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## Original Article

## Mediating Effects of Burnout in the Association Between Emotional Labor and Turnover Intention in Korean Clinical Nurses

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## ABSTRACT

**Background:** The current lack of the number of nurses and high nurse turnover rate leads to major problems for the health-care system in terms of cost, patient care ability, and quality of care. Theoretically, burnout may help link emotional labor with turnover intention. The purpose of this study was to investigate the mediating effect of burnout in the association between emotional labor and turnover intention in Korean clinical nurses.

**Methods:** Using data collected from a sample of 606 nurses from six Korean hospitals, we conducted a multiple regression analysis to determine the relationships among clinical nurses' emotional labor, burnout, and turnover intention, looking at burnout as a mediator.

**Results:** The results fully and partially support the mediating role of burnout in the relationship between the subfactors of emotional labor and turnover intention. In particular, burnout partially mediated the relationship between emotional disharmony and hurt, organizational surveillance and monitoring, and lack of a supportive and protective system in the organization. In addition, we found that burnout has a significant full mediation effect on the relationship between overload and conflicts in customer service and turnover intention. Although the mediating effect of burnout was significantly associated with the demands and regulation of emotions, no significant effects on turnover intention were found.

**Conclusion:** To reduce nurses' turnover, we recommend developing strategies that target both burnout and emotional labor, given that burnout fully and partially mediated the effects of emotional labor on turnover intention, and emotional labor was directly associated with turnover intention.

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## 1. Introduction

Care is the core of nursing practice [1]. Nurses must forge a caring relationship—as opposed to a simple task-oriented one—with patients in pain, which can render them emotionally exhausted and may produce conflict. Despite this, nurses must demonstrate appropriate emotional management when providing services to patients face-to-face [2]. In other words, nurses must engage in emotional labor [3], which pertains to controlling one's emotions and emotional display to accomplish an organization's goals. More specifically, it refers to efforts to display the emotions that are deemed appropriate for the job, for

the sake of improving job performance. An important aspect of emotional labor is emotional distortion, which has been shown to influence workers' mental well-being adversely by prompting them to neglect their true emotions and inducing a sense of alienation from oneself [3].

The current world wide lack of nursing occupations has been a current big issue in the past decade [4]. In 2002, the Bureau of Labor Statistics projected that the United States would be 800,000 registered nurses short of the national requirement by 2020 [5]. Several researchers have suggested that withdrawal behaviors among nurses maybe an outcome of emotional labor. For example, Nixon et al. [6] argued that emotional labor could increase

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psychological stress in the workplace, which in turn can have negative outcomes such as the intention to quit.

Notably, turnover intention had a stronger correlation with burnout than with job stress. Nurse turnover is especially detrimental for hospitals not because of the turnover per se but because it leads to considerable financial loss, undermines the quality of patient care, demoralizes fellow employees, and reduces efficiency and productivity [7].

Burnout is a negative psychological experience that often challenges workers whose job duties are highly interpersonal and who face prolonged exposure to stressors without adequate organizational support. According to Maslach et al. [8], burnout is a psychological syndrome encompassing the aspects of emotional exhaustion, depersonalization, and low personal achievement. In particular, organizational employees are exhausted if they are exposed to chronic situations forcing emotional regulation. As a way of coping with emotional exhaustion, they may express negative attitudes or behaviors toward the customers and demonstrate dehumanizing and heartless responses, which in turn can lead to poor job performance and a negative assessment of themselves [9].

The aim of this study was to determine whether the relationship among clinical nurses' emotional labor, burnout, and turnover intention.

## 2. Materials and methods

### 2.1. Participants and procedure

Study participants were nurses working at one of six general hospitals located in Seoul or Gangwon Province. Data were collected using a self-administered questionnaire. A total of 606 registered nurses (response rate 60.6%) were included in the final analysis, after excluding 24 questionnaires for incomplete responses. This descriptive cross-sectional study was performed to examine the relationship of emotional labor and burnout to turnover intention in clinical nurses.

### 2.2. Measures

#### 2.2.1. Emotional labor

The Korean Emotional Labor Scale (K-ELS) [10] was used to assess emotional labor. This 24-item scale comprises five subscales, including five items for *emotional demand and regulation*, three for *overload and conflict in customer service*, six for *emotional disharmony and hurt*, three for *organizational surveillance and monitoring*, and seven for *lack of a supportive and protective system in the organization*. Each item is measured on a 4-point Likert scale ranging from 1 ("not at all") to 4 ("very often"). The total summed score for the five subfactors ranges from 24 to 96, which are converted to a 0–100 scale for analysis. Higher total scores indicate a greater degree of emotional labor. The following is an example item: "I intentionally try not to express negative feeling to patient." The Cronbach's  $\alpha$  coefficients for the five factors of emotional labor ranged from 0.761 to 0.904 in the present study. To confirm the factor structure of the K-ELS in our sample, we performed a principal component factor analysis with a varimax rotation. The results revealed five factors with eigenvalues of 1.00 or greater. Together, these factors explained 61.9% of the variance. All items loaded onto at least one factor with factor loadings of 0.50 or higher. Furthermore, the communalities for all items exceeded 0.50. Thus, the K-ELS was deemed to have satisfactory factorial validity in our sample.

#### 2.2.2. Burnout

Burnout was assessed using the 5-item scale developed by Maslach and Jackson [11]. Each item was measured on a 4-point Likert scale ranging from 1 ("not at all") to 4 ("very often"). Higher total scores on this measure indicate a higher degree of burnout. The following is an example item: "I feel exhausted because of my work." In the present study, the Cronbach's  $\alpha$  was 0.91.

#### 2.2.3. Turnover intention

Turnover intention was measured using a tool developed by Kim [12]. Kim [12] validated the scale using an expert panel, for use with hospital nurses. The scale comprises six items measured on a 5-point Likert scale ranging from 1 ("not at all") and 5 ("very much"). A higher total score indicates a higher degree of turnover intention. The following is an example item: "If I could choose other hospitals to work at, I would not choose this hospital." The Cronbach's  $\alpha$  for this tool 0.79 in the present study, whereas that in Kim's [12] study was 0.76.

### 2.3. Research hypothesis

Overall, emotional labor, job stress, and burnout all appear to be key determinants of turnover intention among nurses [13,14]. In particular, the positive correlation between emotional labor and turnover intention has been demonstrated. Grandey [15] also suggested that emotional management increases physiological arousal, which may lead individuals to withdraw from their work and eventually quit. The following hypotheses were therefore proposed.

**Hypothesis 1.** Emotional labor is positively related to turnover intention.

It is important to note that, in the present study, the conceptualization of emotional labor developed by Schaubroeck and Jones [2] was used, which includes emotional demands to regulate positive or negative emotion. As nurses may try to suppress negative and to express positive emotions on a day-to-day basis [16], we have combined them to examine the composite effect of emotional labor.

Meanwhile, many preceding studies have emphasized on burnout as an important factor influencing turnover intention [17,18]. Bartram et al. [17] actually demonstrated that burnout fully mediated the relationship between emotional labor and intention to leave—in other words, emotional labor results in burnout, which in turn results in nurses wanting to leave their workplace. However, these past studies did not look at the various components of emotional labor. More precisely, to ensure that intervention strategies aimed at reducing turnover intention rate are effective, it is essential to understand which aspects of emotional labor are direct risk factors for turnover intention, and which maybe mediated by burnout. Although there is numerous evidence that emotional labor can be stressful and can lead to burnout, a growing body of research has rarely considered the different impacts of emotional labor as the eligible risk factors of burnout and turnover intention. Through the present study, we aimed to fill this research gap.

**Hypothesis 2.** Burnout mediates the relationship between emotional labor and turnover intention.

The basis of our investigation of the associations between emotional labor, burnout, and turnover intention among clinical nurses was "the dissonance theory of emotional labor." In accordance with the dissonance theory of emotional labor, which seems

to be driven by the mediating influence of self-alienation (i.e., emotional dissonance) [19], burnout maybe a crucial mechanism for demonstrating the relation of emotional labor to turnover intention. A potential mechanism of this relationship is that holding competing emotions creates a sense of emotional exhaustion, which in turn motivates withdrawal behaviors, such as turnover intention [20]. Indeed, there is evidence that the emotional exhaustion component of burnout is associated with turnover intention [21] and voluntary turnover [22]. Morris and Feldman [23] argued that the emotional workers gradually experience burnout as their available capacity for emotional dissonance. Zapf [19] also proposed that emotional dissonance positively affects burnout.

#### 2.4. Data analysis

The data were analyzed using SPSS Statistics 21.0 (IBM Corp., Armonk, NY). The participants' demographic characteristics were expressed in frequencies and percentages or means and standard deviations. Pearson's correlation analysis was performed to examine the correlations between emotional labor, burnout, and turnover intention. Simple and multiple regression analyses were performed to identify the mediating role of burnout in the relationship between emotional labor and turnover intention; this finding was validated using the 3-step mediation analysis method developed by Baron and Kenny [24]. This causal-steps approach to testing mediation entails a specific sequence of tests to examine the relationships among the variables, making it suitable for analysis [25].

In accordance with this method, mediation effects are considered present if the following conditions are met: (1) the independent variable significantly predicts the dependent variable; (2) the independent variable significantly predicts the mediating variable; and (3) when the dependent variable is regressed simultaneously on the independent variable and the mediator, the mediator significantly predicts the dependent variable, and the independent variable has a weaker effect on the dependent variable than that obtained in Condition 1. If the independent variable still has a significant effect in Condition 3, the mediation is partially considered; if the independent variable has a non-significant effect, the mediation is deemed as full. Notably, however, Baron and Kenny [24] mentioned that only Condition 2 and 3 are needed to demonstrate mediation effects. The statistical significance of the mediating effect was validated using the Sobel test. We adjusted for Type I error using Bonferroni corrections, and difference with a  $p < 0.01$  was considered statistically significant.

#### 2.5. Ethical considerations

Data collection proceeded on obtaining approval from the Institutional Review Board at Wonju College of Medicine, Yonsei University (IRB NO: YWNR-15-2-024). Before the commencement of data collection, we explained the purpose of the study to the chief executive nurse at each hospital and sought their cooperation. Subsequently, we provided written explanations on the study purpose to participants and obtained signed informed consent forms from them. The informed consent forms included information on the purpose of the study, assurance of anonymity, confidentiality agreement, and withdrawal of participation, and we explained that the collected data would only be used for study purposes. Participants returned the completed questionnaires in an envelope addressed to the researcher. As an incentive to participate, all nurses who completed the survey were given gift cards of an estimated worth of 15000 won (approx. 13.22 USD). All data were collected between November 1 and November 30, 2015.

**Table 1**  
Distributions and mean values of participants' demographics (n=606)

Features	Category	n (%) M ± SD
Sex	Male	25 (4.1)
	Female	581 (95.9)
Age (years)	20–29	291 (48.0)
	30–39	219 (36.1)
	40–49	91 (15.0)
	50–59	5 (0.8)
Marital status	Single	358 (59.1)
	Married	248 (40.9)
Religion	No	243 (40.1)
	Yes	363 (59.9)
Education	3-year college	124 (20.5)
	4-year university or higher	482 (79.5)
Working department	General wards	243 (40.1)
	ICU/OR/others	296 (48.8)
	ER/outpatient	67 (11.1)
Position	Staff nurse	538 (88.8)
	Charge nurse or higher	68 (11.2)
Clinical experience (years)	1–5	261 (43.1)
	6–15	206 (34.0)
	16–34	128 (21.1)
Job type	Shift	503 (83.0)
	Ordinary hours	103 (17.0)
Experience of transfer of department	Yes	351 (57.9)
	No	255 (42.1)
Patient care hours	1–4	223 (36.8)
	5–12	369 (60.9)
Average weekly working hours	32–40	173 (28.5)
	41–49	191 (31.5)
	50–60	242 (39.9)

OR = operating room, ICU = intensive care unit, ER = emergency room.

### 3. Results

#### 3.1. Demographic characteristics of the study participants

The participants were predominantly female (95.9%) and most fell in the 20–29 years age group (48%). Of them, 59.1% of the participants were single, whereas 59.9% (n = 363) had a religious affiliation. In addition, 79.5% had completed a 4-year university or higher degree. Most of the participants worked in the intensive care unit, operating room, or other departments (48.8%), followed by general wards (40.1%), and emergency rooms, and outpatient clinics (11.1%). Participants were predominantly staff nurses (88.8%). Furthermore, most participants had 1–5 years (43.1%) of clinical experience, followed by 6–15 years (34%) and 16–34 years (21.1%). Most participants worked in shifts (83%), and they had been transferred to different departments in the past (57.9%). Approximately, 61% of the participants engaged in 5–12 hours of patient care per day, and most worked 50–60 hours per week on an average (39.9%), followed by 42–49 hours (31.5%) and 32–40 hours (28.5%) (Table 1).

#### 3.2. Correlations between emotional labor and turnover intention

Turnover intention was positively correlated with the following factors of emotional labor: overload and conflicts in customer service ( $r = 0.160$ ,  $p = 0.000$ ), emotional disharmony and hurt ( $r = 0.266$ ,  $p = 0.000$ ), organizational surveillance and monitoring ( $r = 0.196$ ,  $p = 0.000$ ), and lack of a supportive and protective system in the organization ( $r = 0.190$ ,  $p = 0.000$ ). Thus, Hypothesis 1 was supported (Table 2).

#### 3.3. The mediating role of burnout in the relationship between emotional labor and turnover intention

The results of the mediation analyses conducted to test Hypothesis 2 were as follows. "Emotional demand and regulation"

**Table 2**  
Correlations between emotional labor factors and turnover intention (n = 606)

Variables	1	2	3	4	5	6	7
1. Emotional demand and regulation	1						
2. Overload and conflicts in customer service	0.378 (0.000)	1					
3. Emotional disharmony and hurt	0.499 (0.000)	0.634 (0.000)	1				
4. Organizational surveillance and monitoring	0.249 (0.000)	0.398 (0.000)	0.503 (0.000)	1			
5. Lack of a supportive and protective system in the organization	0.109 (0.007)	0.064 (0.118)	0.150 (0.000)	0.064 (0.114)	1		
6. Burnout	0.323 (0.000)	0.412 (0.000)	0.548 (0.000)	0.298 (0.000)	0.198 (0.000)	1	
7. Turnover intention	0.004 (0.922)	0.160 (0.000)	0.266 (0.000)	0.196 (0.000)	0.190 (0.000)	0.317 (0.000)	1

All values are Pearson's correlation coefficients (*p*-value).

did not predict turnover intention in the first step (corresponding to Model 2 explained earlier;  $\beta = 0.048$ ,  $p = 0.209$ ). However, it did predict burnout in the second step (corresponding to Model 1;  $\beta = 0.35$ ,  $p = 0.000$ ), and both of these were significantly associated with turnover intention in the third step (corresponding to Model 3,  $\beta = -0.046$ ,  $p = 0.244$ ;  $\beta = 0.265$ ,  $p = 0.000$ ). However, as these results did not meet Baron and Kenny's criteria, we could not conclude that burnout mediated the relationship of emotional demand and regulation with turnover intention (Table 3).

For "overload and conflicts in customer service," all three steps yielded significant relationships. Specifically, it significantly predicted turnover intention (first step;  $\beta = 0.14$ ,  $p = 0.000$ ) and burnout (second step;  $\beta = 0.41$ ,  $p = 0.000$ ), and both overload and conflicts in customer service and burnout significantly predicted turnover intention (third step;  $\beta = 0.044$ ,  $p = 0.269$ ;  $\beta = 0.230$ ,  $p = 0.000$ ). Given the notable reduction in standardized beta coefficients between the first and third steps, standardized beta coefficient of overload and conflicts in customer service is not significant. Therefore, the results of a Sobel test indicated that burnout have a significant full mediating effect on the relationship between overload and conflicts in customer service and turnover intention ( $z = 5.05$ ,  $p = 0.000$ ; Fig. 1).(Tables 4, 5, 6, 7)

For "emotional disharmony and hurt," we again found significant effects for all three steps (first step:  $\beta = 0.24$ ,  $p = 0.000$ ; second step:  $\beta = 0.54$ ,  $p = 0.000$ ; third step:  $\beta = 0.14$ ,  $p = 0.001$ ;  $\beta = 0.17$ ,  $p = 0.000$ ). Here, the decreased standardized beta coefficients between the first and third steps indicated a partial mediating effect of burnout on the relationship of emotional disharmony and hurt with turnover intention. This mediating effect was verified by significant Sobel test results ( $z = 3.73$ ,  $p = 0.000$ ; Fig. 2).

Partial mediating effects were also found for two other factors of emotional labor: "organizational surveillance and monitoring" and "lack of a supportive and protective system in the organization." For "organizational surveillance and monitoring," all three steps showed significant beta coefficients (first step:  $\beta = 0.18$ ,  $p = 0.000$ ; second step:  $\beta = 0.30$ ,  $p = 0.000$ ; third step:  $\beta = 0.12$ ,  $p = 0.002$ ;  $\beta = 0.21$ ,  $p = 0.000$ ), and the decrease in coefficients between the first and third step, combined with a significant Sobel test result ( $z = 4.63$ ,  $p = 0.000$ ) indicated that burnout had a mediating effect on the relationship of organizational surveillance and monitoring with turnover intention (Fig. 3).

For "lack of a supportive and protective system in the organization," all three steps yielded significant beta coefficients (first step:  $\beta = 0.18$ ,  $p = 0.000$ ; second step:  $\beta = 0.20$ ,  $p = 0.000$ ; third step:  $\beta = 0.14$ ,  $p = 0.000$ ;  $\beta = 0.22$ ,  $p = 0.000$ ), and the decrease in these coefficients between the first and third steps, coupled with the significant Sobel test ( $z = 3.93$ ,  $p = 0.000$ ), again confirmed the mediating effect of burnout (Fig. 4).

The results fully and partially support the mediating role of burnout in the relationship between the subfactors of emotional labor and turnover intention. Thus, Hypothesis 2 was partially supported.

#### 4. Discussion

In this study, we examined the mediating effect of burnout on the relationship between emotional labor and turnover intention. The findings indicated that overload and conflict in customer service, emotional disharmony and hurt, organizational surveillance and monitoring, and lack of a supportive and protective system in the organization were significantly associated with burnout and turnover intention. This coincides with the results of prior studies that reported that emotional labor induces burnout, and that it is positively correlated with turnover intention [21,26,27]. However, notably, emotional demand and regulation was not associated with turnover intention. There is, unfortunately, a lack of evidence to support this result. Although emotional demand and regulation were associated with burnout, most participants might consider this factor a natural part of their role as a nurse. Hence, this factor may not lead to turnover intention.

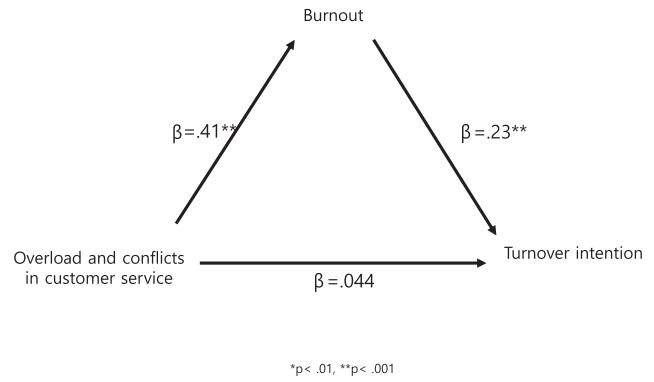
In the present study, overload and conflict in customer service, emotional disharmony and hurt, emotional disharmony and hurt (i.e., emotional dissonance), organizational surveillance and monitoring, and lack of a supportive and protective system in the organization were the significant predictors of burnout and turnover intention. Emotional dissonance is defined as the conflict between positive emotional display—namely, the emotions required by the organization—and individuals' felt emotions [28]. Previous studies have demonstrated a clear and consistent relationship between emotional dissonance and burnout among professionals in the human service industry [29,30]. In other words, these studies have stressed that suppressing one's internal emotions is detrimental to the health and well-being of organization members.

We found that burnout partially mediated the effects of three of the five factors of emotional labor: emotional disharmony and hurt, organizational surveillance and monitoring, and lack of a supportive and protective system in the organization. This finding coincides with the emotional dissonance theory [17], and it is supported by other studies indicating that emotional exhaustion maybe an important predictor of turnover intention. In particular, conflicts between displayed and actual emotion can exhaust workers emotionally, which in turn may motivate withdrawal behaviors such as turnover intention [20]. Furthermore, Lindquist and Whitehead [31] noted that emotional labor and turnover intention are not involved in a direct causal relationship; rather, emotional labor induces job stress, which in turn influences organizational effectiveness, including factors such as job satisfaction or turnover intention.

Turnover intention refers to a worker's intention to leave his or her current workplace, or prudent and considerate thoughts about leaving the organization [32]. It is recognized as the final step in the process of turnover [33,34]. Although personal factors have been found to influence turnover per se, organizational factors, such as organizational stress and leadership, have a considerable influence on turnover intention [35]. For instance, Flinkman et al. [36]

**Table 3** Mediating effects of burnout on the relationship between emotional demand and regulation and turnover intention (n = 606)

Variable	Model 1			Model 2			Model 3		
	B(SE)	$\beta$	p	B(SE)	$\beta$	p	B(SE)	$\beta$	p
(Constant)	7.664 (1.368)			11.712 (1.583)			9.364 (1.567)		
Control variables									
Age (30 vs 20)	-0.678 (0.290)	-0.094	0.020	-0.927 (0.335)	-0.111	0.006	-0.719 (0.325)	-0.086	0.027
Age (40 vs 20)	-1.331 (0.396)	-0.138	0.001	-2.876 (0.459)	-0.257	<0.001	-2.468 (0.447)	-0.221	<0.001
Age (50 vs 20)	-3.862 (1.446)	-0.101	0.008	-7.591 (1.674)	-0.172	<0.001	-6.408 (1.625)	-0.145	<0.001
Shift work	1.076 (0.360)	0.117	0.003	1.458 (0.417)	0.137	0.001	1.128 (0.405)	0.106	0.006
Working hours	0.038 (0.025)	0.058	0.128	0.124 (0.029)	0.164	<0.001	0.113 (0.028)	0.149	<0.001
Emotional demand and regulation	0.081 (0.009)	0.352	<0.001	0.013 (0.010)	0.048	0.209	-0.012 (0.010)	-0.046	0.244
Burnout							0.306 (0.046)	0.265	<0.001
Parameter	0.154			0.155			0.213		
Adjusted R <sup>2</sup>	19.317			19.460			24.343		
F									
p									



**Fig. 1.** Mediating effects of burnout on the relationship of overload and conflicts in customer service with turnover intention.

reported that the following factors influence turnover intention among hospital nurses: young age, male, high level of education, low wage, low job commitment, low emotional commitment, low job satisfaction, weak support system, low job autonomy, burnout, and job-related conflict with family members. Similar results have been found in the Korean literature as well. For instance, Kim and Kim [37] found that turnover intention was negatively correlated with job satisfaction, organizational commitment, and job marketing although it was positively associated with job stress and burnout.

We found that overload and conflicts in customer service, as a subfactor of emotional labor, had a direct effect on turnover intention, and this relationship was fully mediated by burnout. As per the job demands-resources model, high job demands—such as overload and conflicts with patients—and few job resources are associated with poorer organizational commitment, which, in turn, relates to turnover intention [38]. However, more evidence on this result is needed. We suggest that future research should take a closer look at this factor of emotional labor.

Studying nurses' turnover intention maybe more cost effective for hospitals than merely studying turnover behavior of all hospital employees. In addition, identifying the key factors related to turnover intention enables administrators to develop interventions to prevent nurses' turnover [39]. Because nurses account for a critical proportion of personnel in medical facilities, understanding the factors related to turnover intention among them is becoming an increasingly important and reasonable aspect of hospital management strategy [40]. Burnout manifests differently based on the job types, although it appears to be much more prevalent in service employees than in manufacturing workers [41].

Taken together, these findings indicate that it is needed to pay attention to burnout among nurses, given their high levels of emotional labor. Indeed, it is especially important given that the impacts of burnout go beyond individual members; namely, it is not beneficial to the organizational goals (e. g. productivity and organizational efficiency), increases turnover, reduces positive job attitudes, and decreases work productivity [42]. All of these ultimately cause negative effects among nursing professions and patients [43].

This study has some limitations. First, selection bias is a potential limitation of this study because we selected the participating facilities without randomization and participants could choose whether to participate in the study. Furthermore, all data in this study were obtained through a self-administered questionnaire, thus presenting the possibility of common method bias. It cannot exclude the possibilities to select out from enrollment of

**Table 4** Mediating effects of burnout on the relationship between overload and conflicts in customer service and turnover intention (n = 606)

Variable	Model 1			Model 2			Model 3		
	B(SE)	$\beta$	p	B(SE)	$\beta$	p	B(SE)	$\beta$	p
(Constant)	10.594 (1.195)			11.371 (1.406)			8.553 (1.458)		
Control variables									
Age (30 vs 20)	-0.568 (0.281)	-0.079	0.044	-0.949 (0.331)	-0.114	0.004	-0.798 (0.323)	-0.096	0.014
Age (40 vs 20)	-1.017 (0.384)	-0.105	0.008	-2.842 (0.452)	-0.254	<0.001	-2.571 (0.443)	-0.230	<0.001
Age (50 vs 20)	-3.645 (1.408)	-0.096	0.010	-7.401 (1.658)	-0.167	<0.001	-6.432 (1.625)	-0.146	<0.001
Shift work	0.855 (0.350)	0.093	0.015	1.426 (0.412)	0.134	0.001	1.199 (0.403)	0.113	0.003
Working hours	0.008 (0.024)	0.012	0.755	0.112 (0.029)	0.148	<0.001	0.110 (0.028)	0.146	<0.001
Independent variable	0.067 (0.006)	0.409	<0.001	0.026 (0.007)	0.138	<0.001	0.008 (0.008)	0.044	0.269
Parameter									
Burnout	0.198			0.171			0.266 (0.047)	0.230	<0.001
Adjusted R <sup>2</sup>	25.825			21.867			24.319		
F	<0.001			<0.001			<0.001		
p									

**Table 5** Mediating effects of burnout on the relationship between emotional disharmony and hurt and turnover intention (n = 606)

Variable	Model 1			Model 2			Model 3		
	B(SE)	$\beta$	p	B(SE)	$\beta$	p	B(SE)	$\beta$	p
(Constant)	10.400 (1.087)			10.888 (1.359)			8.856 (1.442)		
Control variables									
Age(30 vs 20)	-0.549 (0.258)	-0.76	0.034	-0.958 (0.323)	-0.115	0.003	-0.851 (0.321)	-0.102	0.008
Age(40 vs 20)	-1.091 (0.354)	-0.113	0.002	-2.887 (0.442)	-0.258	<0.001	-2.674 (0.440)	-0.239	<0.001
Age(50 vs 20)	-3.237 (1.297)	-0.085	0.013	-7.120 (1.622)	-0.161	<0.001	-6.487 (1.612)	-0.147	<0.001
Shift work	0.541 (0.323)	0.059	0.094	1.269 (0.403)	0.119	0.002	1.163 (0.400)	0.109	0.004
Working hours	0.003 (0.022)	0.005	0.890	0.107 (0.028)	0.141	<0.001	0.106 (0.028)	0.140	<0.001
Independent variable	0.086 (0.005)	0.539	<0.001	0.043 (0.007)	0.235	<0.001	0.026 (0.008)	0.144	0.001
Parameter									
Burnout	0.320			0.207			0.195 (0.051)	0.169	<0.001
Adjusted R <sup>2</sup>	48.434			27.364			26.140		
F	<0.001			<0.001			<0.001		
p									

Sobel test Z = 3.73, p=<0.001.

**Table 6** Mediating effects of burnout on the relationship between organizational surveillance and monitoring and turnover intention (n = 606)

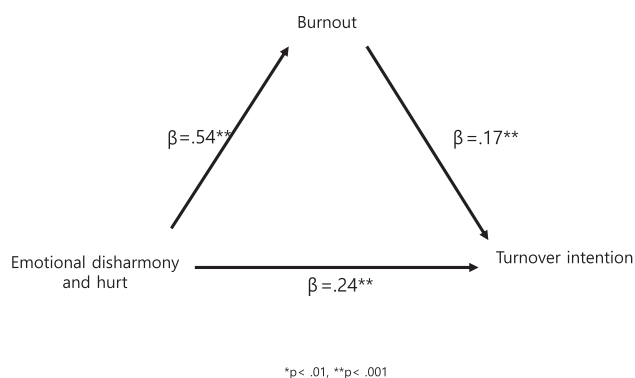
Variable	Model 1			Model 2			Model 3		
	Organizational surveillance and monitoring -> burnout			Organizational surveillance and monitoring -> turnover			Burnout -> turnover		
	B(SE)	$\beta$	p	B(SE)	$\beta$	p	B(SE)	$\beta$	p
(Constant)	12.519 (1.224)			11.662 (1.364)			8.590 (1.443)		
Control variables									
Age(30 vs 20)	-0.578 (0.294)	-0.080	0.050	-1.007 (0.328)	-0.121	0.002	-0.866 (0.321)	-0.104	0.007
Age(40 vs 20)	-0.933 (0.402)	-0.097	0.021	-2.804 (0.448)	-0.251	<0.001	-2.575 (0.439)	-0.230	<0.001
Age(50 vs 20)	-4.260 (1.473)	-0.112	0.004	-7.626 (1.642)	-0.173	<0.001	-6.581 (1.614)	-0.149	<0.001
Shift work	0.899 (0.366)	0.098	0.014	1.461 (0.408)	0.137	<0.001	1.241 (0.401)	0.117	0.002
Working hours	0.018 (0.025)	0.028	0.469	0.110 (0.028)	0.182	<0.001	0.106 (0.028)	0.140	<0.001
Independent variable	0.050 (0.006)	0.299	<0.001	0.035 (0.007)	0.182	<0.001	0.023 (0.007)	0.118	0.002
Parameter							0.245 (0.044)	0.212	<0.001
Adjusted R <sup>2</sup>	0.120			0.185			0.224		
F	14.800			23.940			25.883		
p	<0.001			<0.001			<0.001		

Sobel test Z = 4.63, p=<0.001.

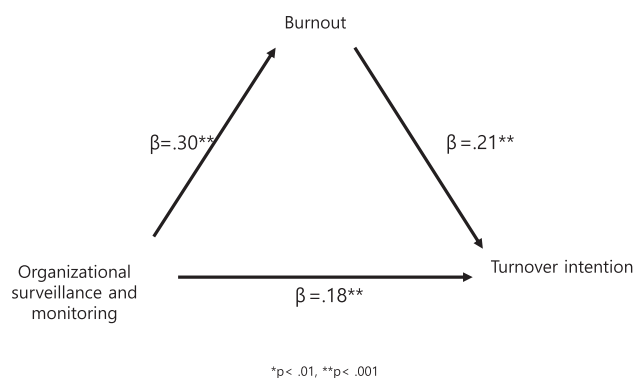
**Table 7** Mediating effects of burnout on the relationship between lack of a supportive and protective system in the organization and turnover intention (n = 606)

Variable	Model 1			Model 2			Model 3		
	Lack of a supportive and protective system in the organization -> burnout			Lack of a supportive and protective system in the organization -> turnover			Burnout -> turnover		
	B(SE)	$\beta$	p	B(SE)	$\beta$	p	B(SE)	$\beta$	p
(Constant)	12.314 (1.288)			10.909 (1.396)			7.768 (1.458)		
Control variables									
Age(30 vs 20)	-0.496 (0.302)	-0.069	0.101	-0.984 (0.328)	-0.118	0.003	-0.857 (0.320)	-0.103	0.008
Age(40 vs 20)	-0.929 (0.413)	-0.096	0.025	-2.792 (0.448)	-0.250	<0.001	-2.555 (0.438)	-0.228	<0.001
Age(50 vs 20)	-4.213 (0.151)	-0.110	0.006	-7.558 (1.642)	-0.171	<0.001	-6.484 (1.608)	-0.147	<0.001
Shift work	0.863 (0.377)	0.094	0.022	1.443 (0.408)	0.136	<0.001	1.223 (0.399)	0.115	0.002
Working hours	0.032 (0.026)	0.049	0.217	0.118 (0.028)	0.156	<0.001	0.110 (0.027)	0.145	<0.001
Independent variable	0.042 (0.008)	0.197	<0.001	0.045 (0.009)	0.181	<0.001	0.034 (0.009)	0.138	<0.001
Parameter							0.255 (0.043)	0.220	<0.001
Adjusted R <sup>2</sup>	0.070			0.185			0.229		
F	8.635			23.943			26.693		
p	<0.001			<0.001			<0.001		

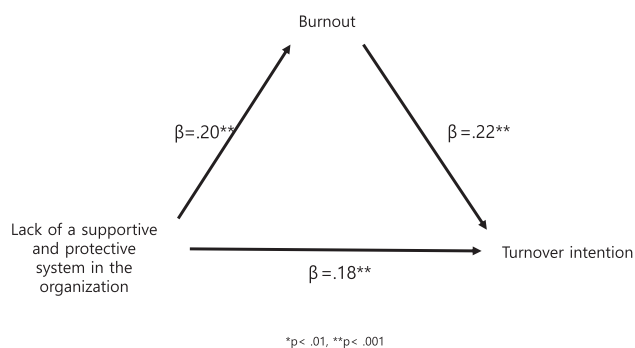
Sobel test Z = 3.93, p=<0.001.



**Fig. 2.** Mediating effects of burnout on the relationship of emotional disharmony and hurt with turnover intention.



**Fig. 3.** Mediating effects of burnout on the relationship of organizational surveillance and monitoring with turnover intention.



**Fig. 4.** Mediating effects of burnout on the relationship of lack of a supportive and protective system in the organization with turnover intention.

the study so-called “healthy worker effect”. This should be taken into consideration when interpreting the present results. Second, we could not include the occupational factors such as bullying or workplace violence from clients or supervisor. It is needed to examine some eligible occupational risks in the future study.

Despite these limitations of this study, our results are noteworthy with reference to the implication that the different factors of emotional labor may have differential effects on mediators and outcomes. Besides the effects obtained previously, it is possible that these factors have independent contributions to various other outcomes.

In conclusion, this study suggests that emotional labor is related to turnover intention and burnout mediates the relationship

between emotional labor and turnover intention in clinical nurses, in an attempt to devise intervention strategies to reduce nurses’ turnover intention and to ultimately improve the management of nursing personnel and quality of medical services. The increasing attention on the concept of emotional labor allowed us to use an emotional labor scale that was developed considering Korea’s sociocultural characteristics and to verify its validity in the field of nursing.

## Conflicts of interest

The authors declared no conflicts of interests.

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## Appendix A. Supplementary data

Supplementary data to this article can be found online at <http://doi.org/10.1016/j.shaw.2020.01.002>.

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