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* RESEARCH PAPER *

The mediating effect of emotional intelligence between emotional labour, job stress, burnout and nurses' turnover intention

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Hong E, Lee YS. International Journal of Nursing Practice 2016; 22: 625–632 The mediating effect of emotional intelligence between emotional labour, job stress, burnout and nurses' turnover intention

This study was designed to construct and test the structural equation modelling on nurses' turnover intention including emotional labour, job stress, emotional intelligence and burnout in order to identify the mediating effect of emotional intelligence between those variables. Emotional labour, job stress and burnout increase turnover intention of nurses. However, emotional intelligence is negatively correlated with emotional labour and reduces job stress, burnout and turnover intention. Structural equation modelling was used to analyse the goodness of fit of the hypothetical model of nurses' turnover intention. Research data were collected via questionnaires from 4 to 22 August 2014 and analysed using SPSS version 18.0 and AMOS version 20.0. The model fit indices for the hypothetical model were suitable for recommended. Emotional intelligence has decreasing effect on turnover intention through burnout, although its direct effect on turnover intention is not significant. Emotional intelligence has mediation effect between emotional labour and burnout. This study's results suggest that increasing emotional intelligence might critically decrease nurses' turnover intention by reducing the effect of emotional labour on burnout.

Key words: burnout, emotional intelligence, emotions, nurses, personnel turnover, professional.

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SUMMARY STATEMENT

What is already known about topic?

- Emotional labour, job stress and burnout are important factors of turnover intention among hospital nurses.
- What this paper adds:
- Emotional intelligence decreases turnover intention by mediating between emotional labour and burnout.

The implications of this paper:

 Emotional intelligence mediates between emotional labour and burnout. Increasing nurses' emotional intelligence might critically decrease nurses' turnover intention by reducing the effect of emotional labour on burnout.

INTRODUCTION

Nurses are among the most important front-line healthcare professionals. They are critical to the maintenance of national health and the provision of safe and efficient medical services.¹ However, high nurse turnover is a global phenomenon.² Most Organization for Economic Cooperation and Development (OECD) countries report shortage of nurses, and unemployment of nurses is minimal in these countries.³

In South Korea, there are 4.84 practising nurses (including nurses' aides) per 1000 people, which is around half the OECD mean of 8.8.⁴ This shortage of practising nurses impedes satisfaction of demand for quality nursing services, which is rising with the increasing elderly population.⁵ The South Korean Government has therefore increased quotas in nursing departments to increase the supply of nurses; however, the mean job turnover rate among nurses, which is currently 16.8,⁶ has caused the imbalance of nursing supply and demand to persist in South Korea.

Emotional labour, job stress and burnout are related to nurses' turnover intention.^{7–11} In South Korea, recent studies have reported that nurses perform above-average amounts of emotional labour,^{12,13} and that increased emotional labour significantly increases job stress, burnout and turnover intention.^{14–16}

Emotion is critical in healthcare organizations, as hospital staff must manage events related to strong emotions, for example, births, illnesses and deaths.¹⁷ Emotional intelligence is negatively correlated with emotional labour and significantly reduces job stress, burnout and turnover intention.^{13–15,17,18} Emotional intelligence is the ability to accurately sense one's emotional state, to control one's state in a constructive manner and to sense the emotional state of others, responding in a way that elicits desirable outcomes.¹⁹ When workers use their emotional intelligence as a part of their job requirements, they are performing emotional labour.²⁰

The effect of emotional labour and job stress on burnout and turnover intention might be mediated by emotional intelligence; however, few extant studies have examined direct and indirect effects between these variables. This study therefore aimed to examine the effects of emotional labour and job-stress on burnout and turnover intention, and emotional intelligence's possible mediation of these effects.

This study aimed to identify emotional labour, job stress, emotional intelligence and burnout as variables affecting nurses' turnover intention, to construct a structural equation model of nurses' turnover intention including these variables, to test the model's data fit and to determine these variables' direct and indirect effects on nurses' turnover intention in order to formulate suggestions for programmes aiming to reduce nurse turnover.

METHODS Aims

This study aimed to construct and test a structural equation model of nurses' turnover intention that included emotional labour, job stress, emotional intelligence and burnout in order to identify the mediating effect of emotional intelligence between those variables.

Design

The present study developed a hypothetical model of nurses' turnover intention based on extant research; structural equation modelling (SEM) was used to analyse the model's fit to obtained cross-sectional survey data.

Sample

A convenience sample of general nurses working in a university hospital in G province for more than one year was recruited. We excluded new nurses who had worked full-time for less than 12 months, as new nurses' mean turnover rate (33.6%) is significantly higher than the general nurses' turnover rate.^{4,21}

SEM generally requires a sample size of 200. Therefore, to allow for withdrawals, 240 questionnaires were distributed. A total of 236 responses were collected, and 211 were analysed after excluding 25 new nurses.

Data collection

Data were collected from 4 to 22 August 2014. Nurses in each inpatient ward and outpatient clinic of one university hospital in G province were visited; survey items and the study's purposes and participation criteria were explained. Nurses who consented in writing to participate voluntarily were selected as participants; nurses were given small rewards to encourage participation and response sincerity.

Measuring instruments

The questionnaire consisted of items examining participant's demographic data, the Emotional Labour Scale (ELS), Korean Occupational Stress Scale (KOSS-SF), Wong and Law Emotional Intelligence Scale (WLEIS), Burnout Measure-Short Version (BMS) and Turnover Intention Scale (TIS). Emotional labour was measured using the ELS developed by Morris and Feldman²² and translated into Korean by Kim,²³ which is the most widely used measure examining nurses' emotional labour in South Korea.²⁴ This tool is composed of nine questions; responses used a 5-point Likert scale. Cronbach's α was .84 in the present study.

Job stress was measured using KOSS-SF, developed by Chang et al.²⁵ This tool is comprised of 24 questions examining seven subcategories; responses used a 4-point Likert scale. Cronbach's α was .83, and subcategories were .50–.75 in the present study.

Emotional intelligence was measured using WLEIS (developed by Wong and Low and modified by Hwang).^{26,27} This tool is composed of four subcategories including self emotion appraisal, other's emotion appraisal, regulation of emotion and use of emotion. There were a total of 16 questions, with 4 questions in each subcategory. Cronbach's α was .90 in the present study.

Burnout was measured using Korean version of BMS (developed using standard methods of translation and back-translation by Cho).^{28,29} This tool is composed of 10 questions examining three subcategories; responses used a 7-point Likert scale. Cronbach's α was .90 in the present study.

Turnover intention was measured using TIS developed by Lawler and revised by Park, which is appropriate for nurses' working conditions in Korea.^{30, 31} The tool is composed of four questions; responses used a 5-point Likert scale. Higher scores indicated higher levels of turnover intention. Cronbach's α was .87 in the present study.

Ethical considerations

The purposes of the study, anonymity, confidentiality and exclusive use of the collected data were explained to the participants. Only participants who voluntarily gave written consent to participate were given the questionnaire and were informed that they could withdraw their consent at any time during the study. A governmental institutional review board provided ethical approval for the study.

Data analysis

SPSS WIN 18.0 and AMOS 20.0 were used for data analysis and hypothesis testing. Descriptive statistics were calculated for participants' general characteristics; Pearson's correlation coefficient was used to analyse correlations between variables. Covariance structure analysis was performed on the hypothetical model; skewness and kurtosis were examined to determine data normality. The hypothetical model was tested using the maximum-likelihood method assuming multivariate normality; absolute and incremental fit indices (RMSEA, GFI, CFI and IFI) were calculated to examine the hypothetical model's data fit.

RESULTS Participant characteristics

Participants' mean age and mean period of employment were 32.9 ± 7.12 and 10.6 ± 6.93 years, respectively. The most frequent education level was graduate school or beyond, accounting for 32.7% of participants. Half of participants (50.7%) were unmarried; 48.8% earned less than 2600 USD per month; 76.8% were shift workers (Table 1).

Descriptive statistics and correlations between measured variables

Participants' mean scores were as follows: emotional labour, 3.6 ± 0.53 ; job stress, 2.6 ± 0.28 ; emotional intelligence, 3.4 ± 0.47 ; burnout, 3.9 ± 0.92 ; turnover intention, 3.7 ± 0.82 (Table 2).

To determine normality, the measured variables' skewness and kurtosis were investigated. All absolute skewness and kurtosis values were <3 and <7, respectively, indicating symmetrical data distribution.³² Therefore, the data could be further analysed without transformation.

Correlations between all variables were significant, except between emotional labour and emotional intelligence (Table 3).

Tests of the hypothetical model

Confirmatory factor analysis of measured variables

Confirmatory factor analysis was performed on measured variables; minimum factor loading was set at .40. Job insecurity and job demand (factors of job stress) were found to have <0.4 factor loading (.30 and .39, respectively) and were therefore excluded. All coefficients of paths between emotional labour, job stress, emotional intelligence, burnout and turnover intention were significant, and their factor loadings were >0.4; these variables were therefore retained in the model.

Data fit

Analysis of the hypothetical model's goodness-of-fit gave the following results: χ^2 (*P*) = 206.08 (<.001); RMSEA = 0.046; GFI = 0.905; CFI = 0.966; IFI = 0.966. The chi-squared statistic usefully indicates the degree that

Table 1	Participant	characteristics
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			N=211	
Characteristic	Category	N (%)	Mean \pm SD (range)	
Age (years)	≤30	92 (43.6)	32.9±7.12 (21-49)	
	31–40	86 (40.8)		
	≥40	33 (15.6)		
Working experience (years)	≤5	57 (27.0)	10.6±6.93 (1–26)	
	6–10	63 (29.9)		
	11–15	35 (16.6)		
	16–20	32 (15.2)		
	21–25	22 (10.4)		
	≧26	2 (0.9)		
Education	≦College	46 (21.8)		
	BSN	60 (28.4)		
	RN-BSN	36 (17.1)		
	≧Graduate school	69 (32.7)		
Marital status	Married 103 (48.8)			
	Unmarried	108 (51.2)		
Monthly income (USD)	<2600	103 (48.8)		
	2600-4400	44 (20.9)		
	≧4400	64 (30.3)		
Working place	General ward	99 (46.9)		
	Special ward (ICU, ER)	62 (29.4)		
	OPD and ETC	50 (23.7)		
Shift work	Yes	162 (76.8)		
	No	49 (23.2)		

the data supports a given model; however, because it is proportional to the number of samples, bigger samples naturally yield higher χ^2 values.

Therefore, *P*-values < 0.05 do not necessarily indicate goodness of fit, and goodness of fit must be evaluated in conjunction with other indices.³¹ Other goodness of fit indices yielded satisfactory values (RMSEA < 0.05, GFI > 0.9, CFI > 0.9, and IFI > 0.9), indicating good data fit.³¹ Therefore, the hypothetical model was adopted without comparison with other models.

Path analysis

Emotional labour and job stress significantly directly affected emotional intelligence ($\gamma_{11} = 0.20$, CR = 2.29; $\gamma_{12} = -0.40$, CR = -4.00, respectively), with 13.1% total explanatory power (Fig. 1).

Burnout was significantly directly affected by emotional labour ($\gamma_{21} = 0.34$, CR = 3.97), job stress ($\gamma_{22} = 0.25$,

CR = 2.81) and emotional intelligence (β_{21} = -0.29, CR = -3.80); these variables' total explanatory power was 37.2%.

Turnover intention was significantly directly affected by job stress ($\gamma_{32} = 0.37$, CR = 3.92) and burnout ($\beta_{32} = 0.34$, CR = 3.82). Emotional labour ($\gamma_{31} = 0.15$, CR = 1.88) and emotional intelligence ($\gamma_{32} = -0.00$, CR = -0.03) were found to have small effects; however, these were not statistically significant. These variables' combined explanatory power was 48.4% (Table 4).

DISCUSSION

The present study aimed to construct a structural equation model that explains nurses' turnover intention in terms of emotional labour, job stress, emotional intelligence and burnout, and to make suggestions concerning management strategies that might reduce nurses' turnover intention.

Table 2 Mean item scores

Variable	Mean \pm SD R	esponse range
Emotional labour	3.6±0.53	1.9–5.0
Frequency of emotional display	3.8 ± 0.57	2.0-5.0
Attentiveness to required display ru	les 3.6 ± 0.64	1.3-5.0
Emotional dissonance	3.4 ± 0.65	1.7-5.0
Emotional intelligence	3.4 ± 0.47	1.1-4.4
Self emotion appraisal	3.5 ± 0.53	1.3-4.8
Other's emotion appraisal	3.4 ± 0.52	1.0-4.8
Regulation of emotion	3.4 ± 0.55	1.0-4.8
Use of emotion	3.3 ± 0.58	1.0-4.5
Job stress	2.6 ± 0.28	1.8-3.6
Job demand	3.2 ± 0.46	2.0-4.0
Insufficient job control	2.5 ± 0.47	1.0-3.5
Job insecurity	2.3 ± 0.52	1.0-4.0
Interpersonal conflict	2.1 ± 0.34	1.0-3.0
Organizational system	2.7 ± 0.44	2.0-4.0
Lack of reward	2.7 ± 0.49	1.7-4.0
Occupational climate	2.4 ± 0.43	1.0-3.8
Burn out	3.9 ± 0.92	1.0-6.5
Physical	4.4 ± 1.02	1.0-7.0
Emotional	3.5 ± 1.18	1.0-7.0
Mental	3.9 ± 1.00	1.0-6.8
Turnover intention	3.7 ± 0.82	1.0-5.0

The hypothetical model was adopted without revision because the model's explanatory power regarding nurses' turnover intention was relatively high and absolute and incremental indices indicated satisfactory data fit.

In the model, job stress had the largest direct effect on nurses' turnover intention; additionally, its indirect effect through burnout was significant. This result is consistent with prior studies' results.^{14,33} Burnout had the secondlargest effect on nurses' turnover intention; again, this is consistent with the results of prior studies.^{29,34} Emotional labour significantly indirectly affected turnover intention through job stress and burnout; however, its direct effect on turnover intention was not significant. These results are consistent with a previous study, which found that emotional labour indirectly affects turnover intention through job stress.¹⁴ As emotional labour's effect on turnover intention was mediated by job stress and burnout, nurse support programmes should aim to reduce nurses' emotional labour in order to effectively reduce nurses' turnover intention; further, interventions that address nurses' job stress and burnout might diminish nurses' turnover intention.

Although several preceding studies have examined job stress and burnout in nurses, few interventions aiming to reduce these variables have been attempted. Research should therefore examine the effects of interventions aiming to reduce job stress and prevent burnout in nurses.

Emotional intelligence also had significant indirect and total effects on turnover intention through job stress and burnout, although it did not directly affect turnover intention; these results support those of a study of factors affecting nurses' turnover intention, which found that emotional intelligence significantly affects turnover intention. Emotional intelligence should therefore importantly inform programmes aiming to reduce nurse turnover.⁶

Job stress most strongly affected burnout in the model, exerting a significant direct effect and a significant indirect effect through emotional intelligence. These results support Moon and Han, and corroborate the observation that regulating emotion directly decreases burnout.^{20,34} Emotional intelligence exerted the second-strongest effect on burnout, significantly directly affecting that variable. These results support Baik and Yom.¹⁶ Emotional labour exerted the third-strongest effect on burnout, with a significant direct effect and a significant indirect effect through emotional intelligence. This result supports Baik and Yom another study

Table 3 Correlation between emotional labour, emotional intelligence, job stress, burnout and turnover intention

	Emotional intelligence	Job stress	Burnout	Turnover intention
Variable	r (P)	r (P)	r (P)	r (P)
Emotional labour	.065 (.351)	.397 (<.001)	.347 (<.001)	.358 (<.001)
Emotional intelligence		218 (<.001)	264 (<.001)	196 (.004)
Job stress			.539 (<.001)	.397 (<.001)
Burnout	—	—	_	.531 (<.001)

Figure 1. Path diagram for the hypothetical model x1, frequency of emotional display; x2, attentiveness to required display rules; x3, emotional dissonance; x4, job demand; x5, insufficient job control; x6, interpersonal conflict; x7, job insecurity; x8, organizational system; x9, lack of reward; x10, occupational climate; y1, self emotion appraisal; y2, other's emotion appraisal; y3, regulation of emotion; y4, use of emotion; y5, physical burnout; y6, emotional burnout; y7, mental burnout; y8, turnover intention 1; y9, turnover intention 2; y10, turnover intention 4.

that made a similar observation.¹⁶ Strategies intended to prevent nurse burnout should therefore aim to reduce emotional labour and job stress; additionally, future research should evaluate the effectiveness of programmes that aim to reduce burnout and turnover intention by improving nurses' emotional intelligence.

The present study identified variables affecting nurses' turnover intention on the basis of preceding studies, constructed a structural equation model that includes emotional labour, job stress, emotional intelligence and burnout and tested this model. This is the first study to attempt to identify direct and indirect paths between these variables. Of particular significance is the identified mediating effect of emotional intelligence between emotional labour, job stress, burnout and turnover intention. This study found that emotional intelligence significantly indirectly affects turnover intention through burnout, and that emotional intelligence significantly mediates between emotional labour and burnout. This study hence provides basic data suggesting that programmes that increase nurses' emotional intelligence might reduce nurse turnover.

This study was cross-sectional and accordingly did not yield results capable of testing causal hypotheses; therefore, the examined variables' precise causal relationship with nurses' turnover intention and subsequent actual nurse turnover remain unclear. Future research should test possible causal relationships between these variables using a longitudinal design. Additionally, the present results' generalizability might be limited as this study examined only one university hospital. Future research should repeat the



Endogenous variables	Exogenous variables	SE	C.R. (P)	SMC	Direct effect (SE (P))	Indirect effect (SE (P))	Total effect (SE (P))
Emotional intelligence	Emotional labour	.20	2.29 (.023)	0.131	.20 (.023)		.20 (.023)
	Job stress	40	-4.00 (<.001)		40 (<.001)		40 (<.001)
Burnout	Emotional labour	.34	3.97 (<.001)	0.372	.34 (<.001)	06 (.031)	.28 (.010)
	Job stress	.25	2.81 (.005)		.25 (.005)	.11 (.010)	.37 (.010)
	Emotional intelligence	29	-3.80 (<.001)		29 (<.001)		29 (<.001)
Turnover intention	Emotional labour	.15	1.88 (.061)	0.484	.15 (.061)	10 (.034)	.25 (.010)
	Job stress	.37	3.92 (<.001)		.37 (<.001)	.12 (.024)	.50 (.010)
	Emotional intelligence	00	-0.03 (.975)		00 (.975)	10 (.010)	10 (.187)
	Burnout	.34	3.82 (<.001)		.34 (<.001)	—	.34 (<.001)

CR, critical ratio; SE, standardized estimates; SMC, squared multiple correlation.





present analysis in representative samples to obtain more readily generalizable results.

CONCLUSION

The adopted model's explanatory power regarding nurses' turnover intention was relatively high, and its data fit was satisfactory; therefore, this study's structural equation model might be used to effectively predict or explain nurses' turnover intention.

This study's model of the factors affecting nurses' turnover intention might be used to explain nurses' turnover intention. Consideration of emotional labour, job stress, emotional intelligence and burnout, which this study identified as significantly directly and indirectly affecting nurses' turnover intention, should inform programmes aiming to decrease nurse turnover. Improving nurses' emotional intelligence and accordingly reducing emotional labour's effect on burnout will reduce nurses' turnover intention. Future research should longitudinally examine possible causal relationships between emotional intelligence and nurse turnover.

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DISCLOSURE

None declared

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