

Effect of Workplace Spirituality on Quality of Work Life of Nurse Cancer Survivors in South Korea

Juhyun Jin¹, Eunju Lee²

¹Research Institute of Nursing Science, ²College of Nursing, Keimyung University, Daegu, Korea

Corresponding author: Eunju Lee, PhD, RN. College of Nursing, Keimyung University, Daegu, Korea. E-mail: 11578@gw.kmu.ac.kr

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ABSTRACT

Objective: Return to work is known to have a positive effect on the quality of work life of cancer survivors, including the nurse cancer survivors, along with other factors, such as workplace spirituality. The aim of this study was to identify the effect of workplace spirituality and its constituent concepts on the quality of work life of nurse cancer survivors. **Methods:** A cross-sectional survey comprising the nursing workplace spirituality (NWS) and quality of nursing work life (QNWL) scales was completed by 130 cancer survivor nurses between October 15, 2018, and May 15, 2019, in two general hospitals in metropolitan areas, and snowball sampling was used in parallel. The data were analyzed using SPSS 22 software, determining descriptive statistics, and conducting an independent t-test, one-way ANOVA, Pearson's correlation coefficient, and hierarchical multiple regression. **Results:** The average scores for all NWS and QNWL subdomains were medium.

Age, nursing tenure, and the factors of NWS were positively correlated with QNWL, especially the harmony between the workplace and the individual ($r = 0.65, P < 0.001$). In the second hierarchical regression, controlling general characteristics, harmony between the workplace and the individual ($\beta = 0.38, P \leq 0.001$), and relationship with colleagues ($\beta = 0.19, P = 0.031$) were significant predictors of QNWL explaining 59.0% of the variance. This model was found to be suitable ($F = 16.29, P \leq 0.001$). **Conclusions:** Effective and practical organizational systems and intervention programs based on organizational support, including colleagues' support for increasing the quality of work life for nurse cancer survivors, are required.

Key words: Nurse cancer survivors, quality of work life, workplace spirituality

Introduction

Nurses promote patients' physical, mental, social, and spiritual health recovery and perform training and tasks to increase patients' quality of life (QOL). However, efforts to address their own health problems and promote their own health are rare.^[1,2] In fact, high job stress resulting from the hazards of the hospital environment, rapidly

evolving health-care environment, increased responsibility for nursing actions, and conflicts with colleagues, patients, caregivers, and others have elevated nurses' risk for cancer, in addition to presenting other health problems.^[3,4] Despite the need for active health management among nurses for these reasons, nurses have been found to have lower awareness of the risk of cancer and lower practice of preventive health behaviors than the general population.^[3,5]

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The incidence of cancer was reported to be higher among nurses compared to other occupations,^[6,7] and the International Agency for Research on Cancer has included shift work as a carcinogen, raising concerns about cancer risk among nurses, as theirs is one of the most common professions involving shift work.^[8] In South Korea, health problems such as cancer have surfaced as serious social issues among hospital nurses in specific units, and although a cohort study on nurses' health problems has been conducted, the exact cancer prevalence and etiology among this population remain unknown.^[9] However, chronic fatigue and burnout resulting from serious understaffing caused by Korea's high nurse turnover rate increase nurses' risk of various health problems.^[10] Furthermore, "presentism," where nurses have to show up to work even when they feel sick, begotten by an organizational culture that stresses strict regulation and hierarchy, is predicted to increase cancer incidence among nurses and impact the quality of their work life.^[11,12]

Despite predictions that cancer incidence among nurses will continuously rise, some Korean studies have reported the return-to-work rate among nurse cancer survivors to be lower than their counterparts in office or sales work.^[13,14] This is because nurse cancer survivors who return to work carry not only the high psychological and mental responsibility of their own cancer treatment and health management, but also function as care providers working to promote the recovery of others' health.^[15-17]

On the other hand, returning to work serves as an opportunity for nurse cancer survivors to discover new meaning and a sense of duty from nursing, while also gaining positive experiences such as increased empathy and compassion for patients, restoration of confidence in performing new roles in the organization, coworkers' support, and improved resilience.^[15-18] Notwithstanding the positive aspects of returning to work, nurse cancer survivors experience deterioration in quality of work life and consequent turnover as a result of their personal experiences of being a cancer patient, fear of relapse, negative organizational environments pertinent to their relationship with patients and coworkers, prejudice in their work performance, discrimination, and social stigma.^[15-19]

Quality of work life refers to psychological and mental satisfaction and well-being experienced in one's work life, and is an important determinant of QOL, impacting successful return to work and increased QOL among nurse cancer survivors.^[20] Nurse cancer survivors need inner strength to accept internal and external environments through discovering new meanings for their lives and relationships, while simultaneously engaging in work.^[15-18]

Nursing workplace spirituality (NWS) refers to the aspect of inner strength that enables nurses to think about

the meaning of nursing as felt, experienced, and practiced through their work and the support they receive. Because the nature of their interactions with the nursing field is affected by its strict organizational culture, and its promotion of honesty, loyalty, consideration, and empathy in their daily lives, NWS is anticipated to have a positive impact on nurses' quality of work life.^[21] Furthermore, workplace spirituality among cancer survivors, including nurses, is significantly associated with job stress and job satisfaction, both important predictors of quality of work life.^[13,22] The domains of NWS include "meaning of nursing," where nurses attach meaning to nursing and develop joy, delight, and pride in relation to their jobs; "inner self," where nurses strive to discover hope and meaning through their work; "transcendence through nursing," where nurses improve their abilities to provide better care and fully commit to nursing and experience a state of transcendence during work; and "interaction with the job environment," which refers to the culture of empathy within the organization. These individual-level domains of workplace spirituality may be understood as nurses' attachment of new meaning to their work and organizations after returning to work following a turning point in their lives spurred on by cancer diagnosis and treatment. Nurse cancer survivors who return to work will experience joy and self-realization through their inner worlds and nursing behaviors, which will contribute to increasing their quality of work life. Furthermore, from an organizational aspect, "harmony between workplace and individual," which signifies organizations' interest in and fairness regarding an individual's health and vitality, refers to nurses' interest, pride, and positive feeling of being connected to the organization's goals. When nurse cancer survivors consider their work to be more than a source of income and perceive the organization's values to be aligned with their own, it increases satisfaction at work or quality of work life. In addition, from a social aspect, "relationship with colleagues" refers to nurses' experience of bonding with their managers and coworkers, and experiencing a sense of community, predicted to contribute to an improvement in their quality of work life by helping nurses to escape from the prejudice, discrimination, and social stigma of cancer.^[11,14,23]

Problem statement

Only a handful of studies have examined NWS and quality of work life among nurse cancer survivors. A recent Korean study reported that workplace spirituality impacts quality of work life among cancer survivors, including nurses.^[22] However, the study involved the entire cancer survivor population who returned to work and failed to reflect the specific features of the nursing profession, including its greater professional sense of duty compared

to other occupations, the opportunity to discover new meaning in nursing through their relationship with colleagues, and the promotion of self-realization.^[10] Researches on workplace spirituality among nurses are on-going in Korea and abroad.^[10] However, past studies have generally focused on the association between NWS and organizational factors, such as organizational commitment, organizational citizenship behavior, work performance, and turnover intention, and physical factors, such as fatigue and burnout,^[10,24,25] thus failing to reflect the specific characteristics of nurse cancer survivors, who are required to simultaneously contribute to increasing their own QOL, and facilitating patients' health recovery and increased QOL. Therefore, the domains of NWS among nurse cancer survivors who returned to work, that is, nurse cancer survivors who have subjectively experienced interaction with their work environment, the meaning of nursing, their inner selves, relations with colleagues, harmony between the workplace and individual, and transcendence through nursing, are expected to contribute to improving their quality of work life, or perceived satisfaction with their job and workplace.

Purpose of study

This study aimed to analyze the associations between the domains of NWS and quality of work life, and to identify the factors that influence these associations, among nurse cancer survivors who had returned to work, a novel attempt in Korea. The findings of this study will contribute to exploring practical and effective measures that help nurses suffering from chronic diseases such as cancer to perform nursing tasks with pride and good emotional, psychological, and spiritual health, as well as increasing their quality of work life.

Methods

Study design

This study employed a cross-sectional survey to identify the effect of NWS on quality of work life nurse among cancer survivors.

Setting and participants

This study was conducted at two general hospitals located in a metropolitan city in South Korea. Participants were nurses who had survived cancer and had returned to work at least 6 months prior to the study. They were informed of the purpose of the study and voluntarily agreed to participate. The number of participants required for this study was determined using the ratio N (the sample size): P (the number of variables being analyzed). Gorusch argued for minimum ratio of 5, while Everett recommended a ratio

of at least 10.^[26,27] Therefore, the sample size of 130 was suitable for study.

Data collection

After receiving permission for data collection from the institutions, participants were recruited, and the data were collected at two general hospitals in Metropolitan areas between October 15, 2018, and May 15, 2019. A notice of recruitment for this study was attached to the notice boards of the nursing departments, aimed at nurses who voluntarily expressed their intention to participate. Snowball sampling was used in parallel because of the difficulty of recruiting participants. In South Korea, the rate of returning to work among cancer survivors is 30.5%, which is lower than that of overseas countries (63.5%).^[19,28] Furthermore, for nursing jobs, the rate of return to work is lower than among office and sales workers^[13,14]

Ethical approval

This study was approved by the Institutional Review Board of Keimyung University (IRB No. 40525-201803-HR-008-03) and received permission from the nursing director of each institution for recruitment. The written informed consent was obtained from all participants. Participants received sufficient explanation of the ethical considerations inherent to the study, including the fact that information gathered from this study would not be used for any purpose other than the current research, and that all information provided by participants would be treated with complete confidentiality and stored appropriately. It was stated in the questionnaire that its completion would take 20–30 min, which the collected data were anonymized and would not be used for any purpose other than that of the current study, and that participants could withdraw their participation at any time. A modest incentive was offered as reward for participation.

Research instruments

Demographic and clinical variables were obtained from participants, namely, age, marital status, number of children, education level, working years, working type, managerial position, religion, type of cancer, cancer stage, time of cancer diagnosis to present (at the time of the survey), cancer treatment, current treatment, periods of sick leave, and return to the same workplace.

The NWS scale was developed by Suk and Ko for Korean nurses.^[21] The questionnaire consists of 32 items with a seven-point Likert scale ranging from 1 (not at all) to 7 (very well); a higher total score indicates better NWS. NWS includes six subfactors: interaction with job environment (four items), meaning of nursing (eight items), inner self (six items), relationship with colleagues (six items), harmony between

workplace and individual (three items), and transcendence through nursing (five items). Although the NWS is based on common attributes of existing workplace spirituality scales, it added “interaction with job environment” to reflect the characteristics of healthcare environments and nursing as the interaction of trust and responsibility between nurses and patients, based on moral and ethical principles.^[21] The reliability coefficient of the NWS was estimated as 0.96 in Suk and Ko’s study and was 0.95 in our study.

The quality of nursing work life (QNWL) scale was developed by Brooks and translated for Korean clinical nurses.^[29] The Korean-QNWL includes 36 items utilizing a six-point Likert scale, ranging from 1 (not at all) to 5 (very well); higher total scores indicate better QNWL. The QNWL has four subfactors: work context (21 items), support system for home and work life (five items), work design (seven items), and staffing (three items). The reliability coefficient of the questionnaire was estimated as 0.95 in Kim *et al.*’s study and 0.90 in our study.

Statistical analysis

SPSS Statistics version 22.0 (SPSS, Chicago, IL, USA) was used to analyze the survey data. Participants’ general characteristics were analyzed by real number and percentage; the levels of subdomains of NWS and QNWL were analyzed by mean, standard deviation, minimum value, and maximum value. Differences in QNWL according to the general characteristics of the participants were analyzed using a *t*-test and ANOVA. The reliability coefficients of the instruments were estimated by calculating Cronbach’s alpha values. Pearson’s correlation was used to identify correlations between the subdomains of NWS and QNWL, and hierarchical multiple regression analysis was used to identify the effect of the subdomains of NWS on QNWL among nurse cancer survivors.

Results

General characteristics of participants and difference in quality of nursing work life

Table 1 shows the participants’ general characteristics, including work- and clinical-related variables. Participants’ mean age was 46.4 years, with the majority older than 50 (40.0%) and married (78.5%). Participants had more than 20 years of clinical experience (62.3%) and most were day-shift (70.0%) and religious (76.9%). Majority of the participants were staff nurses (63.1%), and more than half were diagnosed with breast cancer (50.8%). QNWL showed statistical differences and presented higher scores according to general characteristics such as age ($F = 4.449, P = 0.005$), nursing tenure ($F = 3.46, P = 0.019$), day-shift group ($t = -2.97, P = 0.004$) and religion ($F = 8.09, P < 0.001$). Among the

religions of participants, Catholic was the highest of QNWL compared to other religions.

Descriptive statistics and correlations between scales’ subdomains

Table 2 shows the scores on the subdomains of the NWS and total scores of the NWS and QNWL. Descriptive statistics of the variables are as follows: interaction with job environment = 4.07, meaning of nursing = 5.56, inner self = 4.82, relationship with colleagues = 5.42, harmony between workplace and individual = 5.34, transcendence through nursing = 4.85, and QNWL = 4.15. All scores had medium averages. Table 3 shows the correlation between demographic variables and NWS and QNWL scores. Age, nursing tenure, and the factors of the NWS were positively correlated with the QNWL, especially “harmony between workplace and individual” ($r = 0.65, P < 0.001$).

Factors influencing QNWL

Table 4 shows the results of hierarchical multiple regression to investigate the factors influencing QNWL. The data from this study were suitable for multiple regression analysis, with a Durbin Watson score of 1.923 ($du = 1.816 < d$) and a tolerance score of 0.21–0.72 (>0.1) and VIF of 1.40–4.78 (<10). The explanatory power of the model was 59%, indicating suitable fitness ($F = 16.29, P < 0.001$). To identify the factors that influence QNWL of nurses who had returned to work, age, marital status, length of career, working type, working position, and religion, which statistically significantly differed according to QNWL at below 5%, were entered into Model 1, and nominal variables were dummy-coded. The explanatory power of Model 1 was 25%. The model had a significant fit ($F = 5.91, P \leq 0.001$), and the Catholic religion ($\beta = 0.39, P \leq 0.001$) was identified as a predictor. In step 2, the six domains of NWS were additionally entered as independent variables. The explanatory power of Model 2 was 59%, which is 34% more than that of Model 1. Model 2 also had a significant fit ($F = 16.29, P \leq 0.001$). The significant predictors of QNWL in Model 2 were working position ($\beta = -0.16, P = 0.024$), no religion ($\beta = 0.21, P = 0.021$), and Catholic ($\beta = 0.18, P = 0.021$) in terms of general characteristics, and harmony between workplace and individual ($\beta = 0.38, P \leq 0.001$) and relationship with colleagues ($\beta = 0.19, P = 0.031$) in the domains of workplace spirituality.

Discussion

In the results of demographic characteristics, it is interesting that majority of participants were breast cancer patients. While breast cancer is the most common cancer among women, with an incidence of 19.5%,^[30] 50.8% of the participants in this study had breast cancer, which limits the generalization

Table 1: General characteristics of participants and differences according to quality of nursing work life (n=130)

Characteristics	Classification	n (%)	Mean ±SD	t or F	P	Sheffe ^a
Age (years)	≤30	6 (4.6)	3.95±0.57	4.44	0.005	
	31-40	31 (23.9)	3.86±0.54			
	41-50	41 (31.5)	4.24±0.56			
	≥51	52 (40.0)	4.28±0.54			
Marital status	Unmarried	28 (21.5)	4.17±0.63	0.14	0.885	
	Married	102 (78.5)	4.15±0.55			
Number of children	1	27 (20.8)	4.16±0.52	1.15	0.333	
	2	61 (46.9)	4.15±0.55			
	≥3	10 (7.7)	4.44±0.59			
Education level	None	32 (24.6)	4.06±0.62	1.51	0.215	
	Diploma	12 (9.2)	4.17±0.63			
	Bachelor	45 (34.6)	4.15±0.55			
	Master	55 (42.3)	4.26±0.48			
Religion	≥Master	18 (13.8)	3.95±0.54	8.09	<0.001	a> b, c, d
	Catholic ^a	32 (24.6)	4.55±0.50			
	Protestant ^b	47 (36.1)	4.03±0.41			
	Buddhism ^c	21 (16.1)	4.07±0.58			
Nursing tenure (years)	None ^d	30 (23.1)	3.99±0.66	3.46	0.019	
	≤10	15 (11.5)	3.92±0.58			
	11~15	26 (20.0)	3.93±0.51			
	16~20	8 (6.2)	4.16±0.43			
Working type	≥21	81 (62.3)	4.27±0.57	-2.97	0.004	
	2 or 3 shifts	39 (30.0)	3.93±0.59			
Working position	Day-shifts	91 (70.0)	4.25±0.53	-3.32	0.001	
	Staff nurse	82 (63.1)	4.03±0.62			
Cancer diagnosis	Nursing manager	48 (36.9)	4.36±0.45	1.66	0.179	
	Breast cancer	66 (50.8)	4.06±0.53			
	Thyroid cancer	39 (30.0)	4.17±0.53			
	Gastric cancer	11 (8.5)	4.34±0.75			
The time from diagnosis of the cancer	Others	14 (10.7)	4.38±0.66	1.15	0.331	
	<1	15 (11.5)	4.15±0.43			
	≥1-<5	60 (46.2)	4.09±0.57			
	≥5-<10	37 (28.5)	4.3±0.522			
Cancer stage	≥10	18 (13.8)	4.06±0.72	1.44	0.240	
	I	89 (68.5)	4.16±0.54			
	II	31 (23.8)	4.06±0.52			
Number of total cancer treatments	III	10 (7.7)	4.41±0.86	0.46	0.714	
	1	31 (23.8)	4.17±0.62			
	2	53 (40.8)	4.21±0.48			
	3	28 (21.5)	4.08±0.51			
Number of currently cancer treatment	≥4	18 (13.9)	4.07±0.79	-0.98	0.327	
	None	63 (48.5)	4.1±0.616			
Periods of sick leave (month)	≥1	67 (51.5)	4.2±0.528	1.57	0.199	
	<6	67 (51.5)	4.19±0.48			
	6-11	15 (11.5)	4.36±0.75			
	12-24	36 (27.8)	4.05±0.64			
Return to same workplace	>24	12 (9.2)	3.96±0.51	2.89	0.059	
	Yes	100 (76.9)	4.21±0.57			
	No	20 (15.4)	3.89±0.39			
	Others	10 (7.7)	4.06±0.70			

*As a Post-hoc after ANOVA test, represents the difference in QNWL between religious groups. a: QNWL's mean of Catholic (4.55), b: QNWL's mean protestant (4.03), c: QNWL mean of Buddhism (4.07), d: none (3.99), means Catholic group's(a) QNWL level is higher than other groups. QNWL: Quality of nursing work life; SD: Standard deviation. Sheffe^a test: *P=0.001, **P=0.017, ***P=0.001

of the findings. Further, as there is a paucity of studies on the prevalence and types of cancer in nurses, subsequent studies should expand the sample and include various regions.

The mean QNWL score among nurse cancer survivors was 4.15 (out of 6) in our study, which was lower than that of cancer survivors doing office work (4.39)^[13] as well as that

found in a foreign study (4.84).^[31] This seems to reflect the characteristics of nurse cancer survivors, who face chronic fatigue and burnout from shift work, and the burden of having to adjust to rapidly evolving medical technology and organizational environments while dealing with their

own cancer diagnosis.^[32] In addition, our finding could be attributed to differences in returning to work and welfare policies for cancer survivors in different countries, including differences in health management, rehabilitation programs, and financial support given to cancer survivors.^[33] As shown here, cancer survivors' return to work and level of quality of work life are influenced by their occupational characteristics, as well as economic, social, and cultural environment. Hence, subsequent studies should include cancer survivors' personal and environmental characteristics.

The mean NWS score of nurse cancer survivors participating in our study was 5.01 (out of 7), similar to the workplace spirituality of general cancer survivors,^[13,22] but higher than the scores of hospital nurses in Korea measured using the same instrument.^[10,21,34] Our finding is supported by previous studies showing that the experience of cancer diagnosis and treatment increases nurses' compassion and empathy for patients, and thus alters

Table 2: Scores of subdomains of nursing workplace spirituality and total score of nursing workplace spirituality and quality of nursing work life (n=130)

Variables	Minimum	Maximum	Mean±SD
NWS	3	7	4.99±0.73
Interaction with job environment	2	7	4.07±0.90
Meaning of nursing	2	7	5.56±0.96
Inner self	2	7	4.82±1.26
Relationship with colleagues	4	7	5.42±0.79
Harmony between workplace and individual	2	7	5.34±0.99
Transcendence through nursing	2	7	4.85±0.90
Quality of nursing work life	3	6	4.15±0.57

NWS: Nursing workplace spirituality; SD: Standard deviation

Table 3: Correlation between demographic variables, nursing workplace spirituality and quality of nursing work life (n=130)

Variables	r (P)								
	Age	Nursing tenure	X ₁	X ₂	X ₃	X ₄	X ₅	X ₆	QNWL
Age	1								
Nursingtenure	0.862**	1							
X ₁	0.301**	0.228**	1						
X ₂	0.273**	0.260**	0.463**	1					
X ₃	0.420**	0.396**	0.353**	0.561**	1				
X ₄	0.282**	0.253**	0.461**	0.567**	0.513**	1			
X ₅	0.184*	0.204*	0.545**	0.381**	0.293**	0.483**	1		
X ₆	0.396**	0.418**	0.552**	0.413**	0.426**	0.514**	0.516**	1	
QNWL	0.287**	0.255**	0.559**	0.393**	0.310**	0.550**	0.647**	0.537**	1

**P<0.01. X₁: Interaction with job environment; X₂: Meaning of nursing; X₃: Inner self; X₄: Relationship with colleagues; X₅: Harmony between workplace and individual; X₆: Transcendence through nursing; QNWL: Quality of nursing work life

Table 4: Effect of subdomains of nursing workplace spirituality on quality of nursing work life among nurse cancer survivors (n=130)

Variables	Model 1					Model 2				
	B	SE	β	t	P	B	SE	β	t	P
Constant	3.55	0.40		8.84	<0.001	1.13	0.42		2.66	0.009
Age	0.01	0.01	0.17	1.04	0.301	0.01	0.01	0.14	1.07	0.288
Nursing tenure	0.00	0.00	0.03	0.21	0.838	0.00	0.00	-0.04	-0.36	0.721
Working type	-0.17	0.11	-0.14	-1.54	0.125	-0.20	0.09	-0.16	-2.29	0.024
Working position	-0.15	0.12	-0.12	-1.25	0.215	-0.03	0.10	-0.02	-0.28	0.781
Catholic*	0.51	0.12	0.39	4.38	<0.001	0.23	0.10	0.18	2.34	0.021
Buddhism*	0.06	0.14	0.04	0.45	0.654	0.08	0.12	0.05	0.72	0.476
None (religion)*	0.23	0.14	0.17	1.60	0.112	0.28	0.12	0.21	2.35	0.021
Interaction with job environment						0.07	0.06	0.11	1.27	0.208
Meaning of nursing						0.01	0.05	0.01	0.13	0.897
Inner self						-0.01	0.04	-0.01	-0.14	0.886
Relationship with colleagues						0.14	0.06	0.19	2.19	0.031
Harmony between workplace and individual						0.22	0.05	0.38	4.76	<0.001
Transcendence through nursing						0.08	0.05	0.13	1.55	0.123
Adjusted R ² (R ²)					0.25 (0.21)					0.59 (0.55)
F (P)					5.91 (<0.001)					16.29 (<0.001)

*Dummy variable; reference group is protestant. SE: Standard error

their attitude toward patients and strengthens their sense of duty.^[15-18]

Among the subdomains of the NWS, the score for “relationship with colleagues” was the highest (5.42), while “interaction with the job environment” had the lowest (4.07), similar to the results of a previous study using the same instrument.^[21,34] “Relationship with colleagues” is a concept similar to interconnectivity and sense of community, which involves sharing of the purpose and meaning of nursing in the workplace.^[21,35,36] Our result shows that colleagues and job environment are important factors for NWS for nurse cancer survivors, namely relationships, support, interconnectivity, atmosphere of organization and sense of community in workplace.^[34]

“Interaction with the job environment” refers to a culture of empathy within an organization that manifests as care, interest and recognition, and encouragement given to nurse cancer survivors.^[21] The low score for this domain suggests that nurses, who account for the majority of healthcare personnel and play a pivotal role in healthcare service delivery, lack care, respect, and communication from the organization. Therefore, fostering strong bonding with colleagues through work-related support and encouraging organizations to pay attention to and be considerate of nurses’ health problems are important to boost workplace spirituality among nurse cancer survivors.

In our study, the “harmony between workplace and individual” and “relationship with colleagues” domains of the NWS were found to be significant predictors of QNWL among nurse cancer survivors, after adjusting for the general characteristics that influence QNWL, namely age, type of work, working position, religion, length of career, marital status, and type of cancer, explaining 59% of the total variance. Although we cannot directly compare and analyze our findings with those of previous studies due to a lack of studies on the relationship between workplace spirituality and quality of work life among nurse cancer survivors, our results are supported by previous findings pinpointing workplace spirituality as a predictor of quality of work life among cancer survivors, including nurses returning to work.^[13]

“Harmony between workplace and individual” refers to nurse cancer survivors’ positive experience of their organizations, as they are aligned with the organization’s mission and values and are linked to the organization’s goals; it is a similar concept to the “alignment with organizational values” domain of workplace spirituality proposed by Milliman, Czaplewski and Ferguson.^[36] The result of this study is partially supported by the result that alignment with organizational values is significantly correlated with job satisfaction, a component of quality of work life.^[37] We can infer that by returning to work, nurse

cancer survivors restore interpersonal relationships that had been severed due to cancer diagnosis and treatment and return to their normal daily lives, and work becomes something beyond a source of income, which boosts their perceived satisfaction in the workplace and thus impacts their quality of work life.^[18]

“Relationship with colleagues” refers to the support cancer survivors receive from their managers and colleagues, who constitute a human support system within the organization, and this is supported by previous results that found support from managers and colleagues to be a direct predictor of quality of work life among cancer survivors.^[14,23] Collaboration and communication within and outside the nursing unit is crucial to providing quality nursing service, and relationships with managers and colleagues are particularly important for nurse cancer survivors, as with general cancer survivors, in order to return to work, readjust, and perform nursing tasks. In the future, replications studies should be performed to examine the impact of support and encouragement from colleagues on job satisfaction and quality of work life among clinical nurses with cancer and other chronic diseases.

Overall, organizational policies and support systems, as well as support and encouragement from supervisors and colleagues, are essential to improve job satisfaction and lower the burden of carrying out work while undergoing treatment among nurse cancer survivors to increase their quality of work life.

Implications for nursing practice

Thus far, the handful of available studies dealing with nurse cancer survivors’ experiences of returning to work were mostly qualitative studies examining individual nurses’ subjective experiences, which hindered the application of their findings to practice.^[15-18,38] In contrast, this study is the first Korean study to shed light on the relationship between workplace spirituality and quality of work life among nurse cancer survivors, and our results are significant in that they can serve as practical foundational data for the development of measures and policies to boost quality of work life of nurse cancer survivors. Further, stress from the organizational environment may hinder their readjustment to work. Therefore, effort to achieve harmony between organizational and individual values and communication strategies to improve the relationships among colleagues may contribute to enhancing the quality of work life of nurse cancer survivors.

Limitations

The study has some limitations. First, we collected data only from Korean nurses, and due to a lack of similar studies in foreign countries, we could not analyze the differences between countries. Second, our analysis of and comparison

against existing literature were limited, due to the dearth of existing data on quality of work life of nurse cancer survivors in Korea and elsewhere. Finally, because the NWS was developed for Korean nurses and thus has rarely been used in foreign studies, we could not conduct comparisons and analyses in relation to nurses' work environment, which is influenced by cultural and social environments and thus varies across countries.

Conclusion

The "harmony between workplace and individual" and "relationship with colleagues" domains of NWS were found to influence the quality of work life among nurse cancer survivors. Thus, in addition to improving the organizational culture to enable nurse cancer survivors to align themselves with the organization's goals and values, measures to strengthen bonds with colleagues, efforts to change individual, organizational, and social perceptions of nurse cancer survivors, and relevant policies are needed to improve their quality of work life.

Subsequent studies should also examine and expand the scope of research on nurses with cancer or other chronic diseases, in addition to studying the relationship between quality of work life and workplace spirituality, such as professional calling and meaning and values of work among professionals. Further, we also suggest experimental studies to develop and assess the effects of intervention programs that boost workplace spirituality, which is an important predictor of quality of work life among nurse cancer survivors through successful return and readjustment to work.

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Conflicts of interest

There are no conflicts of interest.

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