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Emotional Labour: Its Effect on Work Performance

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

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ABSTRACT

The previous two decades of the 20th century has witnessed a dynamic change in the distribution of employment that has shifted from agriculture and industry to the service sector. With the rise of the service sector, more numbers of employees are involved in direct contact with the client and in such occupations, the job demands expression of appropriate emotions during the interaction. Concomitant with this transition a relatively new labour market has been created, which is marked by work roles that focus on direct communication between service workers and customers. Many a times the front-line service workers have to regulate their emotions in jobs so as to appear professional, even when during unpleasant situations. This new type of labour which has emerged from the work demand is termed as 'Emotional labour'. Emotional labour is not confined tocustomer

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service workers, it can be challenging for most of us, because it is not easy to hide true emotions and display emotions required in work place. Organizational expectation of emotional expression by employees at work place leads to emotional labour. Arlie Hochschild (1983) was the first sociologist to distinctively point out the management and display of emotions by workers as part of their work role. She defined emotional labour as the management of emotions in order to bring out visible facial and bodily display. Hochschild asserted that emotional labour is a stressor that maybe harmful for the psychological and physical well-being of employees. Her findings suggested that the need to manage emotions in work place may bring in contradiction between the emotions an employee feels and the emotions he/she has to display while working with customers. This discrepancy between required and true emotions is referred to as 'Emotional dissonance'. The more the conflict between the required and true emotions, the more employees tend to experience stress, job burnout, and psychological alienation from self. Hochschild proposed two different approaches to reduce emotional dissonance, which are surface acting (outward behavior) and deep acting (inner feelings). As the emotional state of employees is directly related to work performance, management of factors causing emotional labor is an important aspect at work environment.

Keywords: Emotions; emotional labour; emotional dissonance; job performance.

1. INTRODUCTION

Emotions have a profound effect on almost everything we do in daily life. It's generally believed that conscious reasoning (cognition) is the primary driver of a person's thoughts and actions. But, the discoveries made neuroscience have revealed that both cognition emotion influences our perceptions, decisions, and behaviour, and that often emotion has more influence. Emotions can be defined as physiological, behavioural, and psychological episodes experienced toward an object, person, or event that create a state of readiness. There are four key elements of this definition. First, emotions are brief events or episodes, suppose, annoyance with a customer can be for a short duration and would usually subside in few minutes. Second, emotions are directional; it can be toward an object, person, or event. We usually experience various emotions like joy, fear, anger, and other toward some assignments. customers, managers, systems and so on. Third, emotions are experiences, as emotions bring changes in a person's physiological conditions, such as blood pressure, heart rate, and perspiration, as well as changes in behaviour, such as facial expression, voice tone, and eye movement. These emotional expressions are automatic and often occur without consciousness. As we become aware of our emotional reactions, we develop feelings (worry, fear, boredom) that consequently points out our emotional experience towards that event/object. The fourth element relates to experience of emotion, i.e. emotions put people in a state of readiness. For instance, in times of fear, we experience increase in heart rate and blood

pressure, so as to make our body prepared either to fight or flight. Emotions are also a means to communicate to our conscious selves. Some emotions (e.g., anger, fear) acts as triggers, that interrupt our thought, attention, and create motivation to take action. They make us aware of events that may affect our survival and well-being. Most of the time, the emotional operations are automatic and unconscious, but studies indicate that a person while translating beliefs into feelings uses logical reasoning of the emotion. Suppose, in thinking about whether the announced change in organizational structure is good or bad, we try to sense our emotional reactions to the event, then use this emotional awareness as factual information for logical assessment. Verv often, emotions affect workplace attitudes also. While working or interacting with co-workers, we experience a variety of emotions, which shape our feelings toward the organization/institution, fellow workers, the task, and so on.

"The previous two decades of the 20th century has witnessed a dynamic change in the distribution of employment that has shifted from agriculture and industry to the service sector" [1-"With the rise of the service sector, more numbers of employees are involved in direct contact with the client and in such occupations, the job demands expression of appropriate during the interaction" [4,5,6]. Concomitant with this transition a relatively new labour market has been created, which is marked by work roles that focus on direct communication between service workers and customers. Many a times the front line service workers have to regulate their emotions in jobs so as to appear professional, even when during unpleasant situations. This new type of labour which has emerged from the work demand is termed as 'Emotional labour'. Arlie Hochschild [7] was the first sociologist to distinctively point out the management and display of emotions by workers as part of their work role. She defined emotional labour as the management of emotions in order to bring out visible facial and bodily display.

Emotional labour is not confined to customer service workers, it can be challenging for most of us, because it is not easy to hide true emotions and display emotions required in work place. The reason behind this is that, emotions like, joy, sadness, anger automatically activate facial muscles that are difficult to prevent, and hide. True emotions tend to disclose themselves as subtle gestures, usually without our awareness. Hence, display of fake emotions become difficult at times, because it needs coordination of several specific facial muscles and body positions. The more is the conflict between the expected emotion and true emotions, the greater is the possibility that employees experience stress, burnout, and psychological separation from selfie work alienation.

2. THEORETICAL BACKGROUND - AFFECTIVE EVENTS THEORY (AET) MODEL

Affective Events Theory (AET) is a psychological model that describes the interrelation between emotional expression at workplace, job performance, job satisfaction and behaviours. The underling belief of AET is that human behaviours are guided by emotion.

Themodel explains the interconnection between intrinsicinfluences(eg.

cognitions, emotions, desires) of employees and its reaction to situations that occur in work environment, which thereby affect in work performance, organizational commitment, and job satisfaction. This theory proposes that affective work behaviors are described by mood and emotions of employee, while cognitive-based behaviors are the predictors of job satisfaction. Also the theory suggests that positive-inducing (e.g., uplifts) as well as negative-inducing (e.g., hassles) emotional incidents at work distinguishable and have significant а psychological impact upon workers' job satisfaction. This result in lasting internal and external affective reactions exhibited through job

performance, job satisfaction, and organizational commitment.

3. ANTECEDENTS OF EMOTIONAL LABOUR

Studies have shown that many factors affect emotional labour. The factors may be individualistic characteristic, job characteristics or organizational characteristics.

3.1 Individual Characteristics

The variables related to individual characteristics are:

- Emotional contagion
- Empathic concern
- Job emotion

"Emotional contagion is the tendency for two individuals to emotionally converge. People with emotional contagion express their emotion easily and so they frequently can empathize with others emotions, but at the same time they feel stressed easily when they need to suppress emotion. Thus, emotional contagion can positively affect emotional labour "[8]. Research revealed that Emotional contagion has significant effect on deep acting of employees Chu [9], and it affects surface acting [10].

"Empathic concern refers to individuals' self-centered acceptance of and response to other's emotion. Employees having high empathic concern do not usually get irritated by customers rather feels for the customers, but not the same way as the customer" [11]. Choi et al. [10] found that empathic concern affects deep acting.

Job emotion is the degree to which employees express their emotion during job performance. If employees are more expressive emotionally in their job, it is more likely that they perceive the difference between the emotions they feel and the emotional display rule required by the organization. The finding of the study of Winkler et al. [12] indicates the need of understanding the health impairing effects of emotion work.

3.2 Job Characteristics

Hackman & Oldham [13] defined the following five core job characteristics: skill variety, task identity, task significance, autonomy and feedback.

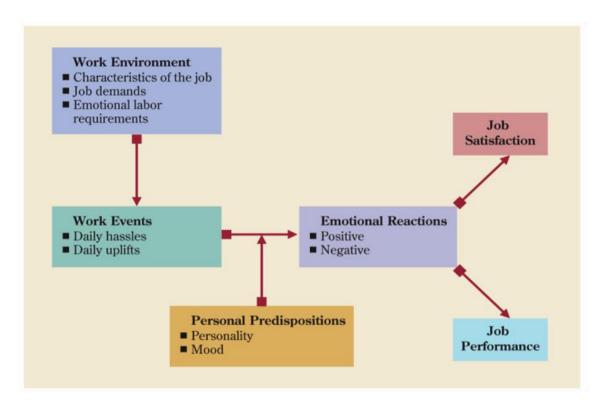


Fig. 1. Affective Events Theory (Source: David Steare, Pinterest)

Table 1. Description of job characteristics suggested by Hackman & Oldham [13]

Job characteristics	Description
Skill variety	Refers to the degree to which a job requires variety of activities, such as proficiency, specialization, knowledge and skills. As the skill variety of employee's increases, the diversity of their emotional display also increases.
Task identity	Refers to the degree to which a job requires completion of a whole job or a part of the whole job. Employees feel their jobs more meaningful when they can perform their job as a complete unit, rather than being responsible for some part of the job.
Task significance	Refers to the degree to which the job performed by individuals has a significant impact on the lives and works of other people both inside the organization and outside the organization. The individuals find their tasks meaningful when their tasks have an actual impact on the physical and psychological situation of others.
Autonomy	Refers to the degree to which the job provides freedom, independence, and discretionary authority to individuals while performing task. Higher the autonomy in job more is the reasonability [13].
Feedback	Refers to the degree to which a clear information on how effective the job performed by an individual is provided to the individual. Outcomes of job performance are given in a direct and indirect manner.

Morris & Feldman [14] suggested that "job autonomy reduces emotional dissonance and thereby decreases emotional labour of employees" [15]. Job autonomy reduces negative influences of emotional dissonance and increases subjective well being[16].

3.3 Organizational Characteristics

The organizational characteristics, as the antecedents of emotional labour, include:

- Organizational support system
- Social support

- Performance pressure
- Job satisfaction

"The organizational support system creates conducive job environment to workers where coworkers can mutually help each other, reducing the stress of the members" [17]. "Job satisfaction and burnout were found to mediate the relationship between emotional labor and work performance, further it was found that organizational support moderated the relationships between emotional labor, job satisfaction and burnout" [18]. "Job pressure and perceived lack of organizational support were directly related to post traumatic stress" [19].

Social support consists of collective support from supervisors, co-workers and family members, and refers to all such positive support obtained from interpersonal relationship. Schneider & Bowen [20] reported that "social support reduces the surface acting of emotional labour and support within the organization creates positive conditions". "The perception employees of a supportive working environment is associated to decrease stress and increase job satisfaction and team work" [21,22,23]. Survey data collected in a study by De Clercq, et al. [24] "among employees across various industries, contradiction showed that in felt and organizationally desired emotions hinder organizational belongingness, because they develop a belief that their organization does not value them".

4. EMOTIONAL DISSONANCE

"Hochschild asserted that emotional labour is a stressor that can be harmful for the psychological and physical well-being of employees. Her findings suggested that the need to manage emotions in work place may bring in contradiction between the emotions an employee feels and the emotions he/she has to display while working with customers. This discrepancy between required and true emotionsis referred to as Emotional dissonance"[25,5]. Thus, emotional dissonance is the conflict between real and displayed emotions [26].

Hochschild proposed two different approaches to reduce emotional dissonance, which are surface acting (outward behavior) and deep acting (inner feelings). "Surface acting focuses on outward behaviour and the Actor is not actually experiencing the displayed emotion, he or she is simply portraying the emotion for the audience to see and interpret. Deep acting, on the other hand, focuses on inner feelings and refers to attempts to internalize the required emotion so that the natural, unaffected display will be congruent with the role requirement. Studies showed that Surface acting results in negative emotional labor such as depersonalization, emotional exhaustion, or dissatisfaction and Deep acting results in positive emotional labor such as sincerity or a sense of fulfillment" [27]. "Further, surface acting and deep acting are, respectively, negatively and positively related to creativity" [28]. "That is, because while Deep acting is not only to create externally expressed emotion but to change even internal emotion in the direction of the emotional expression principle, Surface acting is only to make the visual emotional aspect correspond to the organizational emotional expression principle"

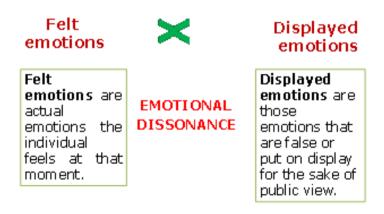


Fig. 2. Emotional dissonance

Since, Deep acting is not only to bring out emotions externally, but also to change internal emotion in accordance to the required emotional expression; it needs creativity in expressing emotion. Also surface acting is about creative overt expression of emotions in conformity to the organizational emotional expression principle.

5. MANAGEMENT OF EMOTIONS AT WORK PLACE

Many factors may contribute to the occurrence of Emotional labor at work place. The management of factors causing emotional labor is an important aspect ofwork places, particularly in service sector. Some of these factors are discussed below:

5.1 Dimensions of Emotion Work: Frequency, Variety, Duration and Intensity

"Dimensions of emotion required in work which includes frequency, duration, variety and intensity influence the outcome of emotion work" [14]. "The type of service rendered in job play a critical role in predicting effects on well-being of employees, positive emotion requirements were found consistently and positively linked to personal accomplishment" [29].

5.2 Self Selection

Some employees may willingly select jobs requiring management of emotion, such employees may more likely enjoy work requiring emotional display, and hence, experience positive consequences of emotion management. On the other hand, employees who did not self select the profession requiring management of emotion, perceive the control of emotional labour to be external (by organizations or by customers), and are more likely to experience emotional dissonance and hence burnout, due to emotion work.

5.3 Emotional Intelligence

Emotional intelligence consists of self awareness, self-regulation, motivation, social skills and empathy [30], is an important factor that may influence the occupational choice. "Emotional intelligence mediates the effort involved in emotion work and the perception of emotion work as positive or negative impact" [31]. "Success signifies the ability to overcome various life problems, and this ability has little to

do with Intellectual Intelligence (IQ), but is related to Emotional Intelligence (EQ)" [32].

5.4 Organizational Commitment

commitment "Organizational is the individual'spsychological attachment to the organization. Organizational commitmentmay be the basis behind how workers feel about their jobs, so that these workers would become more committed to their organizations. Studies suggest that there exist significant relationships between emotional labor levels and organizational commitment" [33,34]. The study of Sezen-Gultekin et al. [35] on "Mediating role of Organizational Commitment (OC) on the relationship between Emotional Labor (EL) and Work Engagement (WE) of Teachers provided evidence that OCof teachers can mediate the relationship between their EL and WE".

5.5 Perceived Job Autonomy

Erickson [36] found that "autonomy in the job tends to mitigate the harmful effects of emotional labor". Importance of autonomy was also highlighted by Lopez [37], who noted that "when the nursing home provided more autonomy to their health care providers, the employees perceived emotion work positively".

5.6 Social Support

"Another factor that mitigates the harmful effects of emotion labour is social support [5]. Montgomery et al. [38] also established that "work life balance moderated the relation between emotional labour and burnout". "Research findings indicate the mediating role of emotional labor in social support and well-being" [39,40].

5.7 Job Satisfaction

"Employees who feel positive about work have less emotional dissonance. This is because their natural feelings are typically in line with the expressions normally demanded by the frontline works. Research suggests that those with high job satisfaction perceive person-job attachment more and are likely to have positive moods and emotions while at work" [41].

5.8 Individual Factors

Individual factors like personality also presumably play a crucial role in choice of professions that entail emotion work [5,26].

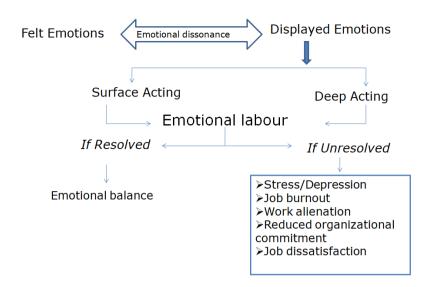


Fig. 3. Effects of Emotional labour on work performance

- · Better physical health
- Appropriate stress coping strategies
- Lower neuroticism
- Higher extraversion
- Positive self-concept
- Lower workaholic

6. EMOTIONAL LABOUR AND WORK PERFORMANCE

"In the workplace, emotional labour often indicates a high degree of stress and a perceived lack of control. When employees are required to regulate their emotions at work to match to the demands of the work environment, appropriate external emotional performance may be inconsistent with the employee's true inner feelings; the external and internal emotions are differentiated. This differentiation cannot be maintained for a long time, which leads to stress, emotional exhaustion and low performance" [42]. "Research studies show that surface acting was positively correlated with emotional exhaustion, while deep acting had no significant relation to emotional exhaustion" [43].

The relation of emotional labour and work performance is shown in Fig. 3.

7. CONCLUSION

The impact of emotions on an employee's performance during the workday is significant. Employees may find it difficult to keep up a helpful, compassionate demeanor when, on the inside, they may be struggling with difficult

personal or professional situations. This is reflected in emotional labor and emotional dissonance. If an employee's emotions get in the way of their work, it's a sign of their ability to deal with stress at work. This is known as emotional labor. When workers can't manage their emotions and their true feelings get in the way of their ability to do their jobs, it's known as emotional dissonance.

Organizations can identify workers who are having emotional dissonance and provide an outlet and training to help them deal with personal issues. This way, the employee will be able to perform on the job positively by solving personal issues.

8. FUTURE RESEARCHABLE AREAS IN EMOTIONAL LABOUR (EL)

- Research studies are concentrated in the affects of EL but very less work has been conducted on 'how to resolve EL'.
- ii. Research on quantitative analysis of EL permissible for different job types can be done.
- iii. Studies on gender differences in EL may be undertaken.

DISCLAIMER (ARTIFICIAL INTELLIGENCE)

Author(s) hereby declare that NO generative Al technologies such as Large Language Models (ChatGPT, COPILOT, etc) and text-to-image generators have been used during writing or editing of manuscripts.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

- 1. Godbout T. Employment Change and Sectoral Distribution in 10 Countries, 1970–90.' Monthly Labor Review. 1993;(116):3–20.
- 2. Yanna L, Shizhong Y,Zhijun L. Analysis of the Impact of Job Burnout on Quality and Economic Benefits of Enterprises. Journal of Economics, Management and Trade.2023;29(9):23–38.
- 3. Mann S. 'People-work': emotion management, stress and coping. British Journal of Guidance & Counselling. 2004;32(2):205-21.
- 4. IgoD,Totterdell P. Emotional labour and emotional exhaustion: Interpersonal and intrapersonal mechanisms. Work & Stress.2007;21(1):30-47.
- 5. Zapf D. Emotion work and psychological well-being A review of the literature and some conceptual considerations. Human Resource Management Review. 2002;12(2):237-268.
- 6. GabrielAS, Diefendorff JM,Grandey AA. The acceleration of emotional labor research: Navigating the past and steering toward the future. Personnel Psychology.2023;76(2):511-545.
- 7. HochschildA. The managed heart: Commercialization of human feeling. Berkeley: University of California Press; 1983.
- 8. Kruml SM, Geddes D. Catching fire without burning out: Is there an ideal way to perform emotional labor. Emotions in the workplace: Research, theory, and practice: 2000:177-188.
- Chu KHL. The effects of emotional labor on employee work outcomes. Virginia Polytechnic Institute and State University; 2002.
- Choi YG, Kim KS. A literature review of emotional labor and emotional labor strategies. Universal Journal of Management. 2015;3(7):283-290.
- 11. DavisMH. Empathy: A social psychological approach. Madison, WI: Brown & Benchmark; 1994.
- 12. Winkler AD, ZapfD, Kern M. Effects of emotion-rule dissonance on emotional exhaustion and physiological health: A

- two-wave study. Applied Psychology. 2024;73(2):540–564.
- 13. Hackman JR, Oldham GR. Development of the Job Diagnostic Survey. Journal of Applied Psychology.1975;60:159-170.
- Morris JA, Feldman DC. The dimensions, antecedents, and consequences of emotional labor. The Academy of Management Review.1996;21(4):986-1010.
- Wharton A. The affective consequences of service work. Managing emotions on the job. Work and Occupations.1993;20:205– 232.
- 16. Shi X, Gordon S, Tang CH. Momentary well-being matters: Daily fluctuations in hotel employees' turnover intention. Tourism
 Management. 2021;83:104212.
- 17. ThomasLT, Ganster DC. Impact of familysupportive work variables on work-family conflict and strain: A control perspective. Journal of applied psychology. 1995;80(1):6.
- 18. Chen Z, Sun H, Lam W, Hu Q, Huo Y, Zhong JA. Chinese hotel employees in the smiling masks: Roles of job satisfaction, burnout, and supervisory support in relationships between emotional labor and performance. The International Journal of Human Resource Management. 2012;23(4):826-845.
- 19. BirzeA, Regehr C, Paradis E, LeBlanc V, Einstein G. Perceived organizational support and emotional labour among communicators: police what organizational context tell us about stress?.International posttraumatic Archives of Occupational EnvironmentalHealth, 2022:95(2):425-435.
- 20. Schneider B, BowenDE. Employee and customer perceptions of service inbanks: Replication and extension. Journal of applied Psychology. 1985;70(3):423.
- 21. Cropanzano R, Howes JC, Grandey AA, Toth P. The relationship of organizational politics and support to work behaviors, attitudes, and stress. Journal of Organizational Behavior: The International Journal of Industrial, Occupational and Organizational Psychology and Behavior. 1997;18(2):159-180.
- 22. Eisenberger R, Cummings J, ArmeliS, LynchP. Perceived organizational support, discretionary treatment, and job satisfaction. Journal of Applied Psychology. 1997;82(5):812.

- 23. Howes JC., Cropanzano R, GrandeyAA, Mohler CJ. Who is supporting whom?: Quality team effectiveness and perceived organizational support. Journal of Quality Management.2000;5(2):207-223.
- 24. De Clercq D, Dayan M, Ng PY. When performance demands enable change: How employees can overcome emotional dissonance and organizational underappreciation. European Management Journal; 2023
- Zapf D, Vogt C, Seifert C, Mertini H, Isic A. Emotion work as a source of stress: The concept and development of an instrument. European Journal of Work and Organizational Psychology.1999;8(3):371-400.
- 26. Zapf D, Kern M, Tschan F, HolmanD, SemmerNK. Emotion work: A work psychology perspective. Annual Review of Organizational Psychology and Organizational Behavior.2021;8:139–172.
- 27. Grandey A. When the show must go on: Surface and deep acting as predictors of emotional exhaustion and service delivery. Academy of Management Journal. 2003;46(1):86–96.
- 28. HillNS, ZhangH, Zhang X, ZiweiY.The impact of surface and deep acting on employee creativity. Creativity Research Journal. 2020;32(3):287-298.
- 29. KernM, TrumpoldK, ZapfD. Emotion work as a source of employee well-and ill-being: The moderating role of service interaction type. *European* Journal of Work and Organizational Psychology. 2021;30(6):850-871.
- 30. Goleman D. What makes a leader. Organizational Influence Processes. 2003:82:229-241.
- 31. McQueen AC. Emotional intelligence in nursing work. Journal of advanced nursing. 2004;47(1):101-108.
- 32. UrazD,ArhanB. Improved Performance and Effectiveness through the development of Emotional Intelligence in the Workplace. Journal La Bisecoman. 2020;1(5):20-26.
- 33. Deliveli K,Kiral E. The relationship between emotional labor and organizational

- commitment. Educational Policy Analysis and Strategic Research. 2020;15(2):78-103
- 34. Akin U. Exploring the relationship between emotional labor and organizational commitment levels of teachers. Eurasian Journal of Educational Research. 2021:91:61-82.
- 35. Sezen-GultekinG, Bayrakcı M, Limonl. The mediating role of organizational commitment on the relationship between emotional labor and work engagement of teachers. Frontiers in psychology. 2021;12:648404.
- 36. EricksonRJ. When emotion is the product: Self, society, and (in) authenticity in a postmodern world. Washington State University; 1991.
- 37. Lopez SH. Emotional labor and organized emotional care: Conceptualizing nursing home care work. Work and Occupations. 2006;33(2):133-160.
- 38. Montgomery AJ, Panagopolou E, Wildt M,Meenks E. Work-family interference, emotional labor and burnout. Journal of Managerial Psychology. 2006;21(1):36-51.
- 39. Kwon MK, YoonSY. A study on the influence of emotional labor and social support on airline call centeragent burnout. Journal of Advanced Navigation Technology. 2011;15(5):808-822.
- Wu TJ, WangLY, GaoJY, Wei AP. Social support and well-being of Chinese special education teachers—An emotional labor perspective. International Journal of Environmental Research and Public Health. 2020;17(18):6884.
- 41. Fisher CD. Happiness at work. International Journal of Management Reviews. 2010;12(4):384-412.
- 42. ChenCC. Lan YL, ChiouSL, LinYC. The effect of emotional labor on the physical and mental health of health professionals: Emotional exhaustion has a mediating effect. In Healthcare.2022;11(1):104)
- 43. GoodwinRE, Groth M, FrenkelSJ. Relationships between emotional labor, job performance, and turnover. Journal of Vocational Behavior. 2011;79(2):538-548.

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