cancer patients was 62 ± 13.3 years (range, 31-85 years) and for their family caregivers was 56 ± 17.5 (range, 22-85 years). More than half of patients (61.7%) and caregivers (68.3%) completed college or more and had an annual household income below $30,000 per year. The majority of participants were married (81.7% of patients, 83.3% of caregivers) and lived together (88.4% of patient, 93.3% of caregivers). Forty-three family caregivers were either spouse or partner, 10 were adult children, and 5 were others (friend, parent, sibling, and relatives). About 28.4% of patients were employed whereas 48.3% of caregivers were employed. For family caregivers, the mean hours of caregiving provided per week was between 16-20 hours and about 20% of caregivers provided more than 50 hours of caregiving per week.

About 30% of patients had breast cancer following colorectal and stomach cancers (see Table 1). Half of patients had early-stage cancer, 30% had advanced cancer, and for the rest the stage was unknown or missing. The average number of years since cancer diagnosis was 2.23 (SD = 1.6). In terms of treatment status, a little over 50% of patients completed treatment at the time of study. The other half of patients who were currently receiving treatments at the time of study included treatments like, chemotherapy (20%), hormone therapy (11.6%), surgery (6.7%), or radiation therapy (6.7%). About 40% of patients had at least one comorbidity.

Acculturation Characteristics

The majority of participants were born in South Korea (96.7% of patients and 86.7% of caregivers). None of patients were born in the U.S. The mean years of living in the U.S. for both patients and caregivers was about 25 years. For the majority of patients and caregivers, the mothers' language was Korean and they spoke Korean at home. About 16% of participants spoke both Korean and English at home. The majority of participants (patients 62%; caregivers 82%) said their physicians spoke Korean (see Table 1).

Factors Related to Quality of Life and Depression

Bivariate correlations among the study variables used are shown in Table 3 for patients and Table 4 for family caregivers.

Patient findings*.* For the demographic and medical variables examined, higher income was significantly related to higher patient overall QOL. For selected major variables, higher levels of Korean traditional values, higher modern values, higher level of social support, higher level of high-context communication style, and lower negative appraisals of illness were significantly related to higher patient overall QOL. For depression, none of demographic or medical variables had significant relationships with patients' depression. Lower level of social support and higher negative appraisal of illness were significantly related to higher depression.

Caregiver findings. None of demographic variables or number of caregiving hours were related with caregivers' overall QOL. For selected major variables, having more modern values, higher levels of social support, and less negative appraisal of caregiver burden were significantly related to higher caregiver overall QOL. For depression, none of demographic or number of caregiving hour variables had significant relationships with caregivers' depression. Having less modern values, less high-context communication style, higher levels of acculturative stress, and higher negative appraisal of caregiving burden were significantly related to higher caregiver depression.

Predictors of Patients' and Caregivers' Quality of Life and Depression

Multiple regression analysis was used to examine predictors of patients' and caregivers' quality of life and depression. Predictor variables were selected from the theoretical framework used in the study. The list of predictor variables are listed in Table 5 for patients and Table 6 for caregivers.

Patient findings. Higher levels of social support (t = 2.23, p < .03) and less negative appraisal of illness (t = 3.66, p < .0001) were significant predictors of overall QOL (Table 5). Having a comorbidity (t = -1.75, p < .07) marginally predicted patients' QOL. The variables entered in the model explained about 56% of the variance of patients' QOL (F = 6.04, p = 0.0001).

More negative appraisal of illness ($t = -2.34$, $p < .02$) was the only significant predictor of patient's depression (Table 5). The variables in the model explained about 17% of the variance of patients' depression ($F = 9.17$, $p = 0.06$) and was marginally significant.

Caregiver findings. Older age ($t = 2.01$, $p < .05$), holding less Korean traditional values ($t = -2.31$, $p < 0.02$) and holding higher modern values ($t = 2.02$, $p < 0.04$) were significant predictors of higher caregivers' overall QOL (Table 6). Higher negative appraisal of caregiving burden ($t = -1.82$, $p < 0.06$) marginally predicted caregivers' lower overall QOL. The variables entered in the model explained about 23% of the variance of caregivers' overall QOL ($F = 2.40$, $p= 0.01$).

Lower level of modern value ($t = -1.97$, $p < .05$) predicted higher caregivers' depression (Table 6). Lower level of high-context communication style ($t = -1.84$, $p < 0.06$) marginally predicted higher caregivers' depression. The variables in the model explained about 23% of the variance of caregivers' depression ($F = 2.22$, $p = 0.02$).

Discussion

This study provided an understanding of predictors of Korean American cancer patients' and their family caregivers' quality of life and depression. Using the socio-cultural stress coping framework, a number of variables were found to be significant predictors and explained a significant amount of variance.

For patient's quality of life, higher level of social support and less negative appraisal of illness predicted better overall QOL, findings that are consistent with other studies with Korean American cancer patients (Lim & Yi, 2009; Lim & Zebrack, 2008) and Western cancer patients (Northouse et al., 2002). To the author's knowledge, this study is the first quantitative study to examine the relationship of Korean American cancer patient's own appraisal of illness to their level of QOL. The finding in this study suggests that Korean American cancer patients are similar to Western cancer patients in that having less negative perceptions of illness predicts better QOL.

Patients who had less negative appraisal of their illness also had lower depression. This finding is consistent with Western cancer patients (Munkres, Oberst, & Hughes, 1992) and elderly Koreans without cancer (K. Kim & Sok, 2008). Contrary to findings for patients' QOL, appraisal was the only variable that predicted patient's depression and none of demographic, medical characteristics, and other hypothesized independent variables were significant. This finding is different from Korean American immigrants without cancer in a prior study in which higher acculturative stress and lower social support were associated with higher depression (Han et al., 2007).

Furthermore, in other studies with Korean American breast/gynecologic cancer patients, variables such as low network structures, higher financial stress, lack of health insurance, and low emotional social support directly influenced patient's higher depression (Lim, Yi, & Zebrack, 2008). The differences can be that the patients in the current study were younger than Han and colleagues' (2007) sample and close to one third of the patients were male in this study in contrast to the all-female participants in Lim and colleagues (2008) sample. Prior work indicates that age and gender are significant predictors of depression among Korean American immigrants. Older immigrants have less depression (Oh, Koeske, & Sales, 2002) and women with cancer have higher depression (Segrin et al., 2005).

For caregivers' quality of life, being older, having higher modern values, and having less

Korean traditional values predicted better quality of life. In this study, modern values measured self-reliance, autonomy, assertiveness and Korean traditional values measured obedience, respect for authority, and maintenance of social ties. Our study findings suggest that caregivers with more traditional Korean values, who take caregiving as obligation or have collectivistic values rather than individualistic values experience more negative effects of the caregiving on their QOL. As suggested in studies of Asian American caregivers (Pinquart & Sörensen, 2005; Tang, Li, & Liao, 2007; Youn, Knight, Jeong, & Benton, 1999), collectivistic values of caregiving such as, a strong emphasis on familism, parental authority, and hierarchy within the family do not protect caregivers from burden or emotional distress. Furthermore, according to other researchers, familism in Korean culture does not indicate a strong tradition of mutual support (Youn et al., 1999).

Findings pertaining to depression in caregivers indicate that objective measures of caregiving stressors, such as number of caregiving hours per week, were not predictors of depression. Instead, higher modern values in caregivers predicted less depression. Taiwanese caregivers of cancer patients who follow Confucian values similar to Koreans reported similar findings. A lack of confidence in performing the caregiving role at home among Taiwanese caregivers, rather than amount and time spent in caregiving, predicted higher levels of depression (Tang et al., 2007). These findings indicate that perhaps being more confident and independent have positive effects on lowering caregivers' depression among Korean Americans while holding on to their own cultural values of caregiving (e.g. feeling obligated or meeting unrealistic role expectations), especially when living in Western countries, does not.

Age was also a significant predictor of caregivers' QOL in this study, with younger caregivers reporting a lower QOL than older caregivers. This finding was partially consistent with studies of Caucasian caregivers reporting that older caregivers have less physical QOL but higher mental QOL (Kershaw, Northouse, Kritpracha, Schafenacker, & Mood, 2004; Kim & Spillers, 2010). However, age was not a significant predictor of caregivers' depression. This was inconsistent with prior studies of Korean American caregivers without cancer and other minority caregivers which found that that older age predicted less depression (Chun, Knight, & Youn, 2007; Sörensen & Pinquart, 2005).

One other finding of this study was that acculturative stress was not a predictor of patients' and caregivers' QOL and depression. This finding is not consistent with another Korean American immigrant study that reported that higher acculturative stress was associated with higher depression (Han et al., 2007). The average number of years that patients and caregivers lived in the United States in the Han and colleagues study (2007) was about 16 years, whereas it was about 25 years in the current study. Therefore, those who lived in the U.S. longer may have had less acculturative stress level compared to those who had lived a shorter amount of time in the U.S. In fact, shorter length of residence in the U.S. was a significant predictor of acculturative stress among other ethnic immigrants (Miranda & Matheny, 2000). In fact, in our current study, acculturative stress was related to Korean American caregiver's depression (r=.28, p <.05), even though it was not a significant predictor in the regression analysis. Therefore, further analysis with a larger sample is needed to understand the relationship between acculturative stress and dependent outcomes, QOL and depression.

Clinical Implications

Several clinical implications from the findings suggest ways to improve the quality of life and depression among Korean American cancer patients and their family caregivers. First, expanding and improving the quality and quantity of formal services for Korean Americans may help to improve cancer patients' quality of life. Although the majority of patients and caregivers lived in the U.S. for 25 years, their primary language was Korean which suggests that utilizing formal services provided only in English may not be utilized by Korean American cancer patients and caregivers. Therefore, more programs and interventions will need to be provided in Korean through local community centers and ethnic organizations. Utilizing ethnic agencies can be effective because they can provide bilingual services and can expand social networks within patients' and caregivers' community. Although social support was not a significant predictor of caregiver's QOL in the regression model, it was significantly correlated (r=.26, $p < .05$) with their QOL, therefore, improving the level of social support may also benefit caregivers' QOL.

Second, interventions designed to improve caregivers' autonomy, self-reliance, confidence may be helpful for improving caregivers' QOL and depression. The average of caregiving hours in this study was between 16-20 hours per week and over 20% of caregivers were providing 50 hours per week. In addition, about half of the caregivers worked outside of the home leaving them little time to address their own needs. In fact, 72% of caregivers who worked outside of the home had full-time positions and they were the primary caregivers. With high demands of caregiving from patient and outside work-related demands, family caregivers may need reminders to take care of their own health, and seek additional help as needed to retain their own QOL and reduce depressive symptoms.

From a research perspective, Korean American cancer patients' depression was predicted only by their appraisal of illness instead of demographic and medical variables. This could mean that Korean Americans are more likely to manifest depression through somatic complaints such as, back pain, headache, and indigestion (Pang, 2000). Measuring level of patients' symptom distress could have accounted for additional variance in patients' depression because of the unique cultural expression of depression among Korean Americans.

Several limitations of the current study should be considered. A convenient sample was obtained, and therefore, generalizability of the findings from this study is limited. Participants in this study were recruited in urban and suburb areas of Midwest in which two Korean American community centers reside and where agency staffs speak Korean. Some geographic areas without Korean American community centers may have different perceptions of social support as well as other study variables. The cross-sectional survey design and a small sample size limited finding causal relations of independent variables to dependent variables.

With increasing cancer incidence among Asian Americans, this study provided information about factors associated with patients' and family caregivers' QOL and depression. To increase Korean American's quality of life and decrease their depression, interventions may be more effective if designed to improve their positive appraisal of illness and social support for patients and improve self-reliance, autonomy, and confidence in performing caregiving role for family caregivers.

Table 4.1 Demographic and Medical Characteristics of Sample

Demographic Characteristics	Patients n=60	Caregivers n=60
Age, Mean (SD)	61.6 (13.3)	56.2 (17.5)
Male, N (%)	19 (31.7)	28 (46.7)
Female, N (%)	41 (68.3)	32 (53.3)
Education, N (%)		
Less Than high school	6 (10.0)	5 (8.3)
Graduated high school	17(28.3)	13 (21.7)
College and higher	37(61.7)	41 (68.3)
Missing	-	1(1.7)
Income, N (%)		
< $15,000	22 (36.7)	20 (33.3)
$15,001-30,000	10 (16.7)	12 (20.0)
$30,001-50,000	9 (15.0)	8 (13.3)
$50,001 or more	12 (20.0)	17 (28.3)
Missing	7 (11.7)	3 (5.0)
Marital status, N (%)		
Married/Partnered	49 (81.7)	50 (83.3)
Others	11 (18.4)	10 (16.7)
Employment, N (%)		
Employed	17 (28.4)	29 (48.3)
Not employed	36 (60.0)	24 (40.0)
Others	5 (8.3)	6 (10.0)
Missing	2 (3.3)	1 (1.7)
Dyad relationship, N (%)		
Patient-Spouse/Partner	43 (71.7)	
Patient-Adult Children	10 (16.7)	
Patient- Others	5 (8.4)	
Missing	2 (3.3)	
Current Living Status, N (%)		
Living together	53 (88.4)	56 (93.3)
Not living together	5 (8.3)	4 (6.7)
Missing	2 (3.3)	0 (0.0)
Hours of Caregiving per Week, N (%)		
0-10	-	20 (33.2)
11-20	-	10 (16.7)
21- 40	-	8 (13.4)
Over 50	-	14 (21.7)
Missing	-	9 (15.0)
Years Living in the USA, Mean (SD)	25.6 (11.2)	24.5 (11.2)

Mother Language, N (%)		
Korean	53 (88.3)	52 (86.7)
English	1 (1.7)	3 (5.0)
Both (Korean & English)	4 (6.7)	5 (8.3)
Missing	2 (3.3)	0 (0.0)
Language at Home, N (%)		
Korean	46 (76.7)	47 (78.3)
English	2 (3.3)	3 (5.0)
Both (Korean & English)	10 (16.7)	10 (16.7)
Missing	2 (3.3)	-
Place of Birth, N (%)		
Korea	58 (96.7)	52 (86.7)
USA	0 (0.0)	5 (8.3)
Other country	2 (3.3)	3 (5.0)
Primary Care Physician's Language, N (%)		
Speaks Korean	37 (61.7)	49 (81.6)
Speaks only English	19 (31.7)	10 (16.7)
Missing	4 (6.6)	1 (1.7)
Type of Cancer, N (%)		
Breast	19 (31.6)	
Colorectal	10 (16.6)	
Stomach	7 (11.7)	
Prostate	5 (8.3)	
Thyroid	4 (6.7)	
Lymphoma/Leukemia	5 (8.4)	
Lung/Liver/Kidney	6 (10.0)	
Oral/Skin/Ovarian	4 (6.7)	
Stage, N (%)		
Early (0, I, II)	34 (56.7)	
Advanced (III, IV)	18 (30.0)	
Unknown	2 (3.3)	
Missing	6 (10.0)	
Years of Cancer Diagnosis, Mean (SD)		
	2.23 (1.6)	
Current Treatment, N (%)		
Completed treatment	33 (55.0)	
Chemotherapy	12 (20.0)	
Hormone Therapy	7 (11.6)	
Surgery	4 (6.7)	
Radiation	4 (6.7)	
Comorbidity, N (%)		
No Comorbidity	37 (61.7)	
Have Comorbidity	23 (38.3)	

Table 4.2 Internal Consistency of Scale (Reliability Coefficient Cronbach's Alpha) and Scores of Patients and Family Caregivers

		Patient		Family Caregiver	
Variable	Alpha*	Mean	SD	Mean	SD
Quality of life	0.81	80.9	18.1	79.3	19.6
Depression	0.95	14.3	12.3	12.5	11.5
Korean Traditional Value	0.77	29.2	4.3	28.4	4.1
Korean Modern Value	0.70	17.0	2.3	16.5	2.7
Social Support	0.93	88.3	13.4	85.5	13.3
Communication style	0.87	53.6	8.9	52.4	10.1
Acculturative Stress	0.71	18.0	4.8	17.9	5.8
Appraisal of Illness	0.77	7.8	2.2	-	-
Appraisal of Caregiving	0.73	-	-	69.1	9.7

Note. Patients' and family caregivers' combined internal consistency reliability coefficient obtained in current study.

Table 4.3 Correlation of Patient Variables

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1. Age	-											
2. Income	-.51**											
3. Education	-.33**	.39**										
4. Cancer Stage	.02	.09	.08									
5. Korean Traditional Value	.02	.06	-.12	-.21								
6. Modern value	-.23	.18	.13	-.16	.61**							
7. Social support	-.23	.32*	.16	-.09	.50**	.39**						
8. Communication style	.11	-.06	.08	-.05	.40**	.38**	.30*					
9. Acculturative stress	.42**	-.40**	-.28*	-.23	-.03	-.14	-.25	.01				
10. Appraisal of illness	-.01	.10	.21	-.10	.14	.28*	.31*	.21	.14			
11. Depression	-.04	-.12	-.09	.07	-.22	-.20	-.35**	-.10	.11	-.44**		
12. Quality of Life	.06	.26*	.25	-.16	.41**	.39**	.56*	0.31*	-.06	.63**	-.77**	-

**p* < .05. ** *p* < .01

Table 4.4 Correlation of Caregiver Variables

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1. Age	-											
2. Income	-.24											
3. Education	-.44**	.24										
4. Hours of Caregiving	.41**	.19	-.22									
5. Korean Traditional Value	.13	-.10	-.18	.03								
6. Modern value	.02	.16	.07	-.11	.20							
7. Social support	-.25	-.01	.15	-.22	.42**	.23						
8. Communication style	.10	-.19	.00	-.09	.32*	.17	.43**					
9. Acculturative stress	.21	-.16	-.32*	.13	.00	.02	-.05	-.02				
10. Appraisal of Caregiving	.27*	-.24	-.32*	.32*	.05	-.26*	-.26*	-.06	.25			
11. Depression	-.05	-.06	-.11	.20	.04	-.29*	-.17	-.27*	.28*	.35**		
12. Quality of Life	.07	.09	.21	-.21	-.11	.33*	.26*	.17	-.13	-.43**	-.75**	-

*$p < .05$. ** $p < .01$

Table 4.5 Predictors of Quality of Life and Depression for Patients

	Quality of Life				Depression			
Predictors	*β*	SE	*t* value	*p* value	*β*	SE	*t* value	*p* value
Age	.07	.19	.37	.71	-.20	.16	-1.25	.20
Gender (1=female, 0=male)	-5.45	5.79	-.94	.34	-2.04	5.12	-.39	.69
Income	1.73	1.42	1.21	.22	-.90	1.23	-.72	.46
Education	2.70	2.77	.97	.32	.21	2.37	.09	.92
Employment (1=employed, 0=not employed)	-4.36	4.29	-1.01	.31	2.09	3.87	.54	.58
Relationship (1=spouse, 0=adult children)	2.41	5.29	.45	.65	-2.35	4.64	-.50	.61
Cancer stage	-1.46	1.37	-1.06	.28	.62	1.19	.52	.60
Having therapy (1=current therapy, 0=no therapy)	-3.86	3.83	-1.00	.31	4.10	3.32	1.23	.21
Comorbidity (1=have comorbidity, 0=no comorbidity)	-6.86	3.90	-1.75	.07	1.92	3.31	.58	.56
Korean Traditional value	.53	.58	.90	.36	.00	.51	.00	.99
Modern value	.92	1.06	.86	.38	-.49	.90	-.55	.58
Social support	.42	.19	2.23	**.03**	-.18	.16	-1.16	.24
Communication style	.07	.21	.34	.73	.07	.19	.38	.70
Acculturative stress	-.13	.50	-.26	.79	.44	.45	.97	.32
Appraisal of Illness	3.26	.89	3.66	**.00**	-1.82	.78	-2.34	**.02**
	Adjusted R^2 = .56, F = 6.04, *p* =.0001				Adjusted R^2 = .17, F = 9.17, *p* =.06			

Table 4.6 Predictors of Quality of Life and Depression for Caregivers

	Quality of Life				Depression			
Predictors	*β*	SE	*t* value	*p* value	*β*	SE	*t* value	*p* value
Age	.47	.23	2.01	**.05**	-.20	.13	-1.53	.12
Gender (1=female, 0=male)	6.12	9.23	.65	.51	1.67	4.74	.35	.72
Income	.16	1.71	.09	.92	-.18	.94	-.19	.84
Education	2.01	4.46	.45	.65	1.69	2.57	.65	.51
Employment (1=employed, 0=not employed)	12.62	8.56	1.47	.15	-6.13	4.30	-1.42	.15
Relationship (1=spouse, 0=adult children)	-8.61	11.85	-.72	.46	1.19	6.63	.18	.85
Hours of caregiving	-.50	1.19	-.42	.67	.37	.62	.59	.55
Korean Traditional value	-1.48	.64	-2.31	**.02**	.55	.36	1.49	.13
Modern value	1.84	.91	2.02	**.04**	-1.01	.51	-1.97	**.05**
Social support	.26	.24	1.08	.27	-.06	.13	-.46	.64
Communication style	.22	.26	.85	.39	-.27	.14	-1.84	.06
Acculturative stress	-.14	.47	-.30	.75	.34	.26	1.28	.19
Appraisal of Caregiving Burden	-.48	.26	-1.82	.06	.23	.15	1.49	.13
	Adjusted R^2 = 0.23, F = 2.40, *p*= 0.01				Adjusted R^2 = 0.21, F = 2.22, *p*= 0.02			

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CHAPTER V

Summary of the Three Papers

Cancer is one of the leading causes of death for all ethnic groups in the United States. Among many other ethnic groups, Korean Americans' leading cause of death is cancer. High rates of incidence and mortality of cancer among Korean Americans are related to low cancer screening rates (McCracken et al., 2007), viral infections that are more prevalent among Korean Americans such as, Hepatitis B virus and Helicobacter pylori (Huang, Li, Tsai, & Begier, 2013; Moore & Tajima, 2004), high binge drinking (Huang et al., 2013) and a diet that includes high-sodium pickled food (Kim & Kim, 2005). Despite these characteristics of Korean Americans, few studies assessed how Korean American cancer patients and their family caregivers experience cancer.

The review of literature indicates that cancer affects not only patients but family caregivers and these family caregivers provide physical and emotional support to patients (Honea et al., 2008). In addition, ethnic minority family caregivers provide longer hours of caregiving, have less financial resources, and utilize more informal social support than formal support than White caregivers (Dilworth-Anderson, Williams, & Gibson, 2002; Pinquart & Sörensen, 2005). Despite the significance of cancer among Korean Americans, there is a lack of literature about quality of life and depression after a family member gets a cancer diagnosis.

The purpose of this dissertation project was to gain understanding of quality of life and depression among Korean American cancer patients and their family caregivers. This was accomplished by: 1) reviewing the literature on factors related to Korean American cancer patients' and their family caregivers' quality of life and depression; 2) using socio-cultural stress coping theoretical framework to guide the research and select variables; 3) describing demographic, medical, and cultural characteristics of Korean American cancer patients and their family caregivers; 4) comparing patients' and caregivers' scores on selected variables; 5) determining whether patients' and caregivers' QOL and depression levels differ from other comparison groups of cancer patients and family caregivers of cancer patients; and 6) quantitatively examining the factors associated with quality of life and depression.

The first manuscript was, *Correlates of Quality of Life and Depression in Korean American Cancer Patients and Their Family Caregivers: Review of Literature*. The main finding of this paper was that there was a gap in the literature on Korean American cancer patients and their family caregivers. In fact, only one study included Korean American family caregivers in the study. From selected studies, key factors related to quality of life and depression were found and they are social support, communication, and acculturation.

The second manuscript, *Quality of Life and Depression of Korean American Cancer Patients and their Family Caregiver: A Descriptive Study*, examined the perceptions of quality of life and level of depression reported by Korean American cancer patients and their family caregivers. The study was guided by socio-cultural stress coping theoretical framework. Results from this study revealed that patients and caregivers did not differ on their overall quality of life score, depression, and key factors (ethnic values, social support, communication style, and acculturative stress). Comparing patients from other groups of cancer patients to the patients in this study indicated that patients in this study had better quality of life. However, family caregivers had lower quality of life compared to other groups of family caregivers of cancer patients. In addition, the study identified that most of Korean American caregivers were spouses like Western caregivers. Overall, the findings from the study provided understanding quality of life and depression of Korean American cancer patients and their family caregivers and revealed that they have lower levels of support and may benefit from tailored interventions to help them manage the illness.

The third manuscript, *Factors Associated with Quality of Life and Depression among Korean American Cancer Patients and Their Family Caregivers*, used quantitative method to examine social and cultural factors related to Korean American cancer patients' and their family caregivers' QOL and depression by using socio-cultural stress coping theoretical framework. Findings indicated that higher social support and less negative appraisal of illness predicted better quality of life and less negative appraisal of illness predicted less depression among patients. Older age, endorsing higher modern values, and lower traditional Korean values predicted better quality of life in caregivers; higher modern values predicted less depression among family caregivers.

Limitations of this dissertation include using convenience sampling method which limits generalizability to Korean American cancer patients and family caregivers living in the U.S. Recruitment locations involved two Korean American community centers that provided services in Korean and some geographic areas without centers with similar services may have different perceptions of social support. The cross-sectional survey design and a small sample size limited finding causal relations of independent variables to dependent variables.

The study will provide a valuable contribution to the literature. It provided knowledge about Korean American cancer patients' and caregivers' QOL and depression. Findings suggest a number of clinical implications to improve quality of life and depression. Patients and caregivers revealed that their depression is more likely to be manifested through somatic complaints. This implies that clinicians will need to pay closer attention to those somatic complaints and be able to provide culturally accepted recommendations. Clinicians may want to collaborate with ethnic community agencies that provide bilingual services to improve patients' and caregivers' quality and quantity of using formal support. Clinicians also need to assess how patients appraisal their illness as less negative appraisal is related to lower quality of life and more depression in patients. Finally, clinicians need to be aware that caregivers who hold a number of traditional Korean values may be at risk of lower quality of life and more depression and may require additional assistance from clinicians.

Future research can include designing interventions improving positive appraisal of illness and social support to increase quality of life and decrease depression in patients. For family caregivers, interventions focusing on improving self-reliance, autonomy, and confidence may help to improve their quality of life and lessen their depression as they carry out their caregiving role.

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