

The Effects of Religiosity, Spirituality, and Social Support on Quality of Life: A Comparison Between Korean American and Korean Breast and Gynecologic Cancer Survivors

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Many people turn to faith when faced with life's challenges, such as emigrating to a new country or a diagnosis of cancer (Fosarellie, 2008; Levine, Yoo, Aviv, Ewing, & Au, 2007). For people who experience a life-threatening disease such as cancer, religiosity and spirituality may be related to a sense of hope for survival and used as a coping strategy for psychosocial adjustment after diagnosis (Lengacher et al., 2006; Lowry & Conco, 2002). In a study regarding the spiritual needs of cancer survivors, 83% responded that they had religious faith (McMillmurray et al., 2003). Immigrants also tend to search for religious belief systems as a venue to retrieve and exchange diverse information (Research Team of the Public Health Informatics Research Laboratory, 2005). In fact, 80% of Korean Americans are affiliated with Christianity (Suh, 2004). Seeking for and believing in religiosity and spirituality among Korean American cancer survivors may play important roles as a survival strategy for overcoming two major life events at the same time: immigration and cancer.

Religiosity and Spirituality

Immigrant Korean women recently exposed to the culture of their new country typically experience stressors from the cultural transition process such as language, adaptation, social support, and finance challenges as well as other conflicts between their cultural heritage and new culture (Min, Moon, & Lubben, 2005; Moon, Lubben, & Villa, 1998). As a result, many Koreans tend to search more fervently for religious belief systems after immigrating to adjust to the new country's lifestyle or simply to extend social networks. In the Korean American community, Christian Korean churches are one of the most important social

Purpose/Objectives: To examine the differences in religiosity, spirituality, and quality of life (QOL) between Korean American and Korean breast and gynecologic cancer survivors and investigate the effect of religiosity, spirituality, and social support on QOL.

Design: Cross-sectional design.

Setting: Participants were recruited from hospitals and community-based support groups in the areas of Southern California and Seoul, Korea.

Sample: 161 women diagnosed with breast and gynecologic cancer (110 Koreans and 51 Korean Americans).

Methods: Participants completed a mailed questionnaire. To identify the QOL outcomes, religiosity, spirituality, and social support, four standardized measures were used.

Main Research Variables: QOL outcomes, religiosity, spirituality, religious involvement, and social support.

Findings: Religiosity and spirituality were related to some QOL outcomes in different patterns in Korean American and Korean breast and gynecologic cancer survivors. The effect on QOL, however, was not strong after controlling for covariates. Social support partially mediated the effect of spirituality on QOL but only among the Korean American cancer survivors.

Conclusions: The findings provide evidence that the effect of religiosity and spirituality on QOL varied between Korean American and Korean survivors. The mediating effect of social support between spirituality and QOL for Korean Americans also was demonstrated.

Implications for Nursing: The results present nursing practice and research implications that religiosity, spirituality, and social support need to be considered in developing services for enhancing QOL of immigrant cancer survivors.

forces to meet those needs. The church serves as a well-established social networking hub and, therefore, many Korean immigrants tend to become involved in churches or church-affiliated organizations, converting from Buddhism to Christianity after immigrating to

the United States (Hurh, 1998; Park & Bernstein, 2008; Shin, 2002). In fact, the Korean community's strength has been shown to lie in the Christian Korean church (Research Team of the Public Health Informatics Research Laboratory, 2005).

Native Koreans living in Korea were included in the current study as a control group because they do not experience adjustment concerns related to immigration such as language, cultural, and religious transition. Korea is a multireligious society with Buddhists (25.3%), non-Catholic Christians (19.8%), Catholics (7.3%), and others (Asianinfo, 2000). For Koreans living in Korea, religious activities are one of the many available resources for extending social networks. However, for Korean Americans, going to church after immigration may be a critical way of interacting with other Koreans in the United States. Therefore, investigations regarding the differences in religiosity and spirituality between immigrated Korean Americans and native Koreans could provide meaningful psychosocial information when exploring the effect of religiosity and spirituality on health beliefs and adaptation when incorporating cultural background.

Investigation on the role of religiosity and spirituality has been expanding in cancer survivorship research. However, no consensus exists among researchers regarding the definitions of the terms (Bekelman et al., 2007; Reynolds, 2006). In some cases, religiosity and spirituality are used interchangeably, whereas in others they hold different meanings. In general, religiosity has been defined as "a person's adherence to the beliefs, values, and practices proposed by an organized institution which is devoted to the search for the divine through prescribed ways of viewing and living life" (Thoresen, 1998, p. 410). The term spirituality, however, often relates to "a search for the sacred or divine through any life experience or route" (Mytko & Knight, 1999 p. 440). The major distinction between religiosity and spirituality, Thoresen and Harris (2002) suggested, is that religiosity inherently reflects a social and institutional nature whereas spirituality is related more to individual trust and experience. Different assessment tools tend to be used in research to reflect such differences. For example, religiosity is assessed by simply asking brief questions, such as one's participation in an organized religious institution and adherence to established guidelines for beliefs and behavior (Vachon, 2008). Conversely, spirituality typically is assessed with a range of concepts encompassing meaning, wholeness, transcendence, connection, joy, and peace (Peterman, Fitchett, & Brady, 2002). Nevertheless, the two phenomena are not independent of one another and are not mutually exclusive (Stefanek, McDonald, & Hess, 2005; Vachon, 2008). Therefore, a comprehensive assessment including religiosity and spirituality is required.

Religiosity and Spirituality and Quality of Life in Cancer Survivorship

A growing body of research suggests that religiosity and spirituality may affect cancer survivorship outcomes. An overall positive relationship appears to exist between religiosity and spirituality and outcomes, such as coping (Holland, Passik, & Kash, 1999; Thune-Boyle, Stygall, & Keshtgar, 2006), overcoming cancer treatment (Ebright & Lyon, 2002), personal growth and mental health (Wenzel et al., 2002), and QOL (Brennan, 2001; Peterman et al., 2002; Schnoll, Knowles, & Harlow, 2002; Tomich & Helgeson, 2002) among cancer survivors. In addition, some found that religiosity and spirituality may be related to a sense of hope (Lowry & Conco, 2002; Taylor, 2003). Other studies also have reported that religiosity and spirituality may be related to psychosocial adjustment after cancer diagnosis (Edser & May, 2007), finding meaning, and a sense of control over the negative feelings of cancer treatment and the future (Koening, 2002).

Religiosity and spirituality in the QOL of cancer survivors appears to be more important for certain minority populations (Ramondetta & Sills, 2004). For example, religious and spiritual needs are stronger influences on QOL among African Americans compared to European Americans (Levine et al., 2007). For Korean American breast cancer survivors, religiosity and spirituality are very important factors that influence QOL, indicating that faith in God was reported to be the best tool in helping them cope with the overall effects of breast cancer (Ashing-Giwa, Padilla, Tejero, & Kagawa-Singer, 2003).

Role of Social Support

Social support may be an important contributor in the relationship between religiosity and spirituality and QOL (Dulin, 2005; Harris, Thoresen, McCullough, & Larson, 1999). Several studies have reported that higher levels of social isolation were associated with lower levels of religiosity and spirituality (Mytko & Knight, 1999; Reynolds, 2006). Spirituality also has been related to the provision and benefits of social support (Hines, 2008; Vachon, 2008). In fact, people who are more religiously involved or spiritually active may benefit greatly from drawing on resources provided by religious organizations (e.g., help with jobs, housing, cultural activities, counseling) and enhancement of spiritual beliefs and experiences (Park & Bernstein, 2008; Thoresen & Harris, 2002). Little is known, however, about the effect of social support related to religiosity and spirituality among Korean American and native Korean cancer survivors. A study regarding how social support influences the relationship between religiosity and spirituality and QOL will, therefore, be useful to further understand the role of social support related to religiosity and spirituality as well as ways of improving QOL for Korean American

and native Korean breast and gynecologic cancer survivors (Weaver, Flannelly, & Preston, 2003).

Purpose of Study

The purpose of the current study was to investigate the effect of religiosity, spirituality, and social support on QOL for Korean American and native Korean breast and gynecologic cancer survivors. Based on literature reviews, the following hypotheses were formulated.

- Korean Americans and Koreans will show differences in religious involvement, religiosity and spirituality, and QOL (H1).
- Korean Americans and Koreans with greater religiosity and spirituality will show better QOL (H2).
- Religiosity, spirituality, and social support will positively influence QOL outcomes after controlling for demographic and medical information for the two groups (H3).
- Social support will mediate the relationship among religiosity, spirituality, and QOL for Korean Americans (H4).

Methods

Participants and Setting

Secondary data derived from Korean American ($n = 51$) and Korean ($n = 110$) women who had participated in a project examining QOL and social support for cancer survivors in 2005 were used in the study (Lim & Zebrack, 2008). All participants were diagnosed with breast or gynecologic cancer and were disease-free for at least three months beyond the last completed treatment. Korean Americans refer to those born in the United States following their parents' immigration or having emigrated from Korea to the United States. Koreans in the study are those born in Korea and currently living in Korea.

The Korean American sample was drawn from two hospitals and three community-based support groups in southern California (Los Angeles and Orange counties). Because an eligible sample was lacking, purposive and snowball sampling also was used. Of the 128 recruitment letters mailed, 51 (40%) survivors completed the survey. Korean breast and gynecologic survivors were recruited from five hospitals in Seoul, Korea, as well as from two breast and gynecologic cancer support groups. Among 256 accessible native Koreans, 110 (43%) survivors completed the survey. The English versions of the questionnaires were translated and back-translated into Korean. Internal consistency in scales by language (Korean versus English) was assessed by the reliability coefficient Cronbach α ; no differences were present in internal consistency of language. All recruitment procedures for the study were approved by the University of Southern California institutional review board. A detailed account of the methodology employed for the study is described elsewhere (Lim & Zebrack, 2008).

Instruments

Quality of life: Two standardized psychometric instruments measuring QOL were included: the SF-36® as a generic measure of functional aspects and the **Brief Symptom Inventory-18 (BSI-18)** as a measure of psychological distress.

The SF-36 is an internally consistent and reliable self-report QOL tool (Ware, Snow, Kosinsky, & Gandek, 1993). The 36-item measure has eight multi-item subscales: physical functioning, physical role limitation, bodily pain, general health perception, vitality, social functioning, emotional role limitation, and mental health. Subscale scores were computed by summing across items in the same scale and then transforming raw scale scores to a range from 0 (worst possible function) to 100 (best possible function). Cronbach α coefficients for the eight multi-item scales of the SF-36 ranged from 0.8–0.98.

The BSI-18, measuring psychological distress, consists of three subscales (somatization, depression, and anxiety) (Derogatis, 2000). Symptoms are rated on a five-point Likert scale with values ranging from a 0 (none at all) to 4 (extreme), indicating the degree of distress experienced because of each symptom over the past seven days. Scores were calculated by averaging the values for the items in each subscale. The measure used in the study was found to be reliable, with a Cronbach α of 0.93.

Spirituality and religiosity: The six-item scale was adapted from the spiritual well-being subscale of the Quality of Life-Cancer Survivor (QOL-CS) measure (Ferrell, Hassey, & Grant, 1995). The items measure the salience of spirituality and religion, particularly concerning cancer survivors. Respondents rate themselves along an interval rating scale ranging from 0 (not at all important) to 10 (very important) for each item. The reliability for the spiritual well-being subscale was a Cronbach α of 0.8.

Religious involvement: Religious affiliation and interaction were assessed to consider religious involvement. Participants were asked whether they had a religious affiliation and how many members of their church or religious group they talked to at least once every two weeks (religious interaction).

Social support: The **Medical Outcomes Study (MOS) Social Support Survey**, a 19-item assessment of the perceived availability of social support with four subscales (emotional or informational, tangible, affectionate, and positive social interaction) was used to assess social support (Sherbourne & Stewart, 1991). Items were rated on a five-point Likert scale ranging from 1–5, with higher scores indicating better social support. The instrument showed good reliability, with a Cronbach α of 0.97.

Data Analyses

Exploratory descriptive analyses were conducted to examine the characteristics of and relationship between

the variables. Principal component analysis with an oblique rotation then was performed on the six-item scale of spiritual well-being. Factor structure was determined by examining the scree plot, Eigen values (one or higher), and factor loadings (0.4 or higher).

Independent sample t tests were conducted to compare variables between the two groups (H1). Linear regression analyses were conducted to examine the relationships between religiosity and spirituality and QOL (H2). Hierarchical multiple regression analyses were used to examine the associations of religiosity, spirituality, and social support with QOL after controlling for covariates (H3). Control variables related to medical information were included in model 1, demographic control variables in model 2, religiosity in model 3, spirituality in model 4, and social support in the final model. Korean-American and Korean participants were included in the analyses to focus on the effect of religiosity, spirituality, and social support on QOL regardless of residence location. The group membership was statistically adjusted in the analyses because Korean Americans and Koreans showed significant differences in religiosity and spirituality and QOL.

To investigate the role of social support in the relationship between religiosity and spirituality and QOL, mediation analysis was conducted by simple and multiple regression analyses based on the procedure outlined by Baron and Kenny (1986) (H4). For the statistical techniques, the data were analyzed using SPSS® v.15.0. All hypotheses were tested with a p less than 0.05 criterion for significance.

Results

Demographic and Medical Characteristics of Participants

Most Korean American respondents were born in Korea (98.0%) and used Korean as a primary language (96.1%). The mean length of stay in the United States was 22 years. The two groups showed different patterns in religious affiliations: the predominant religion for Korean Americans was Christianity (70%) and for native Koreans was Buddhism (30%). Only 2% of Korean Americans reported having no religion, whereas 21% of Koreans did. A group comparison based on religious affiliations was not conducted because only one Korean American reported not having any religious affiliation. Demographic and medical information of the respondents is presented in Table 1. More details about the characteristics are described elsewhere (Lim, Yi, & Zebrack, 2008; Lim & Zebrack, 2008).

Factor Analysis in the Spiritual Well-Being Scale

In the spiritual well-being scale, two factors (Eigen values: 2.733 and 1.281) were found. All items showed moderate

Table 1. Demographic and Medical Characteristics of Participants

Characteristic	Korean Americans (N = 51)		Koreans (N = 110)	
	n	% ^a	n	% ^a
Age (years)				
30–39	1	2	7	6
40–49	10	20	35	32
50–59	22	43	54	49
60 or older	18	35	14	13
Education^b				
Less than high school	8	16	30	27
High school or some college	20	39	65	60
College graduate or higher	23	45	14	13
Household income (\$) ^{b, c}				
Less than 25,000	27	53	42	41
25,000 or more	24	47	60	59
Health insurance				
Yes	–	–	102	93
Medicare or Medicaid	21	41	–	–
Private	23	45	–	–
No	7	14	8	7
Religion^b				
None	1	2	22	21
Christian (non-Catholic)	37	74	31	29
Catholic	10	20	21	20
Buddhist	2	4	32	30
Type of cancer				
Breast	47	92	72	65
Gynecologic	4	8	38	35
Years since diagnosis				
Less than 1	9	18	23	21
2–5	28	55	54	49
6 or more	14	27	33	30
Cancer stage at diagnosis^b				
0	14	28	11	10
1	15	29	35	32
2	13	26	44	40
3	7	14	15	14
Treatment^d				
Surgery	50	44	102	43
Radiation therapy	26	23	44	18
Chemotherapy	26	23	73	31
Hormonal therapy	8	7	19	8
Other	3	3	1	1
Recurrence				
Yes	7	14	9	8
No	44	86	101	92
Side effects from cancer or its treatment				
Yes	17	33	48	44
No	34	67	62	56
Birthplace				
Korea	50	98	110	100
Other	1	2	–	–
Primary language				
Korean	49	96	110	100
English	2	4	–	–
Years in the United States				
\bar{X} = 21.94	–	–	–	–
SD = 8.9	–	–	–	–

^a Percentage indicates valid percentage.

^b Because of missing data, n values do not total sample size.

^c Korean won was converted to U.S. dollar.

^d Multiple responses were possible.

to high loadings in only one factor (0.431–0.919) (see Table 2). Researchers concluded that spiritual well-being can be described using two distinct factors: religiosity and spirituality. Here, “religiosity” was related to importance of participation in religious and spiritual activities and spiritual and religious change since the cancer diagnosis, whereas the “spirituality” construct was related to feelings of uncertainty, positive change resulting from illness, or a sense of purpose.

Differences in Quality of Life, Religious Involvement, and Religiosity and Spirituality

Table 3 illustrates the differences in QOL, religious involvement, and religiosity and spirituality between Korean Americans and Koreans. The two groups showed a significant difference in depression, a subscale of the BSI-18. The Korean Americans showed fewer depressive symptoms than Koreans; however, no significant group difference was observed between them in the other BSI-18 subscales or in overall BSI-18 scores. In the SF-36 QOL measure, the emotional well-being and general health perception subscales showed significant differences between the two groups. Emotional well-being was better for Koreans whereas general health perception was better for Korean Americans. Neither showed significant differences in the other SF-36 subscales or the overall SF-36 scores.

A greater number of Korean Americans had a religious affiliation compared to Koreans, but no differences in religious interaction were found. With regard to religiosity and spirituality, religiosity for Korean Americans was significantly higher than that of Koreans, whereas spirituality did not show any differences. H1, that Korean Americans and Koreans would be different in QOL, religious involvement, and religiosity and spirituality was, therefore, partially confirmed.

Associations of Religiosity and Spirituality With Quality of Life

For Korean American breast and gynecologic cancer survivors, religiosity was related only to the BSI-18 psychological distress measure, whereas spirituality was related to most QOL outcomes (see Table 4). More specifically, religiosity and spirituality for Korean Americans was negatively associated with depression and anxiety, indicating that people with higher religiosity expressed fewer depressive symptoms and lower anxiety levels. Spirituality also was positively related to physical QOL outcomes, which implies that people with higher spirituality may have a better physical status. Spirituality, however, was negatively associated with emotional well-being, indicating that Korean Americans with lower spirituality showed better emotional well-being.

Religiosity in Koreans was related only to one SF-36 subscale (social functioning), and spirituality was not related to any QOL outcomes. Contrary to expectations,

Koreans with a higher religiosity showed lower social functioning. Therefore, H2 was partially confirmed in SF-36 and BSI-18 measures.

Predictors Influencing Quality of Life

Two hierarchical regression analyses were conducted to evaluate the influence of religiosity, spirituality, and social support on each QOL outcome measured by the BSI-18 and SF-36 (see Table 5). First, in the analyses on the BSI-18 outcome, religiosity and religious interaction (when added to model 3) explained an additional 5.9% of the variance in psychological distress with a significant effect of religious interaction. In model 4, spirituality added 4.8% of the variance in psychological distress. Finally, adding social support significantly improved the final model for psychological distress, explaining 5.6% of the variance in the outcome. The final model accounted for 25.6% of the variance in psychological distress, with income and social support as significant predictors of psychological distress. Survivors who perceived having more social support were found to have significantly lower psychological distress symptoms. The significant effects of religiosity and spirituality no longer existed in the final model, that is, when social support was added.

In the regression analyses of SF-36, religiosity and religiosity interaction significantly improved model 3 (R^2 change = 0.046; $p < 0.05$). Spirituality however, when added to model 4, did not significantly influence outcomes. Finally, social support significantly improved the final model, explaining 2.4% of the variance in the QOL outcome. The final model accounted for 33.5% of the variance in the QOL outcome. Results indicated that survivors who perceived having more social support and

Table 2. Factor Analysis for Spiritual Well-Being

Item	Component (Loading)	
	Religiosity	Spirituality
Importance of participation in religious activity	0.919	0.134
Religious or spiritual life change as a result of the cancer diagnosis	0.899	0.225
Importance of other spiritual activity (meditation)	0.802	0.175
Positive change in life because of illness	0.273	0.864
Sense of purpose or mission for life or a reason for being alive	0.369	0.843
Feeling about uncertainty about the future	-0.031	0.431

Note. The principal component analysis with the oblique rotation method was the extraction method.

Table 3. Differences in Outcomes and Predictors Between Korean Americans and Koreans

Variable	Korean Americans (N = 51)		Koreans (N = 110)		t
	\bar{X}	SD	\bar{X}	SD	
Brief Symptom Inventory-18 psychological distress (total score)	0.93	0.74	1.13	0.69	1.704
Somatization	0.8	0.68	0.94	0.6	1.204
Depression	0.99	0.81	1.23	1.49	2.051*
Anxiety	0.98	0.87	1.13	0.86	1.341
SF-36® quality of life (total score)	51.75	17.5	49.88	15.27	-0.464
Physical functioning	68.33	22.99	62.86	23.51	-1.383
Physical role limitation	46.63	43.83	46.59	43.69	0.4
Emotional role limitation	43.67	43.28	42.42	42.13	-0.549
Energy and fatigue	38.63	23.07	38.64	20.85	0.002
Emotional well-being	30.04	18.16	37.27	17.39	2.421*
Social functioning	75.96	24.08	72.94	23.22	-0.76
Pain	67.51	24.76	68.99	23.4	0.367
General health perception	57.86	24.04	48.17	18.81	-2.564*
Physical health summary	55.06	17.81	52.97	15.65	-0.723
Mental health summary	49.78	12.85	47.85	12.78	-0.89
Religious involvement					
Having religious affiliation (1 = yes, 2 = no)	1.02	0.14	1.22	0.42	4.497***
Religious interaction	2.98	2.49	3.08	2.49	0.22
Spiritual well-being					
Religiosity	7.78	2.11	6.29	3.13	-3.542**
Spirituality	6.65	1.99	6.66	2.13	0.028

* $p < 0.05$; ** $p < 0.01$; *** $p < 0.001$

showed less religiosity expressed better QOL outcome. Therefore, H3 was confirmed, but only in the positive effect of social support on QOL.

Mediating Effects of Social Support Between Religiosity and Spirituality and Quality of Life

The mediating effects of social support in the link of religiosity and spirituality and QOL outcomes were measured. Significantly positive associations among spirituality, social support, and QOL were established only among Korean Americans. A multiple regression analysis was conducted on spirituality and social support, predicting QOL in Korean Americans, to examine whether spirituality would remain significant when social support was controlled; results indicated that it is still affected ($\beta = 0.296$, $p < 0.05$) but its influence was reduced. In addition, the Sobel statistic value testing the mediating effect was statistically significant ($p < 0.05$) (see Figure 1). Higher spirituality may therefore improve QOL through the perceived social support for Korean American breast and gynecologic cancer survivors.

Discussion

The current study focused on documenting the differences in religiosity and spirituality and QOL between

Korean American and Korean breast and gynecologic cancer survivors and investigating the effect of religiosity, spirituality, and social support on QOL for both groups. Results partially confirmed most of the research hypotheses. Religiosity and spirituality were related to some QOL outcomes in differing patterns between the two groups. The effect on QOL, however, was not strong after controlling for covariates. The effect of social support on QOL was investigated, and the mediating effect of social support between spirituality and QOL for Korean Americans only was observed. The four specific findings were noted.

First, Korean American and Korean survivors showed different patterns in their religious status: 20.8% of Koreans reported having no religion as opposed to only one Korean American. Many Koreans are widely recognized to rely on religious belief systems after immigrating to the United States, which might be part of their efforts to adjust to the new country's lifestyle or simply an attempt to extend social networks. In particular, the Korean community in the United States tends to be very church centered (Research Team of the Public Health Informatics Research Laboratory, 2005). The trend also was shown in the sample, with 70% of Korean American survivors reporting Christianity as a religious affiliation. Most Korean Americans use churches as a venue for seeking useful information, meeting with diverse people, and ultimately adjusting in the new environment. Such activities may stem from the

Table 4. Regression Model for the Association of Religiosity and Spirituality With Quality of Life and Psychological Distress

Outcome Variable	Standardized Beta Coefficients					
	Overall (N = 161)		Korean American (n = 51)		Korean (n = 110)	
	Religiosity	Spirituality	Religiosity	Spirituality	Religiosity	Spirituality
Brief Symptom Inventory-18 psychological distress	-0.143 ⁺	-0.209**	-0.317*	-0.341*	-0.052	-0.152
Depression	-0.147 ⁺	-0.188*	-0.352*	-0.345*	-0.045	-0.128
Anxiety	-0.138 ⁺	-0.198*	-0.367**	-0.338*	-0.419	-0.139
Somatization	-0.099	-0.186*	-0.147	-0.266 ⁺	-0.058	-0.149
SF-36® quality of life	-0.109	0.127	0.036	0.332*	-0.175 ⁺	0.034
Physical functioning	-0.078	0.18	0.049	0.476***	-0.157	0.058
Physical role limitation	-0.128	0.063	-0.007	0.222	-0.163 ⁺	-0.005
Pain	-0.05	0.092	0.117	0.343*	-0.098	-0.022
General health perception	0.07	0.154*	0.111	0.389**	-0.018	0.03
Emotional well-being	-0.092	-0.143 ⁺	-0.241 ⁺	-0.442**	0.011	-0.014
Emotional role limitation	-0.084	0.101	0.067	0.269 ⁺	-0.152	0.027
Social functioning	-0.125	0.1	-0.01	0.211	-0.19*	0.05
Energy/fatigue	0.071	-0.009	0.006	-0.152	0.099	0.059
Physical health summary	-0.066	0.142 ⁺	0.072	0.39**	-0.135	0.029
Mental health summary	-0.084	0.107	0.008	0.223	-0.14	0.058

⁺ p < 0.1; * p < 0.05; ** p < 0.01; *** p < 0.001

loss of intimate family systems, being immersed in an unfamiliar environment, the lack of English proficiency, and a need to have diverse support as well as beliefs in God after immigrating to the new county. In the current sample, the mean length of stay in the United States for Korean Americans was 22 years, but the primary language was Korean, not English. The finding shows how important it may be for Korean Americans to have connections with Korean churches where they can meet other Koreans and speak in Korean. The differences in religious affiliation and activities between the two groups may lead to higher religiosity and spirituality in Korean American survivors.

Second, religiosity was significantly related to QOL outcomes such as depression and anxiety, regardless of residence location. The finding is consistent with previous studies (Mickley & Soeken, 1993; Wenzel et al., 2002). Korean survivors may experience less depression and anxiety by seeking emotional calmness and rest in religious life and having interactions and sharing emotional concerns with other people in religious activities. Because the Korean culture may stop them from visiting counseling services or hospitals because of the social stigma attached to mental disorders, religious organizations might be the primary outlet for Koreans to discuss their emotional issues. In particular, Korean American survivors may have difficulties in accessing such services for discussing emotional concerns because of the lack of English skills. In addition, general health, an SF-36 subscale, showed significant differences according to religiosity and residence location. Korean Americans in the higher religious group expressed the highest general health scores. The finding may suggest that emotional stability from religi-

osity enhances general health for Korean Americans. The importance of religiosity as well as the role of religious organizations, therefore, cannot be overlooked in improving QOL for Korean cancer survivors.

Survivors with higher spirituality showed better scores in psychological distress outcomes, physical functioning, and emotional role limitation. The same results were found in the relationship between religiosity and QOL. The finding supports the theory that spirituality is positively associated with better health and QOL (Brennan, 2001; Schnoll et al., 2002; Tomich & Helgeson, 2002). Conversely, survivors with higher spirituality showed worse energy or fatigue and emotional well-being. The finding appears counterintuitive but may be explained by the fact that cancer survivors who feel lower in energy and emotional well-being seek more spiritual coping strategies. Seeking spirituality has been explained in different ways, some as negative and others as positive. Freud (1933) regarded religious and spiritual coping as a kind of defense mechanism, viewing it as a regressive, passive, and avoidant psychological phenomenon. Research, however, suggests that religious and spiritual beliefs are associated with active coping, not with avoidant or passive coping strategies (Edser & May, 2007; Ferrell, Smith, & Juarez, 2003). The finding adds another piece of information to such discussion, yet, because of the limitations of a cross-sectional study, any causal relations cannot be established. Studies regarding the role of spirituality related to coping strategies require further exploration.

Finally, higher spirituality may improve QOL through perceived social support, particularly within the Korean American survivor group. The researchers

Table 5. Hierarchical Regression Model on Impact of Spiritual Well-Being and Social Support on Quality of Life and Psychological Distress

Instrument	Model 1		Model 2		Model 3		Model 4		Full Model	
	β	t	β	t	β	t	β	t	β	t
Psychological Distress (BSI-18)										
Step 1										
Type of cancer	-0.027	-0.292	-0.071	-0.747	-0.084	-0.885	-0.081	-0.872	-0.079	-0.88
Years since diagnosis	-0.091	-0.972	-0.096	-1.065	-0.082	-0.913	-0.069	-0.785	-0.079	-0.928
Side effects	-0.006	-0.065	0.032	0.357	-0.009	-0.106	0.02	0.223	0.019	0.228
Step 2										
Income	-	-	-0.25	-2.755*	-0.271	-3.046**	-0.232	-2.635*	-0.182	-2.082*
Group (Korean and Korean American)	-	-	-0.209	-2.185**	-0.204	-2.185*	-0.206	-2.261*	-0.169	-1.893
Step 3										
Religiosity	-	-	-	-	-	-0.095	-0.986	0.006	0.057	-0.046
Religious interaction	-	-	-	-	-	-0.2	-2.148*	-0.169	-1.842 ⁺	-0.114
Step 4										
Spirituality	-	-	-	-	-	-	-0.25	-2.599*	-0.173	-1.779 ⁺
Step 5										
Social support	-	-	-	-	-	-	-	-	-0.26	-2.88**
R ²	0.01		0.093*		0.152**		0.200**		0.256***	
ΔR^2	-		0.083**		0.059*		0.048*		0.056**	
Quality of Life (SF®-36)										
Step 1										
Type of cancer	0.239	2.806**	0.28	3.25**	0.234	2.707**	0.232	2.704**	0.231	2.727**
Years since diagnosis	0.168	1.968**	0.174	2.117*	0.211	2.582*	0.204	2.503*	0.21	2.617*
Side effects	0.262	3.094**	0.225	2.743**	0.216	2.648**	0.199	2.438*	0.199	2.472*
Step 2										
Income	-	-	0.247	2.989**	0.264	3.243**	0.241	2.94**	0.207	2.514*
Group (Korean and Korean American)	-	-	0.201	2.306*	0.206	2.415*	0.207	2.447*	0.183	2.163*
Step 3										
Religiosity	-	-	-	-	-0.19	-2.16*	-0.249	-2.636*	-0.215	-2.272*
Religious interaction	-	-	-	-	0.192	2.258*	0.173	2.041*	0.137	1.603
Step 4										
Spirituality	-	-	-	-	-	-	0.146	1.638	0.095	1.04
Step 5										
Social support	-	-	-	-	-	-	-	-	0.171	2.004*
R ²	0.169***		0.249***		0.295***		0.311***		0.335***	
ΔR^2	-		0.08**		0.046*		0.017		0.024*	

⁺ p < 0.1, * p < 0.05, ** p < 0.01, *** p < 0.001

BSI—Brief Symptom Inventory

Note. Control variables related to medical information were included in model 1, demographic control variables in model 2, religiosity in model 3, spirituality in model 4, and social support in the full model.

initially expected that religiosity, rather than spirituality, would influence an increase in the perception of positive social support and, in turn, affect improvements in QOL for Korean Americans because of the extension of social networks through religious activities. The findings, however, showed that spirituality improved QOL through social support. As discussed previously, religiosity and spirituality have ambiguous definitions. Religiosity and spirituality may lie on different hierarchy orders and spirituality may be a broader or higher-order concept that includes religiosity. If that theory is applied, the finding that perceived social support mediates the relationship between spiri-

tuality and QOL may be understandable. The theory and finding require further research to fill the gap and limitations of this cross-sectional study.

The study has several limitations. First, its use of exclusively self-reported data relies on the honesty and openness of the participants. Second, the small sample size may limit the generalizability of religiosity and spirituality and QOL outcomes on the Korean American and Korean populations. The use of purposive and snowball sampling also leads to a potential selection bias, and the small number of Korean American participants who belong to high spiritual and low religiosity groups may prevent finding significant results. Normal distribution tests, however, were

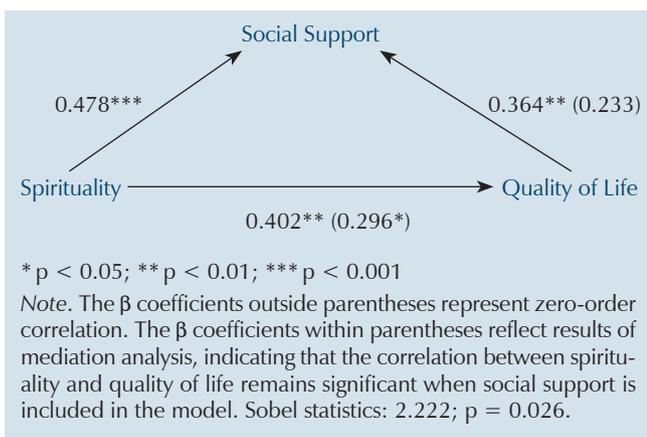


Figure 1. Test of Social Support as a Mediator of Linkage Between Spirituality and Quality of Life for Korean Americans

conducted to address the issue. Finally, the cross-sectional study was not designed to observe the effect of changes in religiosity, spirituality, social support, and QOL, and it could, therefore, not establish causal relationships.

Implications for Nursing

The current study is the first to compare religiosity, spirituality, social support, and QOL in Korean American and Korean populations. The findings suggest the importance of supportive interventions to improve QOL for cancer survivors. In particular, perceived social support was a key contributor that may improve QOL. Perceptions of social support may reduce stress by altering individuals' appraisal of stressors, changing their coping patterns, affecting their perceptions of their own sense of self-efficacy, or altering problem-solving behaviors (Cohen, Underwood, & Gottlieb, 2000). Cognitive and behavioral interventions may, therefore, be useful for improving perceived social support for cancer survivors. For example, the theory that underlying thoughts and feelings alter physical and mental symptoms suggests

several cognitive techniques for QOL improvement, including distraction, cognitive restructuring, guided imagery, and coping strategies to foster mastery of threatening situations (National Cancer Policy Board, 2004).

Psychological and emotional support can often be given in conjunction with education about breast and gynecologic cancer, their treatment and management, and other pertinent aspects of the cancer experience that affect QOL. Such support may provide comfort, instill confidence, and reduce the stress of illness and its management (Vachon, 2008). In addition, all patients would benefit from education programs offering clinical information about the disease, treatment-related side effects, and treatment methods that empower survivors, thereby allowing them to maintain a sense of hopefulness and stay active in their approach to managing the illness. Therefore, service providers, including social workers or nurses, need to make an effort to assist cancer survivors to attain a positive perception of social support through cognitive and behavioral approaches as well as psychological education. Such an effort could be an important means of improving QOL, particularly for immigrant breast and gynecologic cancer survivors, who may feel isolated in their narrow social networks.

On the research side, the findings support the need for comprehensive examination of the meaning and role of religiosity and spirituality in social and cultural contexts. Research is needed to develop the sociocultural interventions that improve QOL, considering the relationship among religiosity, spirituality, and social support for Korean survivors.

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Journal Club Questions

This article has been chosen as particularly suitable for reading and discussion in a Journal Club format. The following questions are posed to stimulate thoughtful critique and exchange of opinions, possibly leading to changes on your unit. Formulate your answers as you read the article. Photocopying of this article for group discussion purposes is permitted.

1. Which immigrant populations are prevalent in the community surrounding our facility?
2. What resources does our facility and the community provide to support patients with cancer who have immigrated?
3. How might religiosity, spirituality, and social support affect quality-of-life outcomes or psychological distress such as depression or anxiety?
4. Do you think the results of this study can be generalized to other immigrant populations? Why or why not?
5. What obstacles do immigrant populations face with regard to health care when relocating? How can oncology nurses help them overcome these obstacles?

At the end of the session, take time to recap the discussion and make plans to follow through with suggested strategies.