

RESEARCH ARTICLE

Relation of Compassionate Competence to Burnout, Job Stress, Turnover Intention, Job Satisfaction and Organizational Commitment for Oncology Nurses in Korea

Sun-A Park^{1*}, Seung-Hee Ahn²

Abstract

Background: Nursing focuses on the development of an empathic relationship between the nurse and the patients. Compassionate competence, in particular, is a very important trait for oncology nurses. The current study sought to determine the degree of compassionate competence in oncology nurses, as well as to determine the relationships between compassionate competence, burnout, job stress, turnover intention, degrees of job satisfaction, and organizational commitment in oncology nurses. **Materials and Methods:** A descriptive correlational study evaluating the relationships between compassionate competence, burnout, job stress, turnover intention, degrees of job satisfaction, and organizational commitment in 419 oncology nurses was conducted between January 30 and February 20, 2015. **Results:** The average score of compassionate competence for oncology nurses in the current study was higher than for clinical nurses. **Conclusions:** The correlational analysis between compassionate competence and organizational commitment, burnout, job stress, turnover intention, and degree of job satisfaction revealed a high correlation between compassionate competence and positive job satisfaction and organizational commitment. **Conclusions:** Compassionate competence was higher in oncology nurses than in nurses investigated in previous studies and positively correlated with work experience. Job satisfaction and organizational commitment in nurses may be improved through compassionate competence enhancement programs that employ a variety of experiences.

Keywords: Compassionate competence - oncology nurses - Korea

Asian Pac J Cancer Prev, 16 (13), 5463-5469

Introduction

Nursing focuses on the development of an empathic relationship between the nurse and the patients.; additionally, empathic communication between the nurse and the patients, as well as between the nurse and the patients' families, is a necessary element in nursing.

Empathy is the ability to understand and communicate clients' emotions and perceived circumstances, and gives clients a sense of security about the treatment they receive while also giving them the notion that they have been well nursed. Empathy may also help improve the quality of nursing by inciting, in nurses, positive emotions from being able to understand their clients, as well as a sense of certainty and satisfaction regarding their ability to improve their clients' conditions (Lee, 2013; Cho, 2014; Choi, 2014).

Cancer patients experience negative emotions, such as anxiety, anger, despair, and fear of death, due to anxieties about their prognosis, relapse potential, and economic burden. These may negatively impact their

individual well-being (Yang et al., 1998; Hong et al., 2012; Hong, 2013). In a multidisciplinary team, nurses play an important role as counselor to cancer patients (Oskay et al., 2014).

Davis' study (1980) on two important characteristics of highly empathic nurses showed that highly empathic nurses assign great value to high self-esteem and the fact that they are caring for others. Empathy influences burnout (i.e., one contributing factor to nurse turnover) in that the formation of empathic relationships between nurses and clients may reduce the risk of nurse burnout, while the lack of such empathic relationships may lead to nurse burnout and dissatisfaction. Yom and Kim, (2012) and Lee, (2013) reported similar results in existing domestic studies.

Oncology nurses experience stress over witnessing frequent patient deaths and the suffering of cancer patients and their families, as well as nursing patients who face death; they also have communication difficulties with patients with severe medical conditions (Lee et al., 2012; Citak et al., 2013). Additionally, nurses experience stress from having to quickly acquire expertise in anticancer

¹Division of Nursing Science, The University of Suwon, Suwon, ²Gastric Cancer Center, National Cancer Center, Goyang, Korea

*For correspondence: sapark@suwon.ac.kr

treatments and new treatment methods for cancer patients (Kim et al., 2011; Chan et al., 2013; Ulas et al., 2015), which leads to burnout and turnovers in the long run.

Compassionate competence can reduce job stress, burnout, and turnover by helping nurses to understand their clients and improving the quality of nursing. It is a necessary trait in oncology nurses, as it can increase patients' sense of security about the medical treatments they receive and boost their satisfaction with the care provided (Maskor et al., 2013). The current study aimed to determine the level of compassionate competence in oncology nurses and investigate the correlations between compassionate competence and burnout, job stress, turnover intention, degree of job satisfaction, and organizational commitment.

Materials and Methods

The current study was reviewed by the Institutional Review Board of the National Cancer Center (NCC2015-0014). It was a descriptive correlational study conducted on oncology nurses to investigate their compassionate competence, as well as to determine the relationship between compassionate competence and burnout, job stress, turnover intention, degree of job satisfaction, and organizational commitment.

Participants of the current study were 419 oncology nurses working at the Cancer Center between January 30 and February 20, 2015. The levels of compassionate competence, burnout, job stress, turnover intention, degree of job satisfaction, and organizational commitment in these oncology nurses were measured using a questionnaire.

The data collected were analyzed using Stata 12.0 (2011, StataCorp LP, College Station, TX, USA); frequencies and percentages were used for technical analysis. To determine levels of compassionate competence, burnout, job stress, turnover intention, degree of job satisfaction, and organizational commitment in oncology nurses, averages and standard deviations were used. To gauge compassionate competence, burnout, job stress, turnover intention, degree of job satisfaction, and organizational commitment in oncology nurses by their basic features, t-tests and ANOVA were used with Scheffe's test for post-hoc analysis. Correlations between compassionate competence and burnout, job stress, turnover intention, degree of job satisfaction, and organizational commitment in oncology nurses were analyzed using Pearson's correlation analysis. Cronbach's α was calculated to determine the reliability of the measures used.

Results

Compassionate competence, burnout, job stress, turnover intention, degree of job satisfaction, and degree of organizational commitment of oncology nurses

The average scores of oncology nurses were as follows: 48.31 ± 5.39 for compassionate competence, 2.95 ± 0.41 for burnout, 2.62 ± 0.57 for job stress, 3.15 ± 0.74 for turnover intention of nurses, 2.77 ± 0.25 for degree of job satisfaction, and 3.91 ± 0.35 for organizational commitment of oncology nurses (Table 1).

Compassionate competence, burnout, job stress, turnover intention, degree of job satisfaction, and degree of organizational commitment by basic features

Compassionate competence varied by age, with levels of competence lowest in those between the ages of 22 to 25 (46.27 ± 5.51) and increasing with age ($p < 0.01$). Analysis of compassionate competence levels by level of education received revealed that graduate school graduates scored higher in competence (51.47 ± 5.26 , $p < 0.01$), while married nurses (49.85 ± 5.32 , $p < 0.01$) showed higher compassionate competence than unmarried nurses. Analysis of compassionate competence by job ranking showed that the head nurses scored the highest in compassionate competence levels (54.72 ± 5.14 , $p < 0.01$), with three-shift workers scoring lower (47.39 ± 5.47 , $p < 0.01$), and the score increasing with work experience ($p < 0.01$).

Those between the ages of 26 and 30 showed highest levels of burnout (3.00 ± 0.41 , $p < 0.05$), while unmarried nurses showed higher levels of burnout than married nurses ($p < 0.01$). As for work type, shift nurses showed greater burnout than full-time nurses ($p < 0.01$), and burnout levels were highest in ward nurses, with lower levels in special unit nurses and outpatient nurses in decreasing order ($p < 0.01$).

Job stress was lower in older nurses (2.28 ± 0.57 , $p < 0.05$), while stress levels were lower for married nurses compared to unmarried nurses (2.53 ± 0.59 , $p < 0.05$). As for work type, full-time nurses had lower levels of stress (2.37 ± 0.50 , $p < 0.01$), with levels of stress being significantly higher ($p < 0.01$) in nurses working in wards (2.74 ± 0.57).

A statistically higher score for turnover intention was seen in nurses between the ages of 26 and 30 (3.34 ± 0.70 , $p < 0.01$), compared to other age groups, with a similar trend seen for burnout. Married nurses showed a lower turnover intention than unmarried nurses (2.91 ± 0.63 , $p < 0.01$). In regards to job ranking, turnover intention was low in head nurses (2.37 ± 0.76 , $p < 0.01$). As for work type, turnover intention in full-time nurses was lower (2.76 ± 0.60 , $p < 0.01$) than in other nurses. In terms of work experience, turnover intention in nurses with work experience of 11 years or more was low (2.82 ± 0.66 , $p < 0.01$); in terms of work places, turnover intention was highest in ward nurses, with lower intention levels in special unit nurses and outpatient nurses, in decreasing order ($p < 0.01$).

Table 1. Nurses' Compassionate Competence, Burnout, Job Stress, Turnover, Job Satisfaction, Organizational Commitment

	N=419			
	Min	Max	Mean	Std. Dev.
Compassionate Competence	29	64	48.31	5.39
Burnout	1.3	4.2	2.95	0.41
Job stress	1.3	4.6	2.62	0.57
Turnover	1	5	3.15	0.74
Job satisfaction	1.7	3.9	2.77	0.25
Organizational Commitment	2.1	5.1	3.91	0.35

Table 2. Compassionate Competence, Burnout, Job Stress, Turnover, Job Satisfaction, Organizational Commitment according to General Characteristics

N=419							
cv	n	Compassionate Competence	Scheffe	Burnout	Scheffe	JobStress	Scheffe
		M±SD		M±SD		M±SD	
		t/F(p)		t/F(p)		t/F(p)	
Age(years)							
22-25a	136	46.27±5.51	a<b,c,d<e	2.98±.42	a,b>e	2.74±.53	a>e
26-30b	137	48.24±4.85		3.00±.41		2.63±.58	
31-35c	75	48.93±4.85		2.93±.34		2.61±.56	
36-40d	41	50.80±4.51		2.85±.42		2.50±.55	
≥41e	30	52.96±5.26		2.71±.37		2.28±.57	
		14.55**		4.08*		4.70**	
		(<.01)		(<.05)		(<.01)	
Education level							
JuniorCollegea	86	47.29±4.57	a, b<c	2.97±.48	b<c	2.68±.61	b>c
Universityb	241	47.50±5.34		2.98±.37		2.67±.55	
Graduateschoole	91	51.47±5.12		2.82±.41		2.45±.56	
Others	1	44.00±0.00		3.00±.00		2.70±.00	
		14.76**		3.46*		3.80*	
		(<.01)		(<.05)		(<.05)	
Marital status							
Single	289	47.62±5.30		2.99±.42		2.67±.56	
Married	130	49.85±5.32		2.85±.39		2.53±.59	
		-3.98**		3.07**		2.26*	
		(<.01)		(<.01)		(<.05)	
Position							
StaffNursea	376	47.78±5.19	a<c	2.96±.41	a>c	2.65±.57	
ChargeNurseb	20	51.10±4.21		2.89±.365		2.45±.467	
HeadNurse c	22	54.72±5.14		2.7±.379		2.34±.60	
Others	1	49.00±.00		3.00±.00		2.40±.00	
		14.62**		3.13*		2.81*	
		(<.01)		(<.05)		(<.05)	
Shift Pattern of duty							
Threeshifta	257	47.39±5.47	a<c	3.05±.40	a>c	2.76±.56	a>c
Twoshiftb	25	48.76±4.58		2.9±.330		2.64±.54	
Dayshiftonlyc	130	49.98±4.93		2.76±.38		2.37±.50	
Others	5	51.6±6.34		2.84±.46		2.24±.57	
		6.08**		12.36**		11.57**	
		(<.01)		(<.01)		(<.01)	
Clinical career(years)							
≤ 1a	50	44.34±5.10	a<b,c<d	2.92±.39	b>d	2.73±.54	
1-5b	175	48.01±5.15		3±.43		2.67±.55	
6-10c	94	48.07±4.63		2.98±.36		2.62±.57	
≥ 11d	98	51.26±5.03		2.84±.40		2.48±.59	
		22.10**		3.45*		3.11*	

		(<.01)		(<.05)		(<.05)	
Working unit							
Warda	223	48.08±5.58		3.06±.40	a>b,c	2.74±.57	a>b,c
Outpatientunitb	74	49.17±4.44		2.71±.37		2.34±.51	
Specialunitc	122	48.20±5.55		2.95±.41		2.58±.54	
		1.16(.31)		23.23**		15.24**	
				(<.01)		(<.01)	
Variable	n	Turnover	Scheffe	Jobsatisfaction M±SD	Scheffe	Organizational Commitment M±SD	Scheffe
		M±SD		t/F(p)		t/F(p)	
		t/F(p)					
Age(years)							
22-25a	136	3.21±.80	a,b,c,d>e	2.75±.25		3.81±.37	a,b<c,d,e
26-30b	137	3.34±.70		2.73±.24		3.88±.34	
31-35c	75	3.10±.60		2.82±.27		3.97±.32	
36-40d	41	2.93±.52		2.82±.22		4.08±.27	
≥41e	30	2.39±.63		2.88±.26		4.17±.28	
		12.79**		3.47**		10.66**	
		(<.01)		(<.01)		(<.01)	
Education level							
JuniorCollegea	86	3.15±.80	a, b>c	2.80±.22	b<c	3.89±.29	b<c
Universityb	241	3.28±.70		2.74±.25		3.87±.36	
Graduateschoolc	91	2.80±.65		2.84±.28		4.05±.35	
Others	1	3.80±.00		2.90±.00		4.30±.00	
		10.18**		3.87**		6.53**	
		(<.01)		(<.01)		(<.01)	
Marital status							
Single	289	3.26±.76		2.74±.25		3.86±.36	
Married	130	2.91±.63		2.84±.25		4.03±.33	
		4.61**		-3.50**		-4.30**	
		(<.01)		(<.01)		(<.01)	
Position							
StaffNursea	376	3.20±.72	a>c	2.76±.25	a<c	3.89±.35	a<c
ChargeNurseb	20	2.97±.53		2.88±.25		4.04±.28	
HeadNurse c	22	2.37±.76		2.94±.19		4.20±.23	
Others	1	2.70±.00		2.70±.00		4.00±.00	
		10.00**		4.82*		6.17**	
		(<.01)		(<.05)		(<.01)	
Shift Pattern of duty							
Threeshifta	257	3.36±.72	a>b	2.74±.26	a<c	3.84±.36	a<c
Twoshiftb	25	3.14±.71		2.82±.21		3.99±.39	
Dayshiftonlyc	130	2.76±.60		2.83±.23		4.02±.29	
Others	5	2.84±.36		2.84±.20		4.3±.50	
		16.85**		4.86**		8.26**	
		(<.01)		(<.01)		(<.01)	
Clinical career(years)							
≤ 1a	50	3.03±.77	a,b,c>d	2.76±.24	b<d	3.83±.36	a,b<d

1-5b	175	3.31±.79		2.73±.25		3.82±.36	
6-10c	94	3.26±.57		2.79±.26		3.96±.31	
≥ 11d	98	2.82±.66		2.85±.24		4.07±.32	
		11.29**		4.85**		12.35**	
		(<.01)		(<.01)		(<.01)	
Working unit							
Warda	223	3.34±.75		2.75±.26	a<b,c	3.84±.36	a<b,c
Outpatientunitb	74	2.75±.58		2.80±.23		3.96±.28	
Specialunitc	122	3.04±.67		2.80±.25		4.01±.35	
		21.85**		2.16(.12)		10.90**	

Table 3. Relation of Compassionate Competence on Burnout, Job Stress, Job Movement Intention, Job Satisfaction and Organizational Commitment

N=419						
	Compassionate Competence	Burnout	Job stress	Turnover	Job satisfaction	Organizational Commitment
	(r/p)	(r/p)	(r/p)	(r/p)	(r/p)	(r/p)
Compassionate Competence	1					
Burnout	0.07/0.13	1				
Job stress	0.19**/p<.01	0.63**/p<.01	1			
Turnover	0.18**/p<.01	0.61**/p<.01	0.60**/p<.01	1		
Job satisfaction	0.22**/p<.01	0.14**/p<.01	0.16**/p<.01	0.34**/p<.01	1	
Organizational Commitment	0.22**/p<.01	0.10*/p<.05	0.13*/p<.05	0.20**/p<.01	0.35**/p<.01	1

*<0.05, **<0.01

Levels of job satisfaction were higher in unmarried nurses than in married ones (2.84±0.25, p<0.01). In terms of job ranking, head nurses (2.94±0.19, p<0.05) and full-time nurses (2.83±0.23, p<0.01) showed high levels of job satisfaction. As for work experience, those with work experience of 11 years or more reported higher job satisfaction (2.85±0.24, p<0.05).

Organizational commitment was higher in older nurses (p<0.01) and in those with higher levels of education (4.05±0.35, p<0.01). As for marital status, married nurses scored high in organizational commitment (4.03±0.33, p<0.01). Head nurses, full-time nurses, outpatient nurses, and special department nurses reported higher organizational commitment (p<0.01) as did nurses with greater work experience (p<0.01; Table 2).

Correlations between compassionate competence and burnout, job stress, turnover intention, degree of job satisfaction, and organizational commitment

Pearson's correlation analysis was completed to investigate the correlations between compassionate competence and burnout, job stress, turnover intention, degree of job satisfaction, and organizational commitment. Compassionate competence was significantly correlated with job stress, turnover intention, degree of job satisfaction, and organizational commitment (r=0.18-0.22, p<0.01). Negative levels of burnout, job stress,

and turnover intention were relatively highly correlated (r=0.60-0.63, p<0.01), while positive levels of job satisfaction and organizational commitment were correlated with a coefficient of .3 or greater (Table 3).

Discussion

The average score of compassionate competence for oncology nurses in the current study was higher than the score reported by Lee (2013), who first developed the instrument used in the current study.

The basic features by which compassionate competence significantly differed were age, highest academic degree, marital status, job ranking, and clinical work experience. Higher levels of compassionate competence were found in nurses with higher age, levels of education, and job ranking, and more work experience (p<0.01).

The overall average score for burnout in the current study was 2.95±0.41. This was higher than the 2.61±0.77 reported in Baik and Yom's study (2012) of clinical nurses and lower than the 3.11±0.55 reported in Lee study (2012) of clinical nurses, but still higher than the 1.92±0.50 reported in Yonder's study (2010) of nurses working in emergency rooms, intensive care units, internal and surgical medicine, cancer wards, pediatric intensive care units, and family medicine, and also higher than the 2.90±0.44 reported in Kim and Seo's study (2013) of

clinical nurses.

The average score for job stress in the current study was 2.95 ± 0.41 . This was higher than the 2.33 ± 0.41 reported by Lee's study (2012) of clinical nurses and lower than the 3.36 ± 0.50 reported by Kim's study (2001) of oncology nurses.

Levels of burnout and job stress differed statistically significantly with age, work type, and work place. With regard to age, higher levels of burnout were observed in nurses between the ages of 26 and 30 (3.00 ± 0.41 , $p < 0.05$), while job stress was negatively correlated with age (2.28 ± 0.57 , $p < 0.05$). This was consistent with Kim's findings (2004). As for work type, shift nurses showed higher burnout ($p < 0.01$) and job stress (2.37 ± 0.50 , $p < 0.01$) than other nurses, and in terms of work place, ward nurses showed higher burnout (3.06 ± 0.40 , $p < 0.01$) and job stress (2.74 ± 0.57 , $p < 0.01$) than other nurses. Kim and Seo's study (2013) on general hospital nurses showed greatest burnout in nurses in intensive care units, unlike Kim's study (2004) of clinical nurses, which showed the greatest physical burnout in the emergency room. Ultimately, job stress and burnout levels may be higher for ward nurses caring for cancer patients than nurses caring for general patients, due to a persistent exposure to higher levels of work-related stress.

The average score for turnover intention in the current study was 3.15 ± 0.74 , which was lower than the average of 3.25 ± 0.62 and 3.51 ± 0.87 reported in Kim's study (2007) of oncology nurses and Kim and Seo's study (2013), respectively; however, the average score was higher than the average of 3.12 ± 0.90 and 3.00 ± 0.73 reported in Doo's study (2004) of clinical nurses and Han and Sohn and Kim's study (2009) of new nurses, respectively. Turnover intention differed significantly by age, job ranking, work type, work experience, and work place, while it did not differ significantly by level of education and marital status. Turnover intention was the highest in nurses between the ages of 26 and 30, which was consistent with findings in studies by Kim (2007). Turnover intention in head nurses was low (2.37 ± 0.76 , $p < 0.01$), which was consistent with Yoon and Kim's findings (2010). For higher job ranking (2.37 ± 0.76 , $p < 0.01$) and for work experience of 11 years or more, turnover intention was low (2.82 ± 0.66 , $p < 0.01$); this was consistent with the findings by Yoon and Kim (2010) and Kim (2007).

The average level of job satisfaction was 2.77 ± 0.25 , which was lower than the average of 2.79 ± 0.34 reported in Kim and Seo's study (2013) of clinical nurses and the average of 3.13 ± 0.59 reported in Kim's study (2007) of oncology nurses. Job satisfaction did not significantly differ according to gender, age, and the amount of education, though it did differ significantly according to marital status, job ranking, work type, and work experience.

The average score for organizational commitment in the current study was 3.91 ± 0.35 , which was lower than the average of 4.59 ± 0.80 reported in Kim's (2007) study of oncology nurses, but higher than the average of 2.72 ± 0.42 reported in Kim and Seo's study (2013) of clinical nurses and the average of 3.11 ± 0.62 reported in Yom's study (2005). Organizational commitment differed significantly

by age, highest academic degree, marital status, job ranking, work type, work place, work experience; the higher the age and career, the greater the organizational commitment, consistent with Lee's findings (2001).

Pearson's correlation analysis was completed to investigate the relationship between compassionate competence and burnout, job stress, turnover intention, degree of job satisfaction, and organizational commitment. Variables that showed statistically significant correlations with compassionate competence were job stress, turnover intention, degree of job satisfaction, and organizational commitment; higher correlations were observed between competence and job satisfaction and organizational commitment (the latter two factors denoting positive aspects of work) than between competence and job stress and turnover intention (the latter two factors denoting negative aspects of work). The current study was significant in that it sought to address empathy via compassionate competence, a personal internal factor, rather than through external environmental factors, such as stress and other external environmental factors in work settings, as previous studies. It was also significant in that it investigated the correlational relationships between turnover intention, degree of job satisfaction, and organizational commitment.

Compassionate competence in oncology nurses was strongly correlated with job satisfaction and organizational commitment, which are positive aspects of work, and was found to increase with age and work experience. The current study demonstrated that compassionate competence in nurses should be increased through programs employing a variety of experiences.

References

- Baik DW, Yom YH (2012). Effects of social support and emotional intelligence in the relationship between emotional labor and burnout among clinical nurses. *J Korean Acad Nurs Adm*, **18**, 271-80.
- Chan HK, Nor SS, Cheng YY, et al (2013). Improving safety-related knowledge, attitude and practices of nurses handling cytotoxic anticancer drug: pharmacists' experience in a General Hospital, Malaysia. *Asian Pac J Cancer Prev*, **14**, 69-73 .
- Cho HJ, Jung MS (2014). Effect of empathy, resilience, self-care on compassion fatigue in oncology nurse. *J Korean Acad Nurs Adm*, **20**, 373-82.
- Choi EH, Lee EN (2014). importance of nurses' caring behaviors as perceived by nurses and patients at emergency departments. *J Korean Acad Soc Nurs Educat*, **20**, 402-12.
- Citak EA, Toruner EK, Gunes NB (2013). Exploring communication difficulties in pediatric hematology: oncology nurses. *Asian Pac J Cancer Prev*, **14**, 5477-82.
- Davis MH (1980). A multidimensional approach to individual difference in empathy. *JSAS Catal Select Doc Psychol*, **10**, 85.
- Doo EY (2005). An analysis of nursing perception of internal marketing activities affecting on nurse's turnover intention, nursing task performance and nursing productivity. *J Korean Nurs Administrat Acad Soc*, **11**, 1-12.
- Han SS, Sohn IS, Kim NE (2009). New nurse turnover intention and influencing factors. *J Korean Acad Nurs*, **39**, 878-87.
- Hong MJ, Tae YS (2013). Structural relationship of burnout and related variables among family caregivers of cancer patients.

- J Korean Acad Nurs*, **43**, 812-20.
- Hong MJ, Tae YS, Noh MY (2012). Relationships between stress, ways of coping and burnout of family caregivers of cancer patients. *Korean Oncol Nurs Society*, **12**, 92-9.
- Kim HO (2004). The association among job stress, job satisfaction and burnout of the clinical nurses in some large-sized hospitals. Graduate School of Chosum University.
- Kim HS (2001). A Comparative study regarding health condition and work stress of nurses working in cancer ward and general ward. *Asican Oncol Nurs*, **1**, 191-203.
- Kim JS, Kim GS, Choi MN et al (2011). Factors associated with burnout for nurses working in hematology-oncology wards. *Korean J Occupat Health Nurs*, **20**, 24-34.
- Kim MR, Seomun GA (2013). Relationships among burnout, job satisfaction, organizational commitment and turnover intention to resign in hospital nurses. *Korean J Occup Health Nurs*, **22**, 93-101.
- Kim YR (2007). A Study on the turnover intention of the oncology nurse. The Graduate School of Chonnam National University.
- Lee HK (2001). Nurses' perceptions of job-related empowerment, job satisfaction, and organizational commitment. *J Korean Nurs Admin Acad Soc*, **7**, 65-84
- Lee JM, Yom YH (2012). Effects of working stress, compassion fatigue and compassion satisfaction on burnout in clinical nurses. *J Korean Nurs Administrat Acad Soc*, **19**, 689-97.
- Lee YJ (2013). Development of the compassionate competence scale for nurses. the graduate school of Korea University.
- Lee YS, Tae YS (2012). The lived experience of the burnout of nurses working in oncology wards. *Korean Oncol Nurs Soc*, **12**, 100-9.
- Maskor NA, Krauss SE, Muhamad M et al (2013). Communication competencies of oncology nurses in Malaysia. *Asian Pac J Cancer Prev*, **14**, 153-8.
- Oskay U, Can G, Basgol S (2014). Discussing sexuality with cancer patients: oncology nurses attitudes and views. *Asian Pac J Cancer Prev*, **15**, 7321-6.
- Yang KH, Song MR, Kim EK (1998). The stress and adaptation in family caregiver of chemotherapy patients. *Seoul J Nurs*, **12**, 118-32.
- Yoder EA (2010). Compassion fatigue in nurse. *Nurs Res*, **23**, 191-7.
- Yoon GS, Kim SY (2010). Influences of job stress and burnout on turnover intention of nurses. *J Korean Acad Nurs Admin*, **16**, 507-16.
- Yom YH, Choi KS (2005). The effects of psychological empowerment and transformation leadership on organizational commitment among hospital nurse. *J Korean Nurs Admin Acad Soc*, **11**, 315-22.
- Yom YH, Kim HJ (2012). Effects of compassion satisfaction and social support in the relationship between compassion fatigue and burnout in hospital nurses. *J Korean Acad Nurs*, **42**, 870-8
- Ulas A, Silay K, Akinci S, et al (2015). Medication errors in chemotherapy preparation and administration: a survey conducted among oncology nurses in Turkey. *Asian Pac J Cancer Prev*, **16**, 1699-705.