

## Factors influencing the dementia care behavior of long-term care hospital nurses



Kyung-Ae Jeon, Seung-Hee Yang\*

College of Nursing, Shin Han University, Dongducheon-si, Gyeonggi-do, South Korea

### ARTICLE INFO

#### Article history:

Received 12 December 2021

Received in revised form

8 February 2022

Accepted 10 February 2022

#### Keywords:

Long-term care hospital nurse

Person-centered care

Dementia care behaviors

Caring efficacy

Nursing professionalism

Job demands-job resources

### ABSTRACT

This is a descriptive research study for examining influencing factors on person-centered dementia care behaviors of nurses working in long-term care hospitals. In March 2021, data were collected from 13 care hospitals located in Seoul and Gyeonggi-do. The subjects include a total of 180 long-term care hospital nurses who have the experience to care for elderly people with dementia. Descriptive statistical analysis, t-test, ANOVA, Scheffé-test, Pearson's correlation, and hierarchical multiple regression analysis of the data collected were conducted using IBM SPSS 25.0. The dementia care behaviors of long-term care hospital nurses had statistically significant correlations with caring efficacy ( $r=.49$ ,  $p<.001$ ), nursing professionalism ( $r=.43$ ,  $p<.001$ ) and job resources ( $r=.37$ ,  $p<.001$ ), and influencing factors on dementia care behaviors had the final explanation of 36.7% (adj  $R^2=.367$ ,  $F=14.253$ ,  $p<.001$ ). Ultimately, the most significant influencing factor on dementia care behaviors of long-term care hospital nurses was identified as nurses' caring efficacy, followed by nursing professionalism, and nurses' age and job resources. The higher the nursing professional intuition, the older the nurse's age, and the higher the job resource, the more important the person-centered dementia care behaviors. This study is meaningful in identifying the factors affecting person-centered dementia care behaviors of long-term care hospital nurses and providing basic data to improve dementia care behaviors.

© 2022 The Authors. Published by IASE. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).

### 1. Introduction

In Korea, the population with dementia was 0.83 million in 2020 and is expected to be drastically increased up to 15.9% of all elderly people: 1.36 million in 2030; and 3.02 million in 2050. As the prevalence of dementia has been increased, measures to cope with dementia are discussed as the foremost health policy, leading to care burden on families and an increase in care costs. Therefore this problem emerges as a social one, rather than one specific to families with persons with dementia (Lee and Choi, 2021).

Care in nursing is not a mere emotion or interest that caregivers should have, but a specific behavior for protecting and enhancing human dignity in correlation with persons (Lee and Park, 2016). Above all, person-centered care, which respects

people with dementia as human beings and values the understanding of their perspective and the formation of positive social relations, is important (Kim, 2013).

Dementia care behaviors in long-term care hospitals care services support people with dementia to undergo daily life while being treated as persons in facilities that can play functional and technical roles in place of homes (Kim, 2014). Since the cognitive and physical functions of people with dementia are dependent, caregivers' attitudes or ways in which care is provided, in other words, dementia care behaviors, have significant effects on their quality of life (Kim, 2018).

Korea currently allows about 2/3 of a quota for nurses who work in long-term care hospitals to be replaced with nurse assistants. Therefore, the number of nurse assistants is prominently higher than the resident nurse, among nursing staff. In addition, it is difficult for a small number of long-term care hospital nurses to perform person-centered dementia care behaviors, as caregivers who did not receive professional education about dementia care directly engage in care for patients with dementia. Although the quantitative extension

\* Corresponding Author.

Email Address: [ysh5155@hanmail.net](mailto:ysh5155@hanmail.net) (S. H. Yang)

<https://doi.org/10.21833/ijaas.2022.04.010>

Corresponding author's ORCID profile:

<https://orcid.org/0000-0002-7137-0442>

2313-626X/© 2022 The Authors. Published by IASE.

This is an open access article under the CC BY-NC-ND license

(<http://creativecommons.org/licenses/by-nc-nd/4.0/>)

of long-term care hospitals or facilities is inevitable along with the historical change toward super-aged society, it is necessary to change perception on person-centered dementia care and develop governmental alternatives for arranging professional personnel in long-term care hospitals.

Person-centered care is a multi-dimensional concept that can be explained with four factors: prerequisites of nurses, caregivers; organizational care environment; person-centered care process; and person-centered care outcomes. In particular, only a factor among 'prerequisites' of nurses and organizational 'care environment' cannot allow person-centered care to be practiced, while it can be achieved only if two factors are simultaneously considered (McCormack and McCance, 2006; 2010). A prerequisite of nurses, caring efficacy, is nurses' confidence in adequately caring for people with dementia. The enhancement of caring efficacy can help reduce nurses' negative emotions such as depression or stress and improve positive dementia care behaviors (Kim, 2014), and also decrease caregivers' burden (Liu and Huang, 2018).

This indicates that caring efficacy is a very important factor not only for patients subjecting to dementia care behaviors but also for nurses who provide care. Another prerequisite, 'nursing professionalism' may be varied in individuals' development and patients' perception of nursing, depending on nurses' own professionalism, and furthermore, determines nurses' motivation for care behaviors and can enhance their abilities to observe and interpret patients, so it may be an important influencing factor in providing quality care (Yeun et al., 2005).

In an organizational care environment, job demands are working environment and stimulation requiring continuous psychological and physical effort, while job resources, required for achieving job goals, reduce physiological and psychological costs related to job demands and stimulate individuals' growth and development (Demerouti et al., 2001). Organizational high job demands bring about negative responses including anxiety, depression, job burnout, or more, leading to job stress (Schaufeli and Bakker, 2004). People with dementia have difficulty in communication and show dependent behavior patterns due to cognitive disorders. Therefore, they may make caregivers experience burnout, because of stronger stress and care burden than those that caregivers may experience when they care for other people with chronic diseases (Han, 2017). Both factors, job demands, and job resources are thought to have very strong impacts on long-term care hospital nurses' dementia care behaviors.

Although previous studies on dementia care suggested that physical environment guidance and assessment instruments, based on person-centered care are provided in foreign countries (Lee and Choi, 2021), there are few studies on person-centered care and dementia care behaviors of long-term care hospital nurses in Korea.

This study thus aims to examine influencing factors on person-centered dementia care behaviors of nurses who care for people with dementia in long-term care hospitals and provide basic data for enhancing dementia care behaviors.

The purpose of this study is to understand influencing factors on person-centered dementia care behaviors of long-term care hospital nurses, and specific goals are as follows:

- 1) To understand the general characteristics of the subjects.
- 2) To understand dementia care behaviors, caring efficacy, nursing professionalism, job demands, and job resources of the subjects.
- 3) To understand differences in dementia care behaviors, caring efficacy, nursing professionalism, job demands, and job resources of the subjects.
- 4) To understand correlations among dementia care behaviors, caring efficacy, nursing professionalism, job demands, and job resources of the subjects.
- 5) To understand influencing factors on dementia care behaviors.

## 2. Method

### 2.1. Research design

This is a descriptive research study for examining influencing factors on person-centered dementia care behaviors of nurses working in long-term care hospitals. Its theoretical framework was constructed based on the Person-Centered Care Theory of McCormack and McCance (2006; 2010) as shown in Fig. 1.

Based on person-centered care theory, this study first viewed nurse prerequisites as 'caring efficacy' and 'nursing professionalism'. Caring efficacy is explained as knowing oneself and a nurse's professional knowledge and competence. Another prerequisite, nursing expertise, clarified nurses' beliefs and values. Second, the organization's care environment was viewed as 'job demands' and 'job resources'. Among them, risk and innovation-taking potential were described as 'job demands', and a supportive organizational system was described as 'job resources'. Through this person-centered care process, the result of final person-centered care was regarded as 'dementia care behavior' and the influencing factors were analyzed.

### 2.2. Subjects and data collection

This study was conducted after it was approved by IRB SHIRB-202012-HR-117-02. Nurses working in 13 long-term care hospitals were selected as the subjects by conducting convenience sampling of facilities around Gyeonggi-do. Data were collected for one month in March 2021. The criteria of selection include the understanding of the objective and purpose of this study, spontaneously written consent to participate in it, and experience of caring

for patients with dementia for more than three months in long-term care hospitals.

The size of the sample required by this study was estimated by using G-power 3.10. A multiple regression analysis with the significance level of 0.05, the effect size of 0.15, power of 0.80, and 20

independent variables was conducted to estimate that the minimal number of samples required is 157, and 180 questionnaires were distributed given the drop rate of 0.15, and all 180 copies returned were used in the final analysis.

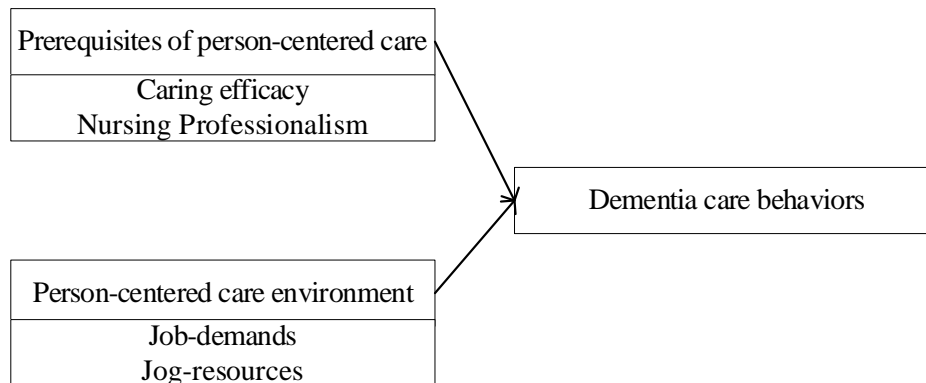


Fig. 1: Theoretical framework of this study

## 2.3. Instruments

### 2.3.1. Dementia care behaviors

Dementia care behaviors were measured by using the instrument for measuring care behaviors, which Park (2017) created by correcting and complementing the care activity practice tool developed by Hwang and Jang (1999). This instrument consists of a total of 21 items and sub-factors including communication (5 items), safety management (7 items), health promotion (6 items), and routine life functions (3 items). Each item is scored on the five-point Likert scale ranging from 1='never' to 5='always', indicating that the higher the score, the better the dementia care behaviors. The reliability in this study is Cronbach's  $\alpha=0.90$ , which was Cronbach's  $\alpha=0.83$  in Hwang and Jang (1999) and Cronbach's  $\alpha=0.90$  in Park (2017).

### 2.3.2. Caring efficacy

Caring efficacy was measured by using the instrument which Jeong (2019) created by correcting and complementing Coates's (1997) tool. It has a total of 30 items consisting of 15 positive and 15 negative items. Each item was scored on the six-point Likert scale ranging from 1='strongly disagree' to 6='strongly agree', indicating that the higher the score, the higher the caring efficacy. The reliability in this study is Cronbach's  $\alpha=0.93$ , which was Cronbach's  $\alpha=0.88$  in Coates (1997) and Cronbach's  $\alpha=0.92$  in Jeong (2019).

### 2.3.3. Nursing professionalism

Nursing professionalism was measured by using the instrument which Han et al. (2008) created by reducing 29 items developed by Yeun et al. (2005) (Demerouti et al., 2001) into 18. The sub-factors of it include professional self-concept (6 items), social

cognition (5 items), nursing expertise (3 items), the role of nursing (2 items), and independence of nursing (2 items), and negative items were reversely operated. Each item is scored on the five-point Likert scale ranging from 1='never' to 5='strongly agree', indicating that the higher the score, the higher the nursing professionalism. The reliability in this study is Cronbach's  $\alpha=0.89$ , which was Cronbach's  $\alpha=0.92$  in Yeun et al. (2005) and Cronbach's  $\alpha=0.94$  in Han et al. (2008).

### 2.3.4. Job demands

Job demands were measured by using the instrument with a total of 25 items, which Gwon (2016) created by correcting and translating the tool developed by Demerouti et al. (2001) and Schaufeli and Bakker (2004). Sub-factors include job burden (8 items), job complexity (4 items), role conflict (3 items), role ambiguity (4 items), and job pressure (6 items). Each item was scored on the five-point Likert scale ranging from 1='never' to 5='strongly agree', indicating that the higher the score, the higher the job demands in organizations. The reliability in this study is Cronbach's  $\alpha=0.93$ , which was Cronbach's  $\alpha=0.93$  in Gwon (2016).

### 2.3.5. Job resources

Job resources were measured by using the instrument with a total of 24 items, which Gwon (2016) created by correcting and translating the tool developed by Demerouti et al. (2001) and Schaufeli and Bakker (2004). Sub-factors include autonomy (6 items), positive feedback (6 items), opportunity to develop the career (6 items), social support (6 items), indicating the higher the score, the higher the job resources in organizations. The reliability in this study is Cronbach's  $\alpha=0.93$ , which was Cronbach's  $\alpha=0.92$  in Gwon (2016).

**2.4. Data analysis**

Data collected by this study were analyzed by using IBM SPSS 25.0, and the specific analysis methods are as follows:

- 1) Frequency, percentage, average, and standard deviation were analyzed to understand the general characteristics of the subjects.
- 2) Average, standard deviation, minimal and maximal values were analyzed to understand dementia care behaviors, caring efficacy, nursing professionalism, job demands, and job resources of the subjects.
- 3) Differences in dementia care behaviors, caring efficacy, nursing professionalism, job demands, and job resources, depending on the subjects' general characteristics were analyzed by using independent t-test and one-way ANOVA, and Scheffé-test as a post-hoc test was conducted.
- 4) Correlations among the subjects' dementia care behaviors, caring efficacy, nursing professionalism, job demands, and job resources were analyzed by using Pearson's correlation coefficients.
- 5) Hierarchical multiple regression analysis was conducted to examine influencing factors on the subjects' dementia care behaviors.

**3. Results**

**3.1. General characteristics of subjects**

In this study, the general characteristics of the subjects are shown in Table 1. The average age is 47.26±8.79 and the number of the subjects over the 50s is highest (n=94, 0.522), followed by those in their 40s (n=46, 0.256). Most of the subjects earned monthly 2-3 million won (n=139, 0.772). The number of subjects with a career of 1-5 years is the highest (n=71, 0.394). The most frequent job style is full-time job (n=61, 0.339), followed by three-shift (n=52, 0.289).

**3.2. The degree of subjects' dementia care behaviors, caring efficacy, nursing professionalism, job demands, and job resources**

The degree of subjects' dementia care behaviors, caring efficacy, nursing professionalism, job demands, and job resources are as shown in Table 2. The whole average of dementia care behaviors is 3.83±0.41 out of 5, and the average of communication is 4.03±0.50; 3.86±0.45 for safety management; 3.85±0.51 for health promotion and 3.43±0.65 for routine life functions, indicating that the average of communication is highest among sub-factors.

The whole average of caring efficacy is 4.45±0.58 out of 6, indicating that the caring efficacy of care hospital nurses is entirely higher.

The whole average of nursing professionalism is 3.05±0.26 out of 5, and the average of professional self-concept is 3.96±0.54; 2.90±0.70 for social cognition; 4.10±0.64 for nursing expertise; 3.84±0.76 for the role of nursing; and 1.58±0.67 for nursing independence, indicating that the average of nursing expertise is highest, while that of nursing independence is lowest among sub-factors.

The whole average of job demands is 3.11±0.59 out of 5, and the average job burden is 3.13±0.80; 3.01±0.74 for job complexity; 3.78±0.67 for role conflict; 2.89±0.65 for role ambiguity; and 2.96±0.79 for job pressure. The averages by factors were compared to show similar outcomes, but the average of role complexity is highest, while that of role ambiguity is lowest.

The whole average of job resources is 3.56±0.51 out of 5, and the average of autonomy is 3.23±0.59; 3.32±0.69 for the positive feedback; 3.87±0.64 for a career development opportunity; and 3.83±0.68 for social support. The averages by factors were compared to show that the average career development opportunity is highest, while that of autonomy is lowest.

**Table 1:** General characteristics of subjects (N=180)

Variables	Categories	N	%
Age	20s	12	6.7
	30s	28	15.6
	40s	46	25.6
	Over the 50s	94	52.2
	general nurses	132	73.3
Position	head nurses	33	18.3
	Middle manager or higher	15	8.3
Clinical career in long-term care hospitals	3 mouths-1 year	21	11.7
	1-5 years	71	39.4
	6-10 years	51	28.3
	≥10 years or more	37	20.6
	full-time job	61	33.9
Job styles	two-shift	40	22.2
	three-shift	52	28.9
	night shift	27	15.0

**3.3. Differences in main variables depending on general characteristics of subjects**

The results of an analysis on differences in dementia care behaviors depending on the general characteristics of the subjects are as shown in Table

3. Dementia care behaviors were significantly varied, depending on age, positions, wages, and job styles: those over the 50s (3.94±0.42) are relatively lower than those in their 30s (3.62±0.38), for differences according to age (F=5.502, p<.01); head nurses (4.00±0.37) are relatively higher than general nurses

(3.78±0.42) for differences according to positions (F=4.425, p<.05); more than monthly 3 million won (3.96±0.37) is relatively higher than monthly 2-3 million won (3.80±0.42) for differences according to

wages (t=-2.244, p<.05); full-time job (3.90±0.41) is relatively higher than night shift (3.61±0.31) for differences according to job styles (F=3.341, p<.05).

**Table 2:** The degree of subjects' dementia care behaviors, caring efficacy, nursing professionalism, job demands, and job resources (N=180)

Variables		M±SD	Minimal	Maximal
Dementia Care Behaviors	Communication	4.03±0.50	2.60	5.00
	Safety management	3.86±0.45	2.71	5.00
	Health promotion	3.85±0.51	2.50	5.00
	Routine life functions	3.43±0.65	1.33	5.00
Caring Efficacy	Total	3.83±0.41	2.62	5.00
	Total	4.45±0.58	2.80	5.97
Nursing professionalism	Professional self-concept	3.96±0.54	2.33	5.00
	Social cognition	2.90±0.70	1.00	5.00
	Nursing expertise	4.10±0.64	1.67	5.00
	Role of nursing	3.84±0.76	1.00	5.00
	Nursing independence	1.58±0.67	1.00	5.00
Job Demands	Total	3.05±0.26	2.33	3.70
	Job burden	3.13±0.80	1.00	5.00
	Job complexity	3.01±0.74	1.00	5.00
	Role conflict	3.78±0.67	2.00	5.00
	Role ambiguity	2.89±0.65	1.50	4.50
	Job pressure	2.96±0.79	1.33	4.83
	Total	3.11±0.59	1.76	4.48
Job Resources	Autonomy	3.23±0.59	1.00	5.00
	Positive feedback	3.32±0.69	1.67	5.00
	Career development	3.87±0.64	2.33	5.00
	Social support	3.83±0.68	2.00	5.00
Total	3.56±0.51	2.46	4.88	

**Table 3:** Differences in main variables depending on general characteristics of the subject (N=180)

	Division	N	Mean±SD	t/F (p)	Scheffé
Age	20s	12	3.75±0.25	5.502 (.001)	b<d
	30s	28	3.62±0.38		
	40s	46	3.77±0.39		
	Over 50s	94	3.94±0.42		
Position	General Nurses	132	3.78±0.42	4.425 (.013)	a<b
	Head nurses	33	4.00±0.37		
	Middle manager or higher	15	3.94±0.40		
Job Styles	Full-time job	61	3.90±0.41	3.341 (.021)	a>d
	Two-shift	40	3.83±0.40		
	Three-shift	52	3.88±0.45		
	Night shift	27	3.61±0.31		

**3.4. Correlations among subjects' dementia care behaviors, caring efficacy, nursing professionalism, job demands and job resources**

The results of an analysis on correlations among subjects' dementia care behaviors, caring efficacy, nursing professionalism, job demands, and job resources are as shown in Table 4. Dementia care behaviors have statistical significance that shows high correlations with caring efficacy (r=.49, p<.001), nursing professionalism (r=.43, p<.001), and job resources (r=.37, p<.001). Among these, dementia

care behaviors and caring efficacy showed the highest correlation. Job demands (r=.13, p>.05) have no significant correlation with dementia care behaviors. Caring efficacy have statistically significant correlations with nursing professionalism (r=.42, p<.001) and job resources (r=.31, p<.001), and nursing professionalism has statistically significant correlations with job demands (r=.16, p<.05), and job resources (r=.41, p<.001). Job demands also have a statistically significant correlation with job resources (r=.23, p<.01).

**Table 4:** Dementia care behaviors, caring efficacy, nursing professionalism, job demands, and job resources (N=180)

	Dementia Care Behaviors	Caring Efficacy	Nursing Professionalism	Job-Demands	Job-Resources
Dementia Care Behaviors	1				
Caring Efficacy	.49***	1			
Nursing Professionalism	.43***	.42***	1		
Job Demands	.13	.04	.16*	1	
Job Resources	.37***	.31***	.41***	.23**	1

\* p<.05 \*\* p<.01 \*\*\* p<.001

**3.5. Influencing factors on subjects' dementia care behaviors**

The results of an analysis on influencing factors on subjects' dementia care behaviors are as shown in

Table 5. Basic hypotheses of a regression model were tested to show that the tolerance limits of all variables were higher than 0.1 and all variance inflation factors (VIF) were less than 10 (1.101-1.376), suggesting that there was no

multicollinearity. In addition, the Durbin-Watson coefficient was 1.940, the approximation of 2 in residual analysis. It was, therefore, found that the hypothesis on the residual independence is satisfied, so it is suitable for regression analysis.

In Model 1, the 50s for age, head nurses for the position, more than monthly 3 million won for wages and night shift for job styles were input as independent variables, which had statistically significant differences from dementia care behaviors, a dependent variable in general characteristics. Caring efficacy and nursing professionalism were input in Model 1 and final job resources were input in Model 3, to examine effects on dementia care behaviors.

Model 1 in which only control variables related to general characteristics are input has 11.9% of explanation of control variables for dementia care behaviors (adj R<sup>2</sup>=.119, F=5.882, p<.001), and age (β=.186, p<.05) has a significant effect on dementia care behaviors and job styles (β=-.170, p<.05). Moreover, especially night shift has a significantly negative effect on dementia care behaviors.

In Model 2, independent variables such as caring efficacy and nursing professionalism are additionally

input after controlling for other variables among the general characteristics to show that explanation was increased by 23.3%, compared to that of Model 1, resulting in the whole explanation of 35.1% (adj R<sup>2</sup>=.351, F=15.596, p<.001). Among control variables, age (β=.182, p<.01) still has a significantly strong effect on dementia care behaviors, and independent variables such as caring efficacy (β=.348, p<.001) and nursing professionalism (β=.253, p<.01) have significantly strong effects on them.

In Model 3, job resources were additionally input by controlling independent variables such as caring efficacy and nursing professionalism, and other variables general characteristics, to show that explanation was increased by 1.6%, compared to that of Model 2, resulting in the whole explanation of 36.7% (adj R<sup>2</sup>=.367, F=14.253, p<.001). The control variables (β=.177, p<.01) still has a significantly strong effect on dementia care behaviors, and independent variables such as caring efficacy (β=.330, p<.001), nursing professionalism (β=.204, p<.01) and job resources (β=.145, p<.05) have significantly strong effects on them.

**Table 5:** Influencing factors on subjects' dementia care behaviors (N=180)

Variables	Model 1				Model 2				Model 3			
	B	SE	β	t	B	SE	β	t	B	SE	β	t
(constant)	3.747	0.048		78.320	1.817	0.250		7.279	1.623	0.264		6.152
Age_50s	0.154	0.064	0.186	2.416*	0.150	0.055	0.182	2.737**	0.147	0.054	0.177	2.693**
Position_Head nurse	0.084	0.083	0.079	1.018	0.052	0.072	0.049	0.731	0.028	0.072	0.026	0.387
Wages_More than monthly 3 million won	0.092	0.077	0.093	1.202	-	0.068	-	-0.416	-	0.068	-	-0.472
Job styles_Night shift	-	0.086	-	-	0.028	0.068	0.029	-	0.032	0.068	0.032	-
Caring efficacy	0.197		0.170	2.282*	0.091	0.076	0.079	-1.204	0.083	0.075	0.071	-1.103
Nursing Professionalism					0.251	0.051	0.348	4.925***	0.237	0.051	0.330	4.672***
Job resources					0.224	0.060	0.253	3.720***	0.181	0.063	0.204	2.870**
R <sup>2</sup> (adj R <sup>2</sup> )		.119(.098)				.351(.329)				.367(.341)		
ΔR <sup>2</sup>		.119				.233				.016		
F		5.882***				15.596***				14.253***		

※ Dummy variable: age (30s=0), position (general Nurses=0), wages (less than 2-3million won=0), Job styles (full-time=0)  
\* p<.05 \*\* p<.01 \*\*\* p<.001

#### 4. Discussion

This study was attempted to identify factors affecting person-centered dementia care behaviors based on nurses in long-term care hospitals and provide basic data to improve dementia care behaviors.

The factors affecting nurses in long-term care hospitals are caring efficacy, nursing professionalism, age, and job resources in this order. However, since it was conducted only for nurses at 13 long-term care hospitals in some parts of the country, there is a limit in expanding or generalizing the research results to nurses at all long-term care hospitals in Korea.

In this study, among the factors influencing dementia care behavior, nurses in long-term care hospitals showed good caring behavior when their caring efficacy was high. It was higher than the study result of Jin and Kim (2020), with an average of 3.69 points in caring efficacy, who used the same tool

targeting nursing students. The reason why studies show the difference in caring efficacy is because nursing students lack hospital practice experiences than nurses working in long-term care hospitals. Therefore, there is a need for a variety of educational programs that can enhance caring efficacy for nursing students and nurses in their 20s and 30s, who do not have much caring experience, through repeated caring experience in the educational field and practice. Moreover, efforts should be made to provide quality care by improving the care environment and treatment in the facility to enhance caring efficacy, relationships with fellow nurses, the appropriate number of caring patients, and educational programs.

Nursing professionalism of long-term care hospital nurses had the highest professional self-concept and the lowest level of independence in nursing. The same result was also reported in the study of Oh (2020). Additionally, in the correlation with dementia caring behaviors, nursing

professionalism showed a statistically significant high correlation and showed a statistically significant correlation with job demands and job resources, which are organizational characteristics. This is similar to the results of previous studies on the influencing factors of nursing professionalism mentioned above, so it is necessary to form correct professionalism as a nurse in dementia care behaviors. It also suggests that nursing professionalism may vary depending on the degree, condition, and environment of job demands and job resources in the organization.

Based on these results, the higher the positive and correct professionalism, the higher the work efficiency, and the higher quality of nursing care can be shown (Jeoung and Kim, 2016). It is thought that it is necessary to improve the organizational environment and to strengthen the positive nursing professionalism so that long-term care hospital nurses can perform person-centered dementia care behaviors.

In this study, job demands were found to be insignificant with dementia care behaviors. However, it is still necessary to provide holistic and inclusive direct care and manage assistant staff. In addition, due to the burden and work demands of long-term care hospital nurses who have to handle the work of on-call doctors, they experience exhaustion derived from emotional depletion or job stress (Kim and Kim, 2019). Therefore, it is necessary to conduct repeated research on the job demands of nursing hospital nurses, and it is thought that social support programs and work improvement are needed to solve the problem.

The job resources of long-term care hospital nurses showed that career development opportunities and social support were high, while autonomy was the lowest. This is the same result as the study of Kim and Kim (2018), and it is considered that authority or free decision-making is rarely performed by a nurse alone. Therefore, it is thought that providing a program to enhance the autonomy of long-term care hospital nurses is needed.

When considering the above findings, there is a necessity in developing solutions to improve the environment of the organization and strengthen the proper nursing professionalism so that nurses in long-term care hospitals can perform person-centered dementia care behaviors. Moreover, it is expected to require the construction of a caring environment to reduce job stress and immerse oneself in nursing through the efficient deployment of the organization's job resources, securing human and physical support, and providing social support programs.

This study has its meaning in identifying the factors influencing person-centered dementia care behaviors of nurses in long-term care hospitals. As the caring efficacy, nursing professionalism, and job resources have an effect on dementia care behaviors, it is believed that continuous in-depth research will be needed that can be reflected in developing

programs to strengthen care capacity for person-centered dementia care behaviors, establishing proper nursing professionalism, expanding job resources in organizations, deploying an appropriate number of nurses, and improving nurses' treatment. Additionally, job requirements in this study have shown to not affect dementia care behaviors, thus, it is expected to require further research.

## 5. Conclusions and recommendations

This study tried to examine influencing factors on person-centered dementia care behaviors of long-term care hospital nurses. The findings show that higher caring efficacy and nursing professionalism, older age, and larger job resources have more positive effects on person-centered dementia care behaviors. They may have an implication in that they provide basic data for developing nurses' caring capacity-building programs and enhancing person-centered dementia care.

On the basis of the findings, the following suggestions can be provided.

First, it is necessary to refine and extend 'person-centered care theory' by attempting various studies on person-centered care in many fields of nursing, not only for long-term care hospitals.

Second, the findings are difficult to be generalized, because this study sampled the subjects by conducting convenience sampling of long-term care hospitals located in Seoul and Gyeonggi-do. A follow-up study for categorizing, extending, and verifying medical organizations by localities and adequacy evaluation grades is warranted.

Third, nursing managers in long-term care hospitals should conduct customized caring capacity-building programs for nurses and other nursing staff in practice, as caring efficacy had been proven to be the most affecting factor to person-centered dementia care behaviors.

Fourth, policy plans such as tightened regulations on care environment in long-term care hospitals, estimation of nursing fees, and legislation of the criterion of adequate nursing staffs should be developed to realize the provision of care environment, deployment of adequate nursing staffs and better treatment of nurses for person-centered dementia care behaviors.

## Compliance with ethical standards

## Conflict of interest

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

## References

- Coates CJ (1997). The caring efficacy scale: Nurses' self-reports of caring in practice settings. *Advanced Practice Nursing Quarterly* 3(1): 53-59.

- Demerouti E, Bakker AB, Nachreiner F, and Schaufeli WB (2001). The job demands-resources model of burnout. *Journal of Applied Psychology*, 86(3): 499-512. <https://doi.org/10.1037/0021-9010.86.3.499>
- Gwon SB (2016). Effect of positive psychological capital on job burnout from perspective of job-demands-resources. Ph.D. Dissertation, Dankook University, Yongin, South Korea.
- Han CS (2017). Effects of perceived facility caregiver's dementia caring competence and organizational ethical climate on care behaviors for elderly people with dementia. M.Sc. Thesis, Hallym University, Chuncheon, South Korea.
- Han SS, Kim MH, and Yoon EG (2008). Influencing factors on nursing professionalism. *Korean Academic Society of Nursing Education*, 14: 73-79. <https://doi.org/10.5977/JKASNE.2008.14.1.073>
- Hwang SY and Jang KS (1999). A study on the levels of dementia-related knowledge, attitude, and practice among nursing assistants caring for institutionalized elders with dementia. *Journal of Korean Academy of Adult Nursing*, 11(3): 378-388.
- Jeong JO (2019). The effect of an empathy education program on nursing students' empathy ability, interpersonal ability, and caring. *The Journal of Korean Academic Society of Nursing Education*. 25(3): 344-356. <https://doi.org/10.5977/jkasne.2019.25.3.344>
- Jeoung HY and Kim SY (2016). Effects of nursing professionalism and job involvement on turnover intention among new graduate nurses. *Journal of Korean Academy of Nursing Administration*, 22(5): 531-539. <https://doi.org/10.1111/jkana.2016.22.5.531>
- Jin SH and Kim EH (2020). Influences of nursing professionalism, caring efficacy, and ethical sensitivity on caring behaviors in nursing students. *Journal of Health Informatics and Statistics*, 45(4): 394-401. <https://doi.org/10.21032/jhis.2020.45.4.394>
- Kim CG (2013). Influencing factors of the perceived formal caregivers' caring competences for elders with dementia. *Journal of Korean Gerontological Nursing*, 15(2): 95-102.
- Kim EM (2018). Effects of elderly care facilities' and nursing assistants' human rights sensitivity and perceptions on elder abuse on person-centered care. M.Sc. Thesis, Ehwa Womans University, Seoul, South Korea.
- Kim HH (2014). Effects of job-stress and self-efficacy on caring performance depending on caregivers' dementia knowledge. Ph.D. Dissertation, Daegu Korean Medicine University, Gyeongsan, South Korea.
- Kim HS and Kim KH (2019). The study of work environment of nurses in long-term care hospitals. *Journal of the Korea Academia-Industrial Cooperation Society*, 20(2): 250-258.
- Kim SY and Kim KK (2018). Relationship of conflict management style, professional autonomy, role conflict and organizational commitment of nurses in general hospitals. *Journal of Korean Academy of Nursing Administration*, 24(5): 387-395. <https://doi.org/10.1111/jkana.2018.24.5.387>
- Lee JY and Park SY (2016). Effect of nurses' socio-psychological health and peer support on ability to care patients. *Nursing Administration Journal*, 22(5): 461-470. <https://doi.org/10.1111/jkana.2016.22.5.461>
- Lee SJ and Choi YY (2021). Comparison of dementia-friendly environment guidance in terms of person-centered care. *Korea Ecological Environment Architecture Journal*, 21(1): 81-87. <https://doi.org/10.12813/kieae.2021.21.1.081>
- Liu HY and Huang LH (2018). The relationship between family functioning and caregiving appraisal of dementia family caregivers: Caregiving self-efficacy as a mediator. *Aging and Mental Health*, 22(4): 558-567. <https://doi.org/10.1080/13607863.2016.1269148>  
**PMid:28001431**
- McCormack B and McCance T (2010). *Person-centered nursing: Theory, models and methods*. Wiley-Blackwell, Chichester, UK. <https://doi.org/10.1002/9781444390506>
- McCormack B and McCance TV (2006). Development of a framework for person-centred nursing. *Journal of Advanced Nursing*, 56(5): 472-479. <https://doi.org/10.1111/j.1365-2648.2006.04042.x>  
**PMid:17078823**
- Oh JK (2020). Person-centered nursing perceived by intensive care unit nurses: Importance-performance analysis. M.Sc. Thesis, Seoul National University, Seoul, Korea.
- Park JH (2017). Influencing Factors of Geriatric Care Hospital Nurses on Dementia Nursing. M.Sc. Thesis, Catholic University, Daegu, South Korea.
- Schaufeli WB and Bakker AB (2004). Job demands, job resources, and their relationship with burnout and engagement: A multi-sample study. *Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior*, 25(3): 293-315. <https://doi.org/10.1002/job.248>
- Yeun EJ, Kwon YM, and Ahn OH (2005). Development of a nursing professional values scale. *Journal of Korean Academy of Nursing*, 35(6): 1091-1100. <https://doi.org/10.4040/jkan.2005.35.6.1091>  
**PMid:16288152**