



Original Article

Effect of Nurses' Emotional Labor on Customer Orientation and Service Delivery: The Mediating Effects of Work Engagement and Burnout

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ABSTRACT

Background: The emotional labor performed by organization members affects psychological well-being at the individual level, which consequently affects results at the organizational level. Moreover, despite evidence that the customer orientation and service level of nurses greatly affect hospital management, studies that comprehensively analyze emotional labor, work burnout, and work engagement related to customer orientation and service level are lacking. This study investigated relationships and paths by designing a model of the effect of emotional labor performed by nurses on the level of service delivery and customer orientation.

Methods: This survey-based study was based on a path analysis designed to verify a hypothesized model involving emotional labor performed by nurses, level of service delivery, customer orientation, work engagement, and burnout. Questionnaires were distributed to 378 nurses in general hospitals with more than 500 beds located in Seoul, Republic of Korea, between March 25 and April 8, 2013.

Results: The results showed that deep acting and work engagement had direct and indirect effects on increasing the level of service delivery and customer orientation of nurses. However, surface acting had an indirect effect on reducing the level of service delivery and customer orientation.

Conclusion: It would be more effective to develop interventions to enhance deep acting and work engagement than to attempt to reduce surface acting and work burnout in clinical nursing settings.

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1. Introduction

More than 400 medical institutions in about 50 countries in Europe, Asia, and Africa have obtained Joint Commission International certification as of June 2011. The Ministries of Health and Welfare in these countries have actively introduced medical institution assessment systems to meet people's expectations for medical services. Hospitals are also striving to provide professional and high-quality medical services in keeping with the changing industry environment [1]. In modern society, where patient-centered medical services are highly valued, nurses, who interact directly with patients, are regarded as important human resources. Nurses' attitudes toward customer service as well as their level of service have a direct influence on the business performance and competitiveness of hospitals [2].

The customer orientation and service level of nurses, the two major factors that determine a hospital's success, are affected by various factors. These include job performance as well as the nurses

performing their duties with a full understanding of their roles. In particular, job burnout and work engagement in employees are important factors that determine the quality of services provided to customers [3]. Job burnout, a concept based on an evasive behavioral system, refers to the withdrawn behavior of employees to avoid exposure to physical risks or pains due to their jobs, and it decreases productivity in organizations [4]. Meanwhile, work engagement, which is based on a facilitative behavioral system, is an employee's attitude toward his or her work and refers to high-level energy and enthusiasm toward work [5]. Employees with high work engagement behave more actively to experience direct happiness and compensation, resulting in increased productivity in an organization [6].

According to a theory suggested by Bakker et al [7], various job demands (heavy workload, emotional demands, conflicts at workplace and home, etc.) perceived by employees result in burnout, and this causes the employees to negatively perceive their roles in the organization, thereby decreasing productivity. Based on the job demand–resources model, Bakker and Demerouti [5]

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emphasized that excessive job demands affect not only employees' work engagement but also their performance. Many nurses who work in clinical settings experience burnout because they are required to exert a great deal of emotional energy while juggling patient needs and the hospital's aim to maximize profits. Because the job performance of nurses who experience burnout tends to be quite low, hospital managers view emotional labor performed by nurses as an important job demand for the improvement of job performance, including customer orientation and service level [8].

Emotional labor can be divided into two main techniques: deep acting (i.e., perspective taking or self-talk to appear "real") and surface acting (i.e., hiding and faking expressions like a mask) [9]. Deep acting is a type of antecedent-focused emotion regulation (i.e., reappraisal, cognitive change), while surface acting is a type of response focused emotion regulation (i.e., expressive suppression) [10]. Surface acting is not just suppressing but also amplifying and faking emotions [11], and specifically, suppressing negative emotions and amplifying positive emotions [12]. Deep acting is typically measured as attempts to change feelings to appear genuine [13] rather than reappraisal [14]. The two types of emotional labor seem similar but do not perfectly coincide and have different effects. In Grandey's research [11], surface acting was observed to have a negative effect on job satisfaction, while deep acting positively affected job satisfaction.

Because engaging in emotional labor requires the employee to perform a role defined by the employer, the employee can develop negative feelings toward his/her role in the workplace if he/she feels uncomfortable about constantly monitoring his/her emotions [9,15]. In particular, because many health-care workers have direct contact with patients, job burnout due to emotional labor can have a significantly negative impact on patient interactions and the level of service provided [16]. Rafaeli and Sutton's theory [17] claims that the emotional labor by organization members affects psychological well-being at the individual level and influences results at the organizational level. There are previous studies related to this theory. In a study [18] on female Malaysian teachers and another [15] on the administrative staff of a college in the Midwestern United States, emotional labor performed by participants had an effect on burnout and customer service. Additionally, a study [19] on workplaces in Australia confirmed that emotional labor performed by employees affects customer orientation. In another study [20] on call center employees,

emotional labor had a direct influence on job burnout and engagement, and emotional labor performed by nurses was also shown to have a direct effect on job burnout in a study conducted on Korean nurses [21].

However, the limitation of these previous studies is that they failed to distinguish between surface acting and deep acting emotional labor types, which have different effects. Further, according to the emotional labor theory proposed by Rafaeli and Sutton [17], emotional labor has an effect on both the individual level and the organizational level. However, if applied to the job demand–resources model proposed by Bakker and Demerouti [5], the emotional labor performed by organization members affects psychological well-being at the individual level, which consequently affects results at the organizational level. Moreover, despite evidence that the customer orientation and service level of nurses greatly affect hospital management, studies that comprehensively analyze emotional labor, work burnout, and work engagement related to customer orientation and service level are lacking. Therefore, this study distinguishes the emotional labor performed by nurses into surface acting and deep acting to confirm the relationship between work engagement and work burnout at the individual level. A distinction is also made between service level and customer orientation at the organizational level to provide basic data for improving customer satisfaction, which is required in nurses, and for ensuring high-quality service.

1.1. Study purpose

This study sought to develop a hypothetical route model using the emotional labor performed by nurses in clinical settings as the exogenous variable, work engagement and job burnout as the parameters, and service level and customer orientation as the result variables; conduct a goodness-of-fit test; and investigate routes and relationship between factors (see Fig. 1).

2. Materials and methods

2.1. Study design

This study is a cross-sectional survey performed to verify relationships and routes by developing a model showing how the

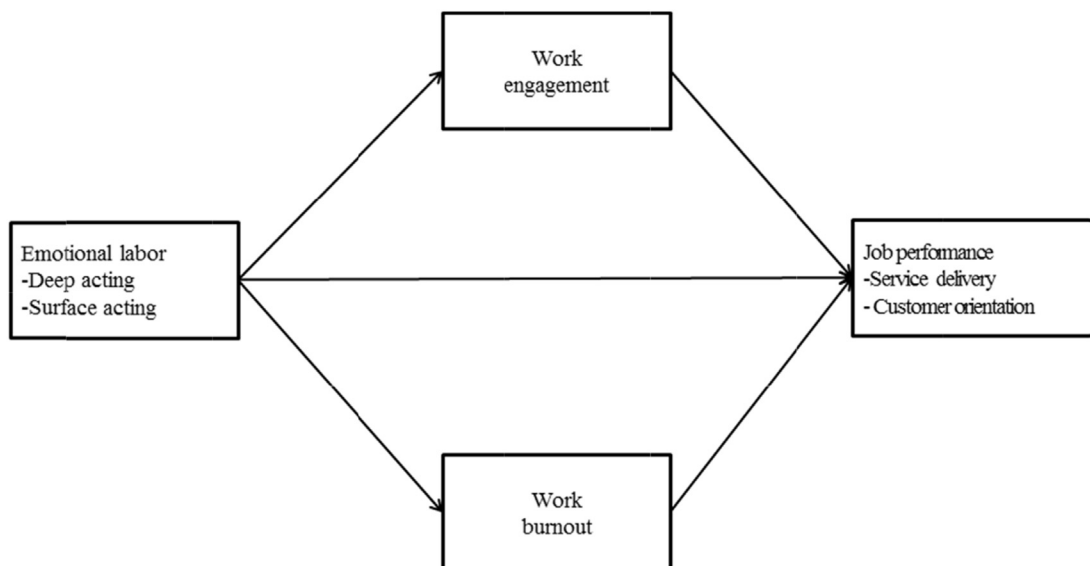


Fig. 1. Conceptual framework.

emotional labor performed by nurses affects their service level and job performance related to customer orientation using the parameters of work engagement and job burnout.

2.2. Study participants and collection procedure

This study was conducted after receiving approval [IRB approval number: KHSIRB-13-008(EA)] from the clinical test committee at Kyung Hee University. Of the general hospitals located in Seoul with 500 beds or more, four general hospitals with similar nursing grades as designated by the Ministry of Health and Welfare were selected. After explaining the content and purpose of the study to the nursing department and obtaining their consent, nurses who were directly and currently providing care to patients were selected as the research subjects. The nurses who participated in the study underwent convenience sampling from the nursing department. The number of subjects per hospital was 110, but one hospital had 120 subjects. The research period was the 15 days between March 25 and April 8, 2013. It took about 10 minutes to complete the survey, and participants received small gifts after completing the questionnaire. Because the recommended number of samples for a correlation study is 5–10 times the number of questions in general [22], it was calculated that this study needed 330–660 people. Accordingly, the researchers selected 450 nurses to participate and distributed questionnaires to them. A total of 416 samples were collected (return rate: 92.9%), of which 378 were valid (final response rate: 84.0%), and 38 invalid samples with many non-responses were excluded from the final analysis.

2.3. Measurement

Emotional labor is defined [9] as the effort exerted by employees to control their tones, expressions, and gestures with the aim of expressing the emotions demanded by their employers during interpersonal interactions. This study used a tool composed of two questions on surface acting and seven on deep acting, which was developed by Brotheridge and Lee [13] and by Kruml and Geddes [23], and then verified for Koreans by Yi et al [20]. Scores for each question range from 1 to 7 and the higher the score, the higher the emotional labor. In the study by Yi et al [20], the reliability value of the tool was Cronbach $\alpha = 0.88$ – 0.89 . As for this study, the reliability values of surface acting and deep acting were Cronbach $\alpha = 0.71$ and Cronbach $\alpha = 0.73$, respectively.

Job burnout refers to a state of physical, psychological, and emotional exhaustion due to emotionally burdensome work [24]. For the survey on job burnout, this study used 12 questions from a tool developed by Pine et al [24], translated by Pik Eunhee [25], and revised by Moon and Han [26]. Scores for each question range from 1 to 7 and the higher the score, the higher the emotional labor. In the study by Moon and Han [26], the reliability value of the tool was Cronbach $\alpha = 0.85$, and that of this study was Cronbach $\alpha = 0.93$.

Work engagement refers to a positive and enterprising attitude of mind toward work and is a state of being completely immersed in work and being passionate about producing great work [27]. In the case of work engagement, this study used the Korean version of the Utrecht Work Engagement Scale. It was developed by Schaufeli et al [27], revised in 2003, and translated and verified by Yi et al [20]. The tool was composed of six questions on vigor, five questions on dedication, and six questions on absorption. Scores for each question range from 1 to 5 and the higher the score, the higher the emotional labor. In the study by Yi et al [27], the reliability of the tool was Cronbach $\alpha = 0.87$, and that of this study was Cronbach $\alpha = 0.91$.

Service level refers to personal services aimed at providing pleasure to customers [28]. The researchers selected 13 questions, which were verified to meet the purpose of the study. Scores for

each question range from 1 to 5 and the higher the score, the higher the service level. In a study by Nam and Kim [10], the reliability value of the tool was Cronbach $\alpha = 0.92$, and that of this study was Cronbach $\alpha = 0.86$.

Customer orientation refers to the tendency of service providers to meet customers' needs while providing services [29]. After translating and back-translating a customer orientation tool developed by Brown et al [29], the researchers selected six questions on pleasure through content validity and construct validity tests to meet the purpose of this study. In the study by Brown et al [29], the reliability value of the tool was Cronbach $\alpha = 0.88$ and 0.87 , and that of this study was Cronbach $\alpha = 0.85$ and 0.84 .

2.4. Data analysis

The collected data were processed using SPSS Windows 20.0 (SPSS Data Solution Inc, Seoul, Republic of Korea) and AMOS 20.0 (SPSS Korea Data Solution Inc.). Using SPSS Windows 20.0, this study analyzed demographic characteristics and the validity and reliability of the study tools. Using AMOS 20.0, this study verified and analyzed factors to develop a route model for the emotional labor performed by nurses. To test the goodness of fit, this study used chi-square, chi-square/degrees of freedom (≤ 3.00), adjusted goodness of fit index (AGFI ≥ 0.90), goodness of fit index (GFI ≥ 0.90), comparative fit index (CFI ≥ 0.90), root mean square residual (RMRS ≤ 0.10), root mean square error of approximation (RMSEA ≤ 0.10), and normed fit index (NFI ≥ 0.90). Models were assessed to be acceptable when the NFI and CFI values and the relative fit indices were 0.90 or higher. In RMSEA, which considers model simplicity, <0.05 is the best possible fit, <0.08 is a good fit, <0.10 is acceptable, and >0.10 is a poor fit [30]. Regarding the standardized coefficient in the path model, less than 0.01 refers to a weak effect, above 0.5 to a strong effect, and other middle values to a moderate effect [30]. This study conducted confirmatory factor analysis to test convergent and discriminant validity. AMOS 20.0 used an estimation method based on maximum likelihood estimation. First, while conducting the convergent validity test, items were eliminated when the factor loading was less than 0.6 (reference value) or when CR (t) was less than 1.96 (reference value) [30].

3. Results

3.1. General participant characteristics

The average age of the participants was 31.9 years, and the number of people above the age of 36 was the highest, comprising 22.8% of the sample. The number of single people (60.6%) was greater than was the number of married people, and the number of graduates from 4-year colleges (68.3%) was greater than was the number from 3-year colleges (16.1%). People with a university degree or higher made up 15.6% of the sample. General-duty nurses were the majority at 89.7%, and the average total service period was 8.8 years. The majority of participants had worked at their present workplace for 7–10 years, with an average of 7.2 years. The majority of participants were new to the department they worked in, with less than a 1-year work period. The average work period was 3.7 years, and the majority of subjects were graduates from 4-year colleges. In case of shift patterns for duties, three shifts (78.6%) made up the majority; 61.4% were working in general wards while 38.6% were working in special wards. See Table 1 for details on general participant characteristics.

3.2. Correlation between observed variables and testing the validity of the tools

The average variance extracted (AVE) value was 0.61–0.87, higher than the reference value of 0.5. Construct reliability was 0.76–0.97,

Table 1
General characteristics of subjects (N = 378)

Variables	Category	Frequency (%)
Age (y) (M ± SD = 31.9 ± 7.50)	≤25	42 (14.1)
	26–30	60 (20.1)
	31–35	67 (22.5)
	≥36	68 (22.8)
Marital status	No	229 (60.6)
	Yes	149 (39.4)
Education background	3-yr nursing college	61 (16.1)
	4-yr nursing college	258 (68.3)
	Masters or above	59 (15.6)
Current position	Staff nurse	339 (89.7)
	Charge nurse	26 (6.9)
	Head nurse or above	13 (3.4)
Total period of clinic career (yr) (M ± SD = 8.8 ± 7.5)	≤3	95 (25.1)
	3–6	87 (23.0)
	7–11	71 (18.8)
	≥12	125 (33.1)
Total period of current hospital (yr) (M ± SD = 7.2 ± 7.3)	≤2	86 (22.8)
	3–6	78 (20.6)
	7–10	118 (31.2)
	≥11	96 (25.4)
Total period of current ward (M ± SD = 3.7 ± 3.5)	≤1	131 (34.7)
	2–4	43 (11.4)
	4–6	101 (26.7)
	≥7	103 (27.2)
Shift work	Three shift	297 (78.6)
	Double shift/usual shift	81 (21.4)
Nursing unit	General ward	232 (61.4)
	Special ward	146 (38.6)

M, mean; SD, standardized deviation.

higher than the reference value of 0.7 (see Tables 2 and 3). To test discriminant validity, this study compared $\sqrt{\text{AVE}}$ and correlation values between constructs. The $\sqrt{\text{AVE}}$ value of the latent variable was 0.78–0.93, which is higher than the correlation coefficient between latent variables, indicating discriminant validity.

Table 2
Confirmatory factor analysis and model fit

Variables	χ^2	GFI	AGFI	NFI	CFI	RMRS	RMSEA
Deep acting	71.92	0.92	0.85	0.89	0.90	0.04	0.12
Surface acting	3.17	0.99	0.97	0.98	0.99	0.01	0.03
Work engagement	233.90	0.90	0.85	0.90	0.91	0.03	0.11
Work burnout	254.28	0.90	0.86	0.92	0.93	0.01	0.09
Service delivery	167.77	0.92	0.89	0.91	0.93	0.01	0.07
Customer orientation	120.95	0.93	0.90	0.93	0.95	0.02	0.08

AGFI, adjusted goodness of fit index; CFI, comparative fit index; GFI, goodness of fit index; NFI, normed fit index; RMSEA, root mean square error of approximation; RMRS, root mean square residual.

Table 3
The correlation and validity test of the variables

Variables	X1	X2	X3	X4	X5	X6	
X1: Deep acting	0.93						
X2: Surface acting	–0.16*	0.78					
X3: Work engagement	0.30*	–0.23*	0.80				
X4: Work burnout	0.18*	0.30*	–0.68*	0.81			
X5: Service delivery	0.37*	–0.20*	0.53*	–0.36*	0.86		
X6: Customer orientation	0.41*	0.25*	0.69*	–0.50*	0.64*	0.83	
Validity test	CR	0.93	0.76	0.95	0.95	0.97	0.96
	AVE	0.87	0.61	0.64	0.65	0.74	0.69

The shaded section: discriminant validity; The nonshaded section: correlation.

AVE, average variance extracted; CR, construct reliability.

* $p < 0.001$.

3.3. Direct effect, indirect effect, and total effect

A total of 12 hypotheses were developed regarding emotional labor (surface acting and deep acting), the exogenous variable; work engagement and job burnout, the parameters; and service level and customer orientation, the result variables. The goodness of fit of the study models was $\chi^2 = 1.55$ ($df = 1$), $\chi^2/df = 1.55$, GFI = 0.99, AGFI = 0.97, NFI = 0.99, CFI = 0.99, RMRS = 0.03, RMSEA = 0.03. The study models had good fit: AGFI was higher than 0.80, NFI and CFI values were also high (higher than 0.99), and RMSEA value was below 0.05. Additionally, eight out of the 12 hypotheses were selected as they were judged to have good fit after testing convergent and discriminant validity.

This study identified the direct, indirect, and overall effects of emotional labor on service level and customer orientation using the parameters work engagement and job burnout. To investigate the significance of indirect effects, this study used the bootstrapping method, and the results are shown in Table 4 and Fig. 2. First, deep acting emotional labor had a moderate direct effect by increasing work engagement, and surface acting had a moderate direct effect by decreasing work engagement. Deep acting had a moderate direct effect by decreasing job burnout, and surface acting had a moderate direct effect by increasing job burnout. Second, job burnout did not affect service level or work engagement, and deep acting emotional labor had a moderate direct effect by increasing service level. Deep acting emotional labor had a moderate indirect effect on the increase in service level, and surface acting had a weak indirect effect on the decrease in service level. Third, job burnout did not affect customer orientation; however, work engagement, service level, and deep acting emotional labor did have a moderate direct effect by increasing customer orientation. Work engagement and deep acting emotional labor had moderate indirect effect on the increase in customer orientation, and surface acting of emotional labor had a moderate indirect effect on the decrease in customer orientation.

4. Discussion

The aim of this study is to identify the correlation and routes between emotional labor and job burnout, work engagement, service level, and customer orientation in nurses, as well as to discuss the correlation between the influencing variables. Deep acting emotional labor by nurses had a direct effect of increasing work engagement and decreasing job burnout, while surface acting increased job burnout and decreased work engagement. This is similar to the results of the study [18] conducted on female Malaysian teachers and the study [15] conducted on the administrative staff of a university in the Midwestern United States. Based on the theory suggested by Grandey [11], surface acting focuses on outward behavior. Because employees recognized the suppression of their emotions and the expression of emotions demanded by employers as technical aspects of their work, surface acting increased job burnout. It was also identified through this study that deep acting affects employees' job performance because it includes the process of changing one's thoughts. The results of this study indicate that if nurses continue to be exposed to excessive demands from unhealthy patients as well as from their employers to control their feelings, they will use surface acting to perform their duties, and as a result, those who feel demotivated or cannot feel rewarded will experience job burnout. Therefore, it is necessary to develop a strategy and a program on deep acting-oriented emotion control to decrease job burnout and increase work engagement among nurses.

Work engagement and deep acting emotional labor by nurses have a direct effect on the level of service provided by nurses. Using

Table 4
Effects of predictor variables in the modified model

Endogenous variables	Exogenous variables	β	SE	t	Direct effect (p)	Indirect effect (p)	Total effect (p)
Work engagement	Deep acting	0.27	0.05	5.42*	0.27 (0.005)		0.27 (0.005)
	Surface acting	-0.19	0.04	-3.83*	-0.19 (0.004)		-0.19 (0.004)
Work burnout	Deep acting	-0.13	0.06	-2.67*	-0.13 (0.005)		-0.13 (0.005)
	Surface acting	0.28	0.04	5.71*	0.28 (0.006)		0.28 (0.006)
Service delivery	Work engagement	0.44	0.04	7.49*	0.44 (0.003)		0.44 (0.003)
	Work burnout	0.01	0.03	-0.01	0.01 (0.979)		0.01 (0.979)
	Deep acting	0.23	0.03	5.18*	0.23 (0.003)	0.12 (0.005)	0.34 (0.003)
Customer orientation	Surface acting	-0.06	0.02	-1.34	-0.06 (0.171)	-0.08 (0.003)	-0.14 (0.006)
	Work engagement	0.42	0.04	8.57*	0.42 (0.002)	0.15 (0.004)	0.57 (0.002)
	Work burnout	-0.07	0.03	-1.61	-0.07 (0.145)	0.01 (0.979)	-0.080 (0.147)
	Deep acting	0.15	0.03	4.19*	0.15 (0.004)	0.22 (0.005)	0.37 (0.008)
	Surface acting	-0.04	-0.02	-1.25	-0.06 (0.295)	-0.14 (0.003)	-0.15 (0.004)

AGFI, adjusted goodness of fit index; CFI, comparative fit index; GFI, goodness of fit index; NFI, normed fit index; RMSEA, root mean square error of approximation; RMRS, root mean square residual; β , standardized regression weights; SE, standardized error.

Model fit: $\chi^2 = 378.78$, $p < 0.001$, $\chi^2/d.f = 2.77$, GFI = 0.93, AGFI = 0.89, NFI = 0.92, CFI = 0.94, RMSEA = 0.06.

* $p < 0.05$.

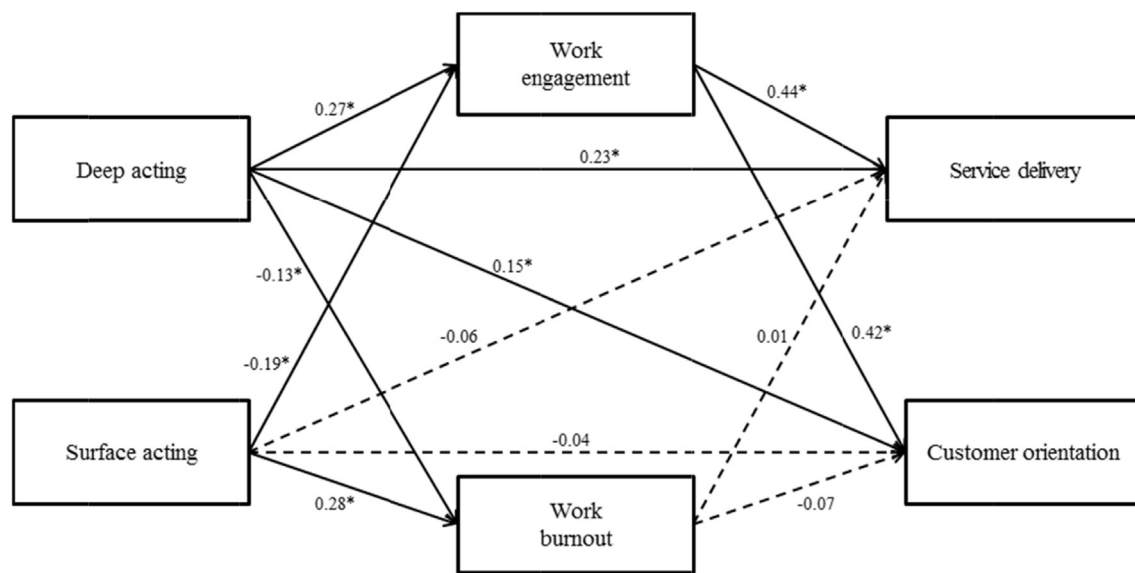


Fig. 2. Path diagram of the model.

the work engagement parameter, it was identified that deep acting and surface acting emotional labor had an indirect effect on service level. Such results are similar to a study [16] conducted on health-care workers. Moreover, if we examine the results of previous work [31,32] on people who had enthusiasm for their work, their productivity was high because they performed their duties with positive feelings. Further, in this study, it was reconfirmed that the service level, which falls under job performance, of people who had enthusiasm for their work was high. This is because deep acting, which includes positive psychological states, and high work engagement for health-care workers who consider their jobs valuable lead to an increase in service level. By using work engagement as the parameter, this study identified that surface acting emotional labor decreased service level, while deep acting emotional labor increased service level. It is difficult to compare with past studies because no other study has classified emotional labor and service level. However, because nurses take care of patients' mental and physical health, surface acting, which only focuses on outward behavior, cannot lead to an increase in service level. Therefore, it is thought to be necessary for nurse managers to develop and apply various resources that can utilize positive emotions for better nursing services.

Deep acting emotional labor, work engagement, and service level had a direct effect on the final result variable of this study, namely, the consumer orientation of nurses. Additionally, this study could identify, using the work engagement parameter, that deep acting and surface acting emotional labor had an indirect effect on customer orientation. This result is similar to the result of a study [19] conducted on workplaces in Australia. This indicates how important employees' emotion control is to job performance: withdrawn behavior by employees lowers their productivity [4], and the positive aspect of work engagement, which is based on facilitative behavioral system [33], enhances service level and customer orientation. Therefore, it is thought to be necessary for nurse managers to develop a program that can provide motivation for nurses to accept emotional labor as part of their job. The limitations of this study are as follows: Emotional labor is affected by various factors, so it is necessary to expand research to emotional labor, customer orientation, and service level based on the theoretical basis and to verify the collective regulation effect, which considers the sociodemographic characteristics of the subjects.

The implications of this study are as follows: First, its academic significance lies in presenting a theoretical model on the nurses' customer orientation by confirming the relationship among

customer orientation, emotional labor, job engagement, and service delivery level, which have been recently emphasized in the field of nursing; second, it has clinical significance in that it provides basic data that can improve the performance of hospital nursing organization and hospitals as a whole and emphasizes the importance of nursing personnel management and environmental management by explaining the importance of nurses' emotional labor management and job engagement orientation through the route by which emotional labor affects customer orientation; finally, it is meaningful because it provides educational materials on customer orientation to nursing students, who are prospective nurses. In particular, as the economic and educational levels of Republic of Korea are improved, the attitudes of medical consumers are changed from passive to active. This study has clinical and educational implications considering that medical consumers demand high quality nursing services, the part about nurse's customer orientation and service delivery is more important.

Conflict of interest

The authors of this paper have no conflicts of interest to report. All authors have materially participated in the research and/or article preparation. This study was approved by the institutional review board of Kyung Hee University (no. KHUIRB 13-008).

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