

Contents lists available at ScienceDirect

Heliyon

journal homepage: www.cell.com/heliyon



Effects of nursing professionalism and self-efficacy on job embeddedness in nurses

Hee-jeong Kim^a, Dahye Park^{b,*}

- a Department of Nursing, Namseoul University, 91, Daehak-ro, Seobuk-gu, Cheonan-si, Chungcheongnam-do, Republic of Korea
- ^b Department of Nursing, Semyung University, Jecheon-si, Chungcheongbuk-do, Republic of Korea

ARTICLE INFO

Keywords: Nursing professionalism Self-efficacy Job embeddedness Nurses

ABSTRACT

Purpose: This study aimed to investigate the effects of nursing professionalism on job embeddedness to stay in hospital nurses.

Methods: This cross-sectional survey recruited 438 nurses working at four general hospitals and three small to medium hospitals in K province, South Korea. Data were collected from June 10 to September 10, 2022 using structured questionnaires and then analyzed with IBM SPSS Statistics for Windows, version 25.0.

Results: The scores, out of 5.0, were 3.30 for nursing professionalism, 3.73 for self-efficacy, and 3.15 for job embeddedness. The three variables were different according to participants' general characteristics. The correlation between self-efficacy and nursing professionalism had a positive correlation to job embeddedness. Nursing professionalism had a mediating effect on the relation between self-efficacy and job embeddedness. Self-efficacy exerted an influence on organizational commitment through the mediating effect of nursing professionalism and is expected to lay the foundation for the promotion of job embeddedness.

Conclusion: To increase nurses' job embeddedness, nursing and hospital managers must develop and implement programs that help improve nurses' self-efficacy and nursing professionalism to adjust well in their organization.

1. Introduction

1.1. Background

South Korea has become an aging society with increased demand for nursing care to meet the increased incidence of chronic disease as well as improved sense of rights across the population. Therefore, an emphasis has been placed on maintaining an adequate level of human resources to provide high quality nursing services [1]. Improving nurse retention is a continuous challenge for most nurse managers and administrators. Human resources management has prioritized minimizing the rate of turnover of competent employees, recruiting talented individuals, and allowing such individuals to reach their highest potentials [2,3]. Regarding turnover and retention, Mitchell et al. [4] suggested the concept of job embeddedness, which indicates the level of deep links and rootedness of an individual with their job. It is concerned with the cause of turnover rather than the incidence, as a novel approach to elucidate the reasons certain employees stay and as a key construct to mediate employee retention [4].

E-mail address: dhpark@semyung.ac.kr (D. Park).

Corresponding author.

In Korea, the hospital nurse turnover rates vary among hospitals, depending on certain characteristics. The Korean Hospital Nurse Association (KHNA) surveys around 200 hospitals annually to determine nurse turnover rates. According to the survey results, the average turnover rate for all hospital nurses was 15.2% in 2019. Moreover, the average turnover rate for new graduate nurses increased from 30.5% in 2011 to 45.5% in 2019 [5].

Job embeddedness is a key predictor of voluntary turnover [6], and an increase in job embeddedness leads to a decrease in turnover or turnover intention [7]. Job embeddedness increases as the length of employment increases [8] and affects job satisfaction, self-efficacy, organizational citizenship behavior, and work performance [9–11]. In the field of nursing, the research on job embeddedness is in its early days and studies have been limited to the correlations with specific variables. Although a number of studies have clarified the relation between job embeddedness and turnover intention, only very few studies have investigated the factors that influence job embeddedness. The few studies on the influencing factors of job embeddedness include the works of Choi [12] on nurses' work environment and psychological capital, Kim et al. (2014) on nurses' work environment, and Mun and Hwang [13] on nursing organizational culture types.

The firm foundation of professionalism in nurses, who account for a substantial proportion of hospital staff, has a huge influence on the productivity and competitiveness of the hospital. Nursing professionalism is the belief in nurses and nursing as a profession [14] and a systematic view of nursing that reflects the occupational view of nursing practitioners, nursing activities, and the job of nursing itself [15]. Through sound professionalism, nurses could acquire the public recognition of the values of nursing as well as personal satisfaction, which is highly important [16]. Nursing professionalism could have a positive effect on the attitudes and behaviors of nurses toward the work; a nurse with positive nursing professionalism would show greater organizational commitment and attain job satisfaction by themselves [17–19]. These consequences would not only increase the efficiency of nursing tasks but also provide quality nursing services to patients, contributing to improving hospital competitiveness [19,20]. Thus, nursing professionalism has a positive effect on nurses' job embeddedness by influencing job satisfaction and organizational attachment.

Self-efficacy means the expectation or belief of an individual regarding their abilities to plan and execute the necessary acts to accomplish a given goal, thereby achieving desired outcomes [21]. Self-efficacy is expected to have a positive effect on nurses' performance of nursing tasks as a concept that motivates the individual nurse's activities in the nursing field to induce changes [22]. Fetzer [23] highlighted that nursing professionalism increases when nurses are in a motivated state to do their best toward self-realization with a positive understanding and opinion of themselves. Research has shown that nurses with high self-efficacy can manage job stress effectively and enhance job satisfaction and psychological well-being within the organization [22,24–26]. Therefore, measures must be developed to strengthen the intrinsic motivational factors in nurses, including self-efficacy, as a means to improve the job embeddedness of nurses.

Studies have mostly conducted fragmentary analyses of certain concepts, as shown by those investigating the correlations between self-efficacy and nursing professionalism, nursing professionalism and job embeddedness, and self-efficacy and job embeddedness. Studies on job embeddedness have been conducted on nursing professionalism, self-efficacy, and job embeddedness, targeting nurses by hospital size and specialty field in various ways, but studies exploring the relationships among nursing professionalism, self-efficacy, and job embeddedness simultaneously are lacking. We aimed to analyze the correlations of all these individual factors. Notably, we sought to determine the mediating effect of nursing professionalism in the correlation of self-efficacy with nursing professionalism and job embeddedness in nurses. Clarifying the role that the locus of nursing professionalism plays in nurses' job embeddedness and self-efficacy provides a framework for nurse managers seeking best retention practices. We expected our findings to provide basic data that would contribute to efficient human resources management and to the organizational management and advancement of hospitals. The purpose of this research was to provoke an awareness of the significant role that the locus of nursing professionalism may play in the job embeddedness and self-efficacy of nurses.

1.2. Purpose

Our study aimed to determine the effects of nursing professionalism and self-efficacy on job embeddedness in hospital nurses. The specific goals were as follows: to estimate the levels of nursing professionalism, self-efficacy, and job embeddedness in participants; to analyze the differences in nursing professionalism, self-efficacy, and job embeddedness according to participants' general characteristics; to identify the correlations between nursing professionalism, self-efficacy, and job embeddedness; and to verify the mediating effect of nursing professionalism on self-efficacy and job embeddedness in participants through simple and multiple regression analyses.

2. Methods

2.1. Study design

We conducted a descriptive correlational survey to determine the correlations among nursing professionalism, self-efficacy, and job embeddedness and to identify the influencing factors of job embeddedness.

2.2. Participants and data collection

The accessible population consisted of nurses working at four general hospitals and three small to medium hospitals in K province, South Korea. The purpose and procedures of the study were explained to the Department of Nursing at each hospital, and through

internal discussions, participation was approved. We posted an advertisement on the hospital's online bulletin board for nurses for 3 months from June 10 to September 10, 2022. With the help of the chief nurses, 450 questionnaires were distributed among the nurses. From 445 retrieved self-report questionnaires (98.8%), 438 were used in data analysis, excluding 7 with incomplete responses. The period of data collection was from June 10 to September 10, 2022. We explained the study's purpose, data anonymity, and privacy protection to potential participants, and those voluntarily agreeing to survey participation were enrolled. Each participant was requested to sign an informed consent form. The number of participants was defined based on the sample size estimated based on the conditions of significance level of 0.05, testing power of .91, and effect size of 0.25. The number of participants in this study at n=438 satisfied the estimated minimal number of n=180 (Bio, Stat. Inc., 2000).

2.3. Ethical considerations

Ethical approval was granted by N university in Chungnam. The participants were informed about the purpose of the study, voluntary participation, freedom to withdraw from the study, guarantee of anonymity, and use of collected data for only research purposes, and written consent was obtained after confirming that the participants had accurately understood the purpose, procedure, and method of the study using the talk-back method. Participants were provided oral and written information describing the objectives and procedures of the study, anonymity, confidentiality, and the right to withdraw from the study at any time. Written consent was collected from all the participants.

2.4. Data analysis

The collected data were computerized and statistically analyzed with the IBM SPSS Statistics for Windows, Version 25.0. For the general and work-related characteristics of participants, we obtained frequency, percentage, mean, and standard deviation values. For the nursing professionalism, self-efficacy, and job embeddedness variables, we obtained descriptive statistics with mean and standard deviation values. For the differences in nursing professionalism, self-efficacy, and job embeddedness according to participants' general characteristics, we conducted independent *t*-test and one-way ANOVA. For the between-group variation, we used the Scheffe test. For the correlation of job embeddedness with nursing professionalism and self-efficacy, we used Pearson correlation coefficients. For the factors that influence job embeddedness, we performed multiple regression analysis.

Table 1 General characteristics of the subjects (n = 438).

Characteristics	Category	n (%)	Nursing professionalism	Self-efficacy	Job embeddedness
Sex	Male	28 (6.4)	.187 (.665)	.001 (.970)	.012 (.912)
	Female	410 (93.6)			
Age (years)	$\leq 25^a$	24 (5.5)	6.226 (.000) a > d > b > c	6.581 (.000) d > b, c	4.405 (.005) d > b
	26–29 ^b	125 (28.5)			
	30–39 ^c	181 (41.3)			
	\geq 40 ^d	108 (24.7)			
Marital status	Unmarried ^a	250 (57.1)	5.397 (.005)**b > c	2.794 (.062)	4.563 (.011)*b > a
	Married ^b	183 (41.8)			
	Others ^c	5 (1.1)			
Clinical experience (years)	$\leq 2^a$	64 (14.6)	4.988 (.002)** a > b, c	2.501 (.059)	4.630 (.003)**d > b
	3–5 ^b	111 (25.3)			
	6–10 ^c	81 (18.5)			
	$\geq 10^{d}$	182 (41.6)			
Education	Diploma ^a	46 (10.5)	1.785 (.169)	9.745 (.000)***c > b > a	13.434 (.000) c > b > a
	Bachelor ^b	320 (73.1)			
	Graduate and above ^c	72 (16.4)			
Shift work	24-h shift ^a	79 (18.0)	2.056 (.129)	4.676 (.010)* a > b, c	5.454 (.005)** a > b, c
	12-h shift ^b	47 (10.7)			
	8-h shift ^c	312 (71.2)			
Department of work	Ward	237 (54.1)	.588 (.556)	2.795 (.062)	.150 (.861)
	Unit (ICU, ER, OR)	154 (35.2)			
	Outpatient (AKR, HPC)	47 (10.7)			
Position	Staff nurse ^a	286 (65.3)	1.538 (.216)	8.467 (.000)***b, c > a	12.750 (.000)***b, $c > a$
	Charge nurse ^b	126 (28.8)			
	Chief nurse or above ^c	26 (5.9)			
Past turnover experience	Y	145 (33.1)	.984 (.322)	.431 (.512)	1.106 (.294)
	N	293 (66.9)			
Annual income	1	24 (5.5)	1.733 (.159)	4.851 (.002)**	6.086 (.000)***
	2	147 (33.6)			
	3	130 (29.7)			
	4	137 (31.3)			

Note: ICU = intensive care unit, ER = emergency room, OR = operating room, AKR = artificial kidney room, HPC = health promotion center. *p < .05, **p < .01, ***p < .001.

2.5. Instruments

To measure nursing professionalism, we used the Korean-Nursing Profession Value, a tool developed by Yeun et al. [15]. The tool consists of 29 items across five dimensions: professional self-concept (9 items), social recognition (8 items), nursing expertise (5 items), nursing competence (4 items), and nursing autonomy (3 items). Each item is rated on a five-point Likert scale; a higher score indicates higher nursing profession. The Cronbach's α was 0.92 in Yeun et al. [15] and 0.88 in our study. Reliability was 0.878 in our study.

Nursing profession self-efficacy plays an important role in boosting the overall performance of nursing professionals, and thus serves as a key predictor of outcomes in the nursing profession. We measured nursing profession self-efficacy using the Korean version-Nursing Profession Self-Efficacy (K-NPSE) developed by Oh et al. (2021). The K-NPSE consists of 19 items in three dimensions: professional situation (10 items), advocating situation (4 items), and caring situation (5 items). Each item is rated on a five-point Likert scale; a higher score indicates higher nursing profession self-efficacy. The Cronbach's α for the entire original scale was 0.92 and was 0.94 in our study.

Job embeddedness reflects the level of rootedness of an employee in the organization to which they belong [4]. In our study, job embeddedness was measured using 18 items under three subcategories adopted from a tool developed by Mitchell et al. [4]: Fit to Organization (8 items), Links to Organization (4 items), and Organization-related Sacrifice (6 items). Each item is rated on a five-point Likert scale; a higher score indicates higher job embeddedness. The Cronbach's α for the tool reliability was 0.87 in the original study and 0.91 in our study.

3. Results

3.1. General characteristics

Table 1 presents the general characteristics of the 438 participants.

3.2. Levels of nursing professionalism, self-efficacy, and job embeddedness

Table 2 presents the levels of nursing professionalism, self-efficacy, and job embeddedness of the participants.

3.3. Correlations between nursing professionalism, self-efficacy, and job embeddedness

Table 3 presents the correlations between perceived nursing professionalism, self-efficacy, and job embeddedness. The results suggested that all three variables were positively correlated.

3.4. Mediating effect of nursing professionalism in the effect of self-efficacy on job embeddedness

To examine the mediating effect of nursing professionalism in the effect of self-efficacy on job embeddedness, we used three regression equations. In the first step, we performed a regression analysis on the mediating variable in relation to the independent variable, and in the second step, a regression analysis on the dependent variable in relation to the independent variable. Lastly, we conducted a multiple regression analysis on the dependent variable in relation to the independent and mediating variables. The result of the first step should be a significant relation between the independent and mediating variables, and that of the second step, a significant relation between the independent variables. For the third and last step, the independent variable should be significantly related to the mediating variable, whereas the respective effect should be stronger in the second step compared with the third step. A lack of a significant relation between the independent and dependent variables in the third step implies a full mediating effect, whereas a significant relation indicates a partial mediating effect [27].

In our study, the multicollinearity test preceding the regression analyses indicated that the tolerance was .714, a level higher than 0.1; the variance inflation factor was 1.400, a level below the threshold of 10; and the condition index ranged at 10.915–16.001, below the level of 30, all of which confirmed the lack of multicollinearity. Table 4 presents the results of our assessment of the mediating effect of nursing professionalism through the previously described three-step regression analysis. The simple regression analysis of the first step—to test the effect of self-efficacy as the independent variable on overall nursing professionalism as the mediating variable—showed that the standardized regression coefficient β was .868 (p < .001) with statistical significance, and the model was significant as well (F = 346.839, p < .001). The analysis of the second step—to test the effect of self-efficacy as the independent variable on job embeddedness as the dependent variable—showed β = .547 (p < .001) with statistical significance, and the model was significant as well (F = 211.852, p < .001). Lastly, the analysis to test the effect of the mediating variable on the dependent variable

Score for self-efficacy, organizational commitment, and nursing professionalism.

Variable	Min	Max	$Mean \pm SD$	$Mean \pm SD/item$
Nursing professionalism	43	145	96.64 ± 13.48 70.79 ± 10.33 56.66 ± 9.88	3.33 ± 0.46
Self-efficacy	19	95		3.73 ± 0.54
iob embeddedness	18	85		3.15 ± 0.55

Table 3Correlations between nursing professionalism, self-efficacy, and job embeddedness.

Variable	Nursing professionalism	Self-efficacy	Job embeddedness
Nursing professionalism	1		
Self-efficacy	.666**	1	
Job embeddedness	.630**	.572**	1

^{**}p < .01.

Table 4
Mediating effect of job embeddedness on the relation between self-efficacy and nursing professionalism.

Variable	В	F	R2	Adjusted R2
Self-efficacy → Nursing professionalism	.868***	346.839	.443	.442
Self-efficacy → Job embeddedness	.547***	211.852	.327	.325
Nursing professionalism → Job embeddedness	.462***	286.946***	.397	.396
Nursing professionalism → Job embeddedness	.328***	169.971	.439	.436
Self-efficacy \rightarrow Job embeddedness	.262***			

p < .05, *p < .01, **p < .001.

showed $\beta = 0.328$ with statistical significance for nursing professionalism as the mediating variable, when self-efficacy, as the independent variable, was controlled, and the β (0.262) for self-efficacy as the independent variable was lower than the β (0.547) in the second step with statistical significance, revealing a partial mediating effect. The model in the third step was also significant (F = 169.971, p < .001).

As shown in Fig. 1, an increase in self-efficacy led to an increase in job embeddedness ($\beta = 0.547$, p < .001), indicating a direct effect. When considering nursing professionalism as a mediating variable, the magnitude of the effect was shown to have relatively decreased ($\beta = 0.262$, p < .001), based on which we concluded that nursing professionalism had a partial mediating effect ($\beta = 0.328$, p < .001). Job embeddedness in nurses increased when nursing professionalism increased as a result of increased self-efficacy.

4. Discussion

This study investigated the levels of nursing professionalism, self-efficacy, and job embeddedness in nurses and the correlations between these factors, and examined the mediating effect of nursing professionalism in the effect of self-efficacy on job embeddedness.

First, on nursing professionalism, our participants reported a mean score of 3.33 out of 5, indicating a moderate level of professionalism. Kim and Jeong [19], in investigating professional self-concept in nurses at small to medium hospitals of \geq 250 beds, reported a mean score of 2.6 out of 4, which lends support to our study. Likewise, Han et al. [28] conducted a study on 370 university hospital nurses and reported similar results to our work: a score of 3.30 out of 5. Koh and Jeong [29] investigated nursing professionalism in nurses at general hospitals of \geq 400 beds, and the mean score was 3.67 out of 5. Notably, their result matched ours despite the variations in the age, career length, and marital status of the participating nurses. However, differences have been reported according to the age, career length, and marital status of nurses [19,29]. The respective variables should be assessed in a repeated study.

The mean score of self-efficacy for the nurses participating in our study was 3.73 out of 5, indicating a moderate level. In Koh and Kang [22] on staff nurses and Kim [30] on nurses, the mean scores were 3.41 out of 5 and 2.73 out of 4, respectively, which agreed with our result. Likewise, the mean score in Seok et al. [31] on nursing undergraduates was 79.0 out of 115, which could be converted to

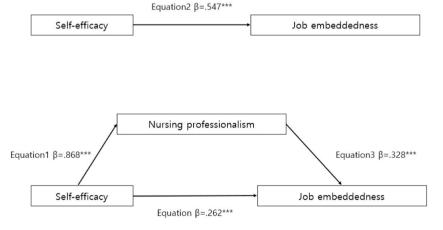


Fig. 1. Mediating effect of nursing professionalism on the relationship between self-efficacy and job embeddedness.

3.43 out of 5. Thus, the nurses in our study had a moderate level of overall belief regarding their nursing performance—the personal belief regarding the planning and execution of specific acts in a tense and unpredictable situation.

The mean score of job embeddedness in the participating nurses in our study was 3.15 out of 5. This coincided with the mean score of 3.19 out of 5 in Choi and Lee [32], which investigated job embeddedness in 242 nurses. In another study investigating job embeddedness in nurses working at seven general hospitals in D-city with <800 beds [33], the mean score was 3.02. The mean score in a study investigating job embeddedness in nurses working at four general hospitals in Seoul and Gyeonggi Province with <500 beds [34], was 3.10. In Son and Choi [35], on nurses at university hospitals in a metropolitan city, the mean score was 3.25, which was slightly higher than the score in our study. Other studies conducted in South Korea regarding job attachment, an identical concept of job embeddedness, reported similar scores to our study. Thus, despite the variation across studies, the level of job embeddedness in Korean hospital nurses mostly exceeded 3.0 out of 5, indicating a moderate level, and did not reach 4.0, which would indicate rootedness in the job. Thus, Korean hospital nurses have moderately adapted to the job but do not admit to themselves that the level of adaptation is adequate. For nurses in the continuously advancing medical profession to adequately adapt to the job, they should be given continuous opportunities to acquire the appropriate professional knowledge and skills. In the future, a repeated study should be conducted to investigate the variables that influence job embeddedness in nurses.

Second, on the correlations between nursing professionalism, self-efficacy, and job embeddedness, our results showed positive ones in all cases. This could be interpreted as an increase in job embeddedness correlating with an increase in nursing professionalism or self-efficacy in nurses. The correlation between nursing professionalism and self-efficacy was positive. This supported the results in Fetzer [23], which examined the relation between nursing professionalism and self-realization in 304 nurses, where self-realization is viewed as incorporating self-efficacy by nature so that self-efficacy is suggested to have an explanatory power on nursing professionalism. In other words, nurses would form a positive professional self-concept when their self-understanding and self-evaluation are positive.

The positive correlation between nursing professionalism and job embeddedness found in our study was in line with the results of Hallin and Danielson [20], who reported that nurses with more positive nursing professionalism are more satisfied with the job and exhibit higher nursing task performance as well as organizational commitment, and Choi and Lee [32], who reported finding a positive correlation between nursing professionalism and job embeddedness. Hwang et al. [18] also reported that nurses with higher nursing professionalism show higher job satisfaction with 42.1% explanatory power via nurses' age, position, department, and professionalism. Kim and Jeong [19] also found positive correlations between professional self-concept and organizational commitment and between professional self-concept and job satisfaction. They also indicated that nursing professionalism is a factor exerting a positive effect on the attitudes and behaviors of nurses toward the work, and that nurses with more positive nursing professionalism tend to show higher organizational commitment and be more likely to acquire higher job satisfaction by themselves.

We also found the correlation between self-efficacy and job embeddedness to be positive. Similarly, in Vardaman et al. [36], the effect of self-efficacy on job embeddedness was verified in 207 nurses. Hence, nurses with the self-confidence to overcome challenging situations and to perform the assigned tasks successfully exhibited high levels of job involvement as well as organizational embeddedness.

An implication of the positive correlations we found between nursing professionalism, self-efficacy, and job embeddedness is that high self-efficacy contributes to nursing professionalism and a high level of nursing professionalism is the key to enhancing job embeddedness in nurses. Based on these results, a program of human resources management to increase self-efficacy in nurses and thereby improve their nursing professionalism would be effective for enhancing job embeddedness in nurses. Studies involving variables of self-efficacy and nursing professionalism, which are in the initial research stage, should be continuously conducted with the aim of increasing nurses' job embeddedness. Continued research on efficient human resource management in nursing organizations is important.

Third, regarding the dynamics between the perceived self-efficacy and job embeddedness in nurses, we verified the mediating effect of nursing professionalism. We found that nursing professionalism had a mediating role in the effect of self-efficacy on job embeddedness. While it is difficult to make a direct comparison with studies, such as that on self-efficacy and nursing professionalism [23], those on nursing professionalism and job embeddedness [17–20,32], and that on the relation between self-efficacy and job embeddedness [36], as most of these studies conducted fragmentary analyses, our study is significant in presenting empirical evidence that self-efficacy and nursing professionalism are critical factors of job embeddedness in nurses, and that self-efficacy has a positive effect on job embeddedness through nursing professionalism. Research is needed to establish and verify a job embeddedness model based on a comprehensive theoretical framework.

5. Conclusion and recommendations

Our results demonstrated positive correlations between self-efficacy, nursing professionalism, and job embeddedness in the participating nurses, and that nursing professionalism had a partial mediating effect in the dynamics between self-efficacy and job embeddedness. Thus, for the development of human resources programs aimed at enhancing job embeddedness in nurses, our findings should be taken into account to increase self-efficacy so as to improve nursing professionalism toward enhancing job embeddedness in nurses. We also recommend that a correlational study be conducted to address the various influencing factors of nursing professionalism and job embeddedness. One limitation of this study is that as the participants were nurses at university and general hospitals in a provincial area. Care should be taken in generalizing the results. In the future, a repeated study should be conducted on nurses, and the search for variables that mediate or control job embeddedness in nurses should be continued.

This study has several limitations. First, the convenient sampling method involving four general hospitals and three small-to-

medium hospitals, and the small sample size, may limit the generalizability of the findings. Second, this was a cross-sectional study; thus, caution must be exercised in the interpretations of the study's findings that infer causality. Thus, further studies should be conducted with a probabilistic sampling method, a larger sample, and utilizing a longitudinal study design.

Funding

This work was supported by Namseoul University.

Author contribution statement

HJ and D conceived and designed the experiments. HJ and D performed the experiments. D analyzed and interpreted the data. HJ, D contributed analysis tools or data. HJ and D wrote the paper.

Data availability statement

Data will be made available on request.

Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

Acknowledgements

The authors wish to thank the participants of this study.

References

- [1] Korean Hospital Nurses Association. (2018). Survey on the current nurse deployment. Retrieved March 30, 2022, from http://www.khna.or.kr/web/information/resource.php.
- [2] Y.S. Kim, S.A. Ryu, Influence of job embeddedness factors on turnover intention of nurses in small and medium sized general hospitals, J. Korean Acad. Nurs. Adm. 22 (2) (2016) 158–166.
- [3] S.J. Lee, H.J. Woo, Structural relationships among job embeddedness, emotional intelligence, social support and turnover intention of nurses, J. Korean Acad. Nurs. Adm. 21 (1) (2015) 32–42.
- [4] T.R. Mitchell, B.C. Holtom, T.W. Lee, C.J. Sablynski, M. Erez, Why people stay: using job embeddedness to predict voluntary turnover, Acad. Manag. J. 44 (6) (2001) 1102–1121.
- [5] Korean Hospital Nurses Association. (2022). Analysis of trends in the 2010-2019 hospital nursing staff placement and working conditions survey. Retrieved March 10, 2022, from www.hira-research.or.kr 116.
- [6] C. Tanova, B.C. Holtom, Using job embeddedness factors to explain voluntary turnover in four European countries, Int. J. Hum. Resour. Manag. 19 (9) (2008) 1553–1568.
- [7] J.R.B. Halbesleben, A.R. Wheeler, The relative roles of engagement and embeddedness in predicting job performance and intention to leave, Int. J. Work Health Org. 22 (3) (2008) 242–256.
- [8] B.C. Holtom, E.J. Indrrieden, Integrating the unfolding model and job embeddedness model to better understand voluntary turnover, J. Manag. 26 (2006) 463–488. http://www.jstor.org/stable/40604552.
- [9] M.A. Darrat, D.A. Amyx, R.J. Bennett, Examining the impact of job embeddedness on salesperson deviance: the moderating role of job satisfaction, Ind. Market. Manag. 63 (2017) (2016) 158–166.
- [10] K.J. Harris, A.R. Wheeler, K.M. Kacmar, The mediating role of organizational job embeddedness in the LMX-outcomes relationships, Leader. Q. 22 (2) (2011)
- [11] T. Sekiguchi, J.P. Burton, C.J. Sablynski, The role of job embeddedness on employee performance: the interactive effects with leader–member exchange and organization-based self-esteem, Person. Psychol. 61 (4) (2008) 761–792.
- [12] H.W. Choi, Effects of Nurses' Work Environment and Psychological Capital on Job Embeddedness in Clinical Nurses. Master's Thesis, Chung-Ang University Graduate School. 2016.
- [13] M.Y. Mun, S.Y. Hwang, Impact of nursing organizational culture types on innovative behavior and job embeddedness perceived by nurses, J. Korean Acad. Nurs. Adm. 22 (4) (2016) 313–322.
- [14] D. Weis, M.J. Schank, An instrument to measure professional nursing values, J. Nurs. Scholarsh. 32 (2) (2000) 201–204.
- [15] E.J. Yeun, Y. Kwon, O. Ahn, Development of a nursing professional values scale, J. Korean Acad. Nurs. 35 (6) (2005) 1091–1100.
- [16] D. Adams, B.K. Miller, Professionalism in nursing behaviors of nurse practitioners, J. Prof. Nurs. 17 (4) (2001) 203-210.
- [17] E.Y. Choi, G.H. Kim, A study on the professional self concept, self efficacy and job satisfaction of nephrology nurses, Korean J. Adult Nurs. 12 (3) (2000) 345–354.
- [18] J.I. Hwang, F. Lou, S.S. Han, F. Cao, W.O. Kim, P. Li, Professionalism: the major factor influencing job satisfaction among Korean and Chinese nurses, Int. Nurs. Rev. 56 (3) (2009) 313–318.
- [19] W.G. Kim, G.H. Jeong, The relationship between professional self-concept, organizational commitment and job satisfaction in clinical nurses, J. Korean Acad. Nurs. Adm. 14 (3) (2008) 287–296.
- [20] K. Hallin, E. Danielson, Registered nurses' perceptions of their work and professional development, J. Adv. Nurs. 61 (1) (2008) 62-70.
- [21] A. Bandura, Self-efficacy: toward a unifying theory of 54 behavior change, Psychol. Rev. 84 (2) (1997) 61-85.
- [22] Y.K. Koh, K.H. Kang, A study on the relationship between self-efficacy, collective-efficacy and job stress in the nursing staff, J. Korean Acad. Nurs. Adm. 12 (2) (2006) 276–286.
- [23] S.J. Fetzer, Professionalism of associate degree nurses: the role of self-actualization, Nurs. Educ. Perspect. 24 (3) (2003) 139–143.
- [24] A. Bahreini Brujeni, A. Alavi, The relationship between nurses' self-efficacy and job expectations with patient safety culture, J. Health Care 22 (2) (2020) 138–146.

[25] K. Nielsen, J. Yarker, R. Randall, F. Munir, The mediating effects of team and self-efficacy on the relationship between transformational leadership, and job satisfaction and psychological well-being in healthcare professionals: a cross-sectional questionnaire survey, Int. J. Nurs. Stud. 46 (8) (2009) 1236–1244.

- [26] Y.S. Seo, Y.C. Kim, A study on factors affecting the turnover intention and job involvement of nurses, Korea Bus. Educ. Assoc. 12 (2007) 151–172.
- [27] J.A. Bennett, Mediator and moderator variables in nursing research: conceptual and statistical difference, Res. Nurs. Health 23 (2000) 415-420.
- [28] S.S. Han, M.H. Kim, E.K. Yung, Factors affecting nursing professionalism, J. Korean Acad. Soc. Nurs. Educ. 14 (1) (2008) 73–79.
- [29] S.H. Ko, B.Y. Jeong, Nursing professionalism and job satisfaction of nurses in general hospital, J. Korean Acad. Nurs. Adm. 10 (3) (2004) 335–344.
- [30] I.S. Kim, The role of self-efficacy and social support in the relationship between emotional labor and burn out, turn over intention among hospital nurses, J. Korean Acad. Nurs. Adm. 15 (4) (2009) 515–526.
- [31] S.H. Sok, D.S. Shin, K.B. Kim, A study of correlation between interpersonal relationship and self-efficacy of nursing students, J. Korean Acad. Psychiatr. Ment. Health Nurs. 15 (4) (2006) 475–481.
- [32] S.Y. Choi, M.-A. Lee, Effects of job embeddedness and nursing professionalism on intent to stay in hospital nurses, J. Korean Acad. Nurs. Adm. 24 (3) (2018) 234–244.
- [33] E.H. Kim, E.J. Lee, Mediation and moderation effects of job embeddedness between nursing performance and turnover intention of nurses, Journal of the Korea Academia-Industrial Cooperation Society 15 (8) (2014) 5042–5052.
- [34] J.H. Jeon, Y.H. Yom, Role of empowerment and emotional intelligence in the relationship between job embeddedness and turnover among general hospital nurses, J. Korean Acad. Nurs. Adm. 20 (3) (2014) 302–312.
- [35] S.Y. Son, J.S. Choi, Effect of job embeddedness and job satisfaction on turnover intention in nurses, Korean J. Adult Nurs. 27 (2) (2015) 180-187.
- [36] J. Vardaman, B. Rogers, L. Marler, Retaining nurses in a changing health care environment: the role of job embeddedness and self-efficacy, Health Care Manag. Rev. 45 (1) (2020) 52–59.