



# Challenge-hindrance stressors and service employees job outcomes

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## Abstract

Building on cognitive appraisal theory of stress, we examined the direct relationship between the emotional labor strategies of employees (i.e., surface and deep acting) and outcomes (i.e., psychological strain and creativity). In addition, we investigated the indirect relationship between emotional labor strategies and outcomes via job stressors (i.e., challenge and hindrance stressors). We collected time-lagged data from service sector employees in Italy and tested the data using path analysis. We found that surface acting predicted psychological strain and creativity, and the indirect relationship between surface acting and outcomes via hindrance stressor was significant. Whereas, deep acting predicted psychological strain but not creativity and the indirect relationship between deep acting and psychological strain via challenge stressor was significant. Our data failed to support the indirect association between deep acting and creativity. Our study highlighted that emotion regulation strategies of employees were related to challenge and hindrance stressors and thus underlines that employees should carefully manage their emotional displays at work. Implications and future research directions are discussed.

**Keywords** Surface acting · Deep acting · Challenge stressor · Hindrance stressor · Psychological strain · Creativity

## Introduction

Service employees are generally hired to perform their job roles creatively and effectively (Alice, 2012; 2013, Moin et al., 2020; 2021, Khan et al., 2022). However, organization

environment occasionally make performing the job roles difficult for such employees. For instance, job demands (e.g., extended work scope, massive workloads, time and situational constraints, and display rules) may result in high stress levels for workers (Antwi et al., 2019; Coelho et al., 2020; Espedido & Searle, 2021; Hon, 2013; Horan et al., 2020; Kern et al., 2021; Kern & Zapf, 2021; Meng et al., 2022; Raper & Brough, 2021; Taylor et al., 2020; Wilder et al., 2014). Service employees generally occupy unstructured positions, manage frequent customer interactions, and collect firsthand market knowledge, which implies that their creative potential should be incentivized (Coelho et al., 2020; Nguyen et al., 2022). Creativity is beneficial for service organizations, as it can promote novelty and client satisfaction and boost performance (Agnihotri et al., 2014; Anderson et al., 2014; Gong et al., 2012; Koh et al., 2019; Nguyen et al., 2022). Service employees face numerous stressors that can cause strain and are expected to be creative in customers handling and problems solving. A unique stressor experienced by service employees is the need to express themselves appropriately, that is, display rules, which can be performed either via deep acting or surface acting. To manage their emotional displays, employees are required to consciously align their internal expressions to

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feel basic job emotions (deep acting) or alter their external expressions (surface acting) regardless of their genuine emotions (Moin, 2018; Moin et al., 2020; 2021). Surface and deep acting enable employees to provide desired customer experiences, and both strategies entail different cognitive resource expenditure methods and psychological states when performing creative tasks (Geng et al., 2014).

To promote employees' creativity while addressing job demands, the management should ensure that employees are using proper emotion regulation strategies. Existing emotion regulation research investigating the link between emotion regulation strategies and creativity is scant (Geng et al., 2014). Furthermore, which emotional labor strategy is useful for creative tasks is not well understood. The stress-related literature suggests that work stressors as a psychological process could explain the influence of job contexts on creativity (Antwi et al., 2019; Hon & Chan, 2013; Hon et al., 2013) and psychological strain (e.g., Abbas & Raja 2019; Fay et al., 2019; Fisher et al., 2019; Lin et al., 2015). However, few studies investigated the influence of emotion regulation strategies via stressor mechanisms (Geng et al., 2014). To bridge this important research gap, our study examines the influence of emotion regulation strategies (i.e., surface and deep acting) on outcomes (i.e., creativity and psychological strain) via challenge and hindrance stressors and the direct relationship between emotion regulation strategies and outcomes. By addressing this important gap, we seek to present several noteworthy contributions to the emotional labor, creativity, and stress-related literature. First, we show how employees with different levels of emotional resources react differently to job stressors with regard to their creative performance and psychological strain. By testing the relationships between surface and deep acting and creativity and psychological strain, we seek to expand the findings on emotion regulation in the stress literature and respond to research calls to investigate the influence of emotion regulation on important job outcomes (Ashkanasy & Dorris, 2017; Geng et al., 2014; Grandey & Gabriel, 2015; Moin, 2018; Moin et al., 2020). Clarifying the effects of emotion regulation strategies on job outcomes is important, as it can help organizations implement emotional activities useful for work outcomes and stop practices that impair emotional behaviors.

Second, we seek to present a theory-driven model of the influence of emotional labor strategies by suggesting how employees' emotional resources interact with job demands to influence results. Also, we assess how the same emotional resource can either aid the positive influence or aggravate the undesirable influence of work demands based on the outcomes under investigation (i.e., creative performance or psychological strain). Lastly, we seek to increase understanding on the influence of emotion regulation strategies

on job stress by categorizing different forms of stressors generated through the unique cognitive appraisal of emotion regulation strategies.

Based on cognitive appraisal theory of stress (Lazarus & Folkman, 1984) and the emotional labor literature, we contend that different types of job stressors generated through different cognitive appraisals of emotional labor strategies can act as psychological mechanisms through which emotional labor can affect job outcomes. In this research, we also seek to examine whether employees' fulfillment of creativity benchmarks is achieved at the expense of increased psychological strain when encountering stressors (see Fig. 1). This study is the first to highlight the influence of not only emotional resources and job settings but also work outcomes.

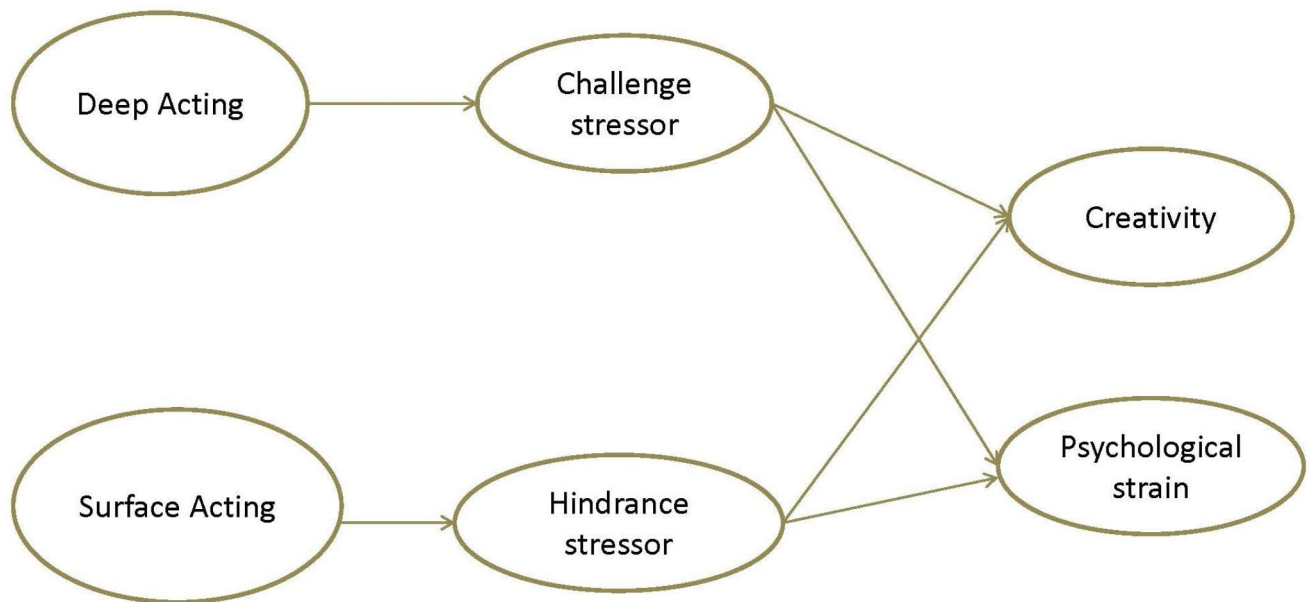
## Literature review and hypotheses

### Cognitive perspective and emotional labor

Deep acting refers to the modification or adjustment of a perception of a situation through cognitive reappraisal or memory before emotions are fully formed, whereas surface acting refers to the modification of a given emotion after it is experienced (Grandey, 2000). The cognitive perspective explains emotion regulation, considering people's evaluation of their surroundings and preferred strategies, the monitoring and alteration of outward expressions, and the role of cognitive mechanism in emotional labor. This perspective emphasizes the importance of cognitive mechanisms (e.g., appraisal, monitoring, thinking, and judging) during emotion regulation and was previously employed to analyze different emotion regulation patterns (Gross & Levenson, 1997; Groth et al., 2009; Richards & Gross, 2000).

Rooted in the cognitive approach (Lazarus & Folkman, 1984), response-focused emotions (surface acting) are less useful than antecedent-based emotions (deep acting) through usage of required cognitive reserves for several reasons. For example, response-focused strategy is employed without past reappraisal, occurs comparatively delayed in cognitive directive mechanism, and calls for the continuous observation (Gross & Levenson, 1997; Richards & Gross, 2000).

Two experimental studies found that the response-focused strategy (surface acting) uses added cognitive supplies than the antecedent-based strategy (deep acting), and the participants who completed the memory assignments after surface acting functioned considerably less worthwhile than those who completed the assignments following deep acting (Gross & Levenson, 1997; Richards & Gross, 2000). Moreover, Grandey (2000) noted that restraint and



**Fig. 1** A proposed model

amplification linked with emotion regulation can harm employees' cognitive productivity. Our research employs the cognitive perspective (Lazarus & Folkman, 1984) to examine the link between emotional labor strategies and outcomes by highlighting the importance of cognitive and psychological mechanisms as core components of emotion regulation and classifying the cognitive and psychological resources used in surface and deep acting, which may be available in creative assignments.

### Emotional labor and job stressors

Regardless of their internal feelings, employees are required to maintain socially acceptable emotions at work to provide satisfactory customers service, which may lead to job stressors owing to the conflict between the employees' abilities or available cognitive resources and job demands (Nath, 2011). Cognitive appraisal approach (Lazarus & Folkman, 1984) posits that individual's appraisal of work demands or stimuli results in two dissimilar forms of demands (i.e., challenging and hindering). Hindrance stressors include stressful demands that threaten goal attainment, such as role conflicts, role ambiguity, resources scarcity, and so on. By contrast, challenge stressors include stressful demands that assist in goal attainment or personal growth, such as workloads, job responsibilities, and tight deadlines (e.g., Abbas & Raja 2019; Fay et al., 2019; Fisher et al., 2019; Lin et al., 2015; Horan et al., 2020; Ma et al., 2021).

Accordingly, deep and surface acting can be considered as stressors, because both strategies involve the regulation of expressions based on display rules. However, their

regulatory mechanisms differ; hence, service employees appraise these regulatory strategies as different job stressors. Based on cognitive appraisal theory of stress (Lazarus & Folkman, 1984), we argue that deep acting enhances challenge stressors in view of their appraisal as challenging, as it is related to experiencing a strong sense of genuineness and favorable expressions and managing favorable associations with customers. Meanwhile, surface acting promotes hindrance stressors in view of their appraisal as hindering, owing to its effortful and depersonalized nature and association with dissatisfaction and distance from customers.

Surface acting is considered as a type of deception as it enables the actor to disguise or conceal his/her true emotions and display fake expressions. When an employee performs surface acting, he/she deviates from his/her true self, resulting in emotional exhaustion, depression, dissatisfaction, or reduced feelings of personal achievement (Brotheridge & Grandey, 2002; Grandey, 2000, 2003; Hochschild, 1983). Such mental processes are linked with and ultimately enhance hindering stressors. Moreover, a high frequency of surface acting is related to detached connections with customers (Brotheridge & Grandey, 2002), which may thwart service employees' goal achievement and personal growth prospects and induce stress. Similar to surface acting, deep acting is a stressful process requiring the regulation of emotions for job display. However, deep acting differs from surface acting as a job stressor owing to its end result, which is agreement between the true self and acted self. Moreover, deep acting is related to experiencing positive expressions, increased personal efficacy, and a strong sense of genuineness (Groth et al., 2009), which can increase challenge

stressors. In addition, the reappraisal of situations in deep acting motivates employees to be responsible for their service duties and establish favorable social connections with customers by understanding their needs (Allen et al., 2010). This high sense of responsibility guides service workers to achieve mastery in service situations, which may be challenging. Hence, we propose that deep acting increases challenge stressors, whereas surface acting increases hindrance stressors.

H1: *Employees' deep acting has a positive relationship with challenge stressors.*

H2: *Employees' surface acting has a positive relationship with hindrance stressors.*

### Emotional labor and job outcomes

The creation of original and notable ideas is defined as creativity (Amabile et al., 1996; Gong et al., 2009). Employees require adequate cognitive supplies to realize their creative potential and expand their field or creative skills to deal with customer complaints, provide reliable solutions, and suggest alternative or new methods (Amabile et al., 1996). Although employees can perform deep or surface acting to communicate required service expressions, based on the cognitive perspective, we argue that the two strategies use different cognitive mechanisms and may not be equally effective during service contact using available cognitive resources for creative tasks (Gross, 1998, 2009; Gross & Levenson, 1997) and may be differently related to creativity.

Surface acting occurs comparatively delayed in cognitive process, lacking the re-assessment of the environment. Employees fake external expressions without modifying their internal feelings and thus must monitor emotional signals continuously to change their expressions based on display requirements and repeat this process recurrently. The continuous monitoring of emotional signals, faking of outer reflection, and repression of authentic emotions cost service employees a large part of their cognitive resources, which can be used for skills enhancement to serve customers creatively. Without adequate cognitive resources, engaging in surface acting to enhance their skills and perform routine tasks creatively would be difficult for service employees. Richards & Gross (2000) found that regardless of customers' awareness of employees' emotional strategy, surface acting consumes a large part of cognitive resources and thus harms cognitive performance. Similarly, conservation of resources theory (Hobfoll, 1989, 2001) confirms that service employees' continuous checking and modification of expressions while engaging in surface acting cost them valuable cognitive resources. Hence, without previous reassessment of service environments or memories, surface acting competes

with creative duties for cognitive resources, thereby harming service workers' creativity.

In deep acting, workers' reappraisal of service contexts and regulation of external expressions involve modifying their internal feelings in the beginning. With this cognitive resource process, service employees need not continuously monitor or modify emotional signals repeatedly (Gross, 2009) and hence have adequate cognitive resources to enhance skills necessary to perform creative tasks successfully. Employees' utilization of deep acting generates positive emotions owing to the agreement between their internal feelings and displayed expressions. Moreover, employees become highly willing to extend sympathy and provide creative solutions to customers' problems. Grandey (2003) found that deep acting is related to favorable job outcomes owing to increased authentic favorable expressions and reduced unfavorable expressions, and one such favorable outcome is creativity.

Despite the dissimilar links between challenging and hindering demands and work results, both stressful job situations are positively related to strain in a sense that all stressful work situations undergo similar psychological processes (i.e., assessment and handling) requiring effort and leading to strain, such as nervousness and tiredness (e.g., Abbas & Raja 2019; Lin et al., 2015). Even challenge stressors, which are assessed as positive, would result in increased strain owing to increased effort related to the assessment and handling of stressful situations. Overall, we argue that challenge and hindrance stressors are positively related to strain and thus propose the following hypotheses:

H3: *Deep acting has a positive relationship with employees' (a) creativity and (b) psychological strain.*

H4: *Surface acting has a (a) negative relationship with employees' creativity and (b) positive relationship with psychological strain.*

### Job stressors as a mediator

When surface acting enhances workers' hindering stressors, they may not have a satisfactory understanding of how their job is related with customers' demands or the overall organizational goals of service performance. High-level hindrance stressors may make obtaining their desired skills and performing their duties successfully difficult for employees. Moreover, employees may think that current situations cannot be improved and problems cannot be resolved, thereby choosing a passive response, such as reducing efforts to improve a situation or displaying neglecting behaviors that can harm creativity. Coelho et al. (2011) determined that work stressors related to task uncertainty reduce creativity; hence, hindrance stressors generated by surface acting can reduce creativity. By contrast, in response to high-level

challenging stressors, employees will follow a proactive approach and take full responsibility for their job. In line with voice theory, employees exposed to challenge stressors tend to gain knowledge, transform and handle problems, and put substantial thought, time, and energy into important and existing tasks, thereby developing their skills and widening their knowledge of service needs, processes, and how to effectively solve customers' problems (Hon & Kim, 2007; Hon, 2012; Hon et al., 2013; Woodman et al., 1993). Hence, when exposed to challenge stressors, service workers enhance their creativity as a reflection of voiced behavior (Hon & Chan, 2013).

We argue that employees who use deep acting perceive themselves adequately skilled to fulfill challenging job demands and generate positive results from their management. Challenge stressors stimulate a high level of motivation, thereby resulting in high creative performance. By contrast, hindrance stressors make performing their job roles successfully difficult for workers and inhibit accomplishments and personal growth. Moreover, employees who use surface acting tend to feel that no reasonable amount of effort is sufficient to manage hindering job demands, thereby stimulating a low level of motivation and resulting in low creative performance. Anchored in the resource allocation view (Grawitch et al., 2010), when dealing with challenge stressors, employees who use deep acting are willing to employ increased resources to overcome job-related constraints and maintain their high performance benchmark to attain increased accomplishments, because they value accomplishment-related situations. For example, employees spend long hours on work assignments, work extra hours, and take few days off to manage the volume of their work. As overall individual resources are limited, employees' allocation approach can slowly drain their individual supply. According to conservation of resources theory, the consumption of individual resources results in feelings of stress. In addition, efforts necessary for managing job demands give rise to different types of strain, such as nervousness and tiredness (Hobfoll et al., 2018). Thus, by allocating time and energy to manage challenging situations, deep-acting employees exchange their wellbeing for high creativity. By contrast, employees who use surface acting tend to direct their resources to manage hindering situations (e.g., work politics or role ambiguity) and creativity benchmarks but are unable to effectively deal with situations or may feel that a situation is beyond their control. Hence, their level of creativity is susceptible to hindrance stressors, thereby making completing creative tasks successfully difficult for service employees. The literature suggested that job stressors may predict creativity (Van Dyne et al., 2002) and psychological strain (e.g., Abbas & Raja, 2019; Lin et al., 2015) and mediate the link between contextual variables and creative

performance (Antwi et al., 2019; Coelho et al., 2011; Hon & Chan, 2013; Hon et al., 2013). Accordingly, we propose that the influence of emotion regulation strategies on job outcomes is mediated by different work stressors and thus present the following hypotheses:

H5: *Challenge stressors mediate the positive relationship between employees' deep acting and (a) creativity and (b) psychological strain.*

H6: *Hindrance stressors mediate the relationship between employees' surface acting and outcomes, such that the mediated relationship between surface acting via hindrance stressors and (a) creativity is negative and (b) psychological strain is positive.*

## Methods

We collected the data in two waves at different time periods from 321 fulltime service sector (banks, hotels and telecom.) employees in Italy. The questionnaire was administered in Italian language following the standard translate-back-translate process (Brislin, 1980). Survey partaking was unpaid, and confidentiality and anonymity were ensured to all participants. A cover letter containing the details of this investigation's objectives and a self-reported questionnaire were distributed among the participants with the help of their HR departments. Data collection was performed in two steps to reduce the method biasness. At Time 1, we collected data for the emotional labor strategy, job stressor, and control variables. At Time 2, (approximately two weeks after Time 1), we collected data for the psychological strain and creativity variables. From a total of 600 distributed questionnaires, we received 321 (53.5% response rate) matched surveys using the unique identity assigned to each participant at the start of the survey. All the items were rated on a five-point scale (ranging from 1 = strongly disagree to 5 = strongly agree) unless specified otherwise.

## Measures

**Emotional labor** Surface and deep acting were measured with a 12-item emotional labor scale developed by Diefendorff et al. (2005). Sample item for surface and deep acting respectively are "I put on a 'mask' in order to display the emotions I need for the job" and "I work hard to feel the emotions that I need to show to customers".

**Job stressors** Challenge and hindrance stressors were measured with the scale developed by Cavanaugh et al. (2000). Sample item for the challenge and hindrance stressors respectively are "I often experience time pressure in doing



my work” and “I often have to go through a lot of red tape to solve customers’ problems”.

**Psychological strain** Psychological strain was measured with the 12-item General Health Questionnaire developed by Goldberg and Williams (1988), which was modified by Wang and Lin (2011). This scale was previously used to measure general psychological strain (e.g., Lin et al., 2013). A sample item is “I could not face up to problems.”

**Creativity** Creativity was measured with the seven-item scale developed by Gong et al. (2009). A sample item is “I often develop creative methods to solve customers’ problems.”

**Control variable** Affects were assessed via the 10-item short scale of positive and negative affect (Mackinnon et al., 1999). Representative items for positive and negative affect rated on a five-point scale (ranging from 1=never to 5=always) are “How inspired are you usually?” and “How afraid are you usually?” Furthermore, Harman’s test for CMB showed that no common factor was evident in the unrotated factor structure and first factor explaining less than 50% of the variance, thereby confirming that our research results are not affected by method bias (Bernerth & Aguinis, 2016; Podsakoff et al., 2003).

**Correlation**

We used SPSS to examine the correlations. As shown in Table 1, deep acting was positively associated with challenge stressors ( $r=.39, p<.01$ ) and psychological strain ( $r=.57, p<.01$ ), whereas surface acting was positively associated with hindrance stressors ( $r=.52, p<.01$ ) and psychological strain ( $r=.60, p<.01$ ). Moreover, surface acting was negatively associated with creativity ( $r=-.57, p<.01$ ). The results of the means, standard deviations, correlations, and reliabilities (all exceeding 0.7) are presented in Table 1.

**Results**

We conducted path analysis using Mplus to test the hypothesized model (Muthen & Muthen, 2012). The results of the analysis showed that deep acting has a positive association with challenge stressors ( $\beta=0.35, SE=0.05$ ), whereas surface acting has a positive association with hindrance stressors ( $\beta=0.57, SE=0.06$ ). Hence, H1 and H2 are supported. Further, challenge stressor has a positive association with only psychological strain ( $\beta=0.19, SE=0.07$ ), but not creativity ( $\beta=0.03, SE=0.08$ ). Whereas hindrance stressor has

**Table 1** Descriptive statistics, reliabilities, and intercorrelations

Variables	Mean	SD	1	2	3	4	5	6	7	8	9	10	11
1 Gender	1.57	0.50											
2 Age	34.00	8.60	-0.16**										
3 Tenure	6.12	3.79	-0.18**	0.57**									
4 surface acting	2.13	1.08	0.00	0.06	0.06	(0.96)							
5 deep acting	2.10	1.13	-0.03	-0.13*	-0.08	0.37**	(0.95)						
6 hindrance stressor	2.19	1.19	-0.02	0.03	-0.01	0.52**	0.42**	(0.95)					
7 challenge stressor	2.43	1.02	-0.04	0.04	0.06	0.54**	0.39**	0.62**	(0.93)				
8 psychological strain	2.03	1.12	0.02	0.02	-0.00	0.60**	0.57**	0.63**	0.60**	(0.99)			
9 creativity	3.55	1.17	-0.02	-0.02	-0.04	-0.57**	-0.28**	-0.50**	-0.39**	-0.62**	(0.97)		
10 negative affect	2.46	0.92	0.10	-0.09	-0.02	0.20**	0.23**	0.21**	0.23**	0.25**	-0.14*	(0.94)	
11 positive affect	3.80	0.85	-0.02	0.10	0.08	-0.03	-0.04	-0.10	-0.10	-0.19**	0.01	-0.13*	(0.91)

Note: \* $p < .05$ ; \*\* $p < .01$ ; (Two-tailed); figures in parentheses are alpha internal consistency reliabilities; for gender, 1 = male, 2 = female

**Table 2** Results of regression analysis

antecedents	challenge stressor		hindrance stressor		psychological strain		creativity	
	B	SE	B	SE	B	SE	B	SE
<i>Control variables:</i>								
positive affect					-0.17***	0.05	-0.03	0.07
negative affect					0.03	0.05	-0.00	0.06
<i>Independent variable:</i>								
deep acting	0.35***	0.05			0.29***	0.05	-0.01	0.06
surface acting			0.57***	0.06	0.27***	0.05	-0.47***	0.07
<i>Mediators:</i>								
challenge stressor					0.19**	0.07	0.03	0.08
hindrance stressor					0.23***	0.06	-0.28***	0.07

a positive relationship with psychological strain ( $\beta=0.23$ ,  $SE=0.06$ ), and a negative association with creativity ( $\beta = -0.28$ ,  $SE=0.07$ ). Regarding H3 (a,b) and H4 (a,b), the results showed that deep acting has a nonsignificant relationship with creativity ( $\beta = -0.01$ ,  $SE = 0.06$ ), but a positive relationship with psychological strain ( $\beta=0.29$ ,  $SE=0.05$ ). Hence, H3a is not supported, but H3b is supported. In addition, H4a and H4b are supported, that is, surface acting has a negative association with creativity ( $\beta = -0.47$ ,  $SE=0.07$ ), but a positive association with psychological strain ( $\beta=0.27$ ,  $SE=0.05$ ). Finally, we examined the indirect effects of emotional labor strategies on creativity and psychological strain. The results, with a bootstrapped 95% confidence interval (CI), showed that the indirect influence of deep acting through challenge stressors on creativity was ( $\beta=0.01$ , CI:  $-0.05$  to  $0.07$ ) and on psychological strain was ( $\beta=0.07$ , CI:  $0.02$  to  $0.13$ ). Hence, H5a was not supported, but H5b was supported. Regarding H6a and H6b, the results showed that the indirect influence of surface acting through hindrance stressors on creativity was ( $\beta = -0.16$ , CI:  $-0.26$  to  $-0.09$ ) and on psychological strain was ( $\beta=0.13$ , CI:  $0.07$  to  $0.22$ ). Hence, H6a and H6b were supported, and mediation was confirmed. The results of the path analysis are shown in Table 2.

Boot-strap-ping results	psychological strain				creativity			
	Effect	SE	LLCI	ULCI	Effect	SE	LLCI	ULCI
Indirect effect of deep acting via challenge stressor	0.07	0.03	0.02	0.13	0.01	0.03	-0.05	0.07
Indirect effect of surface acting via hindrance stressor	0.13	0.04	0.07	0.22	-0.16	0.04	-0.26	-0.09

Boot-strap-ping results	psychological strain				creativity			
	Effect	SE	LLCI	ULCI	Effect	SE	LLCI	ULCI
Indirect effect of deep acting via challenge stressor	0.07	0.03	0.02	0.13	0.01	0.03	-0.05	0.07
Indirect effect of surface acting via hindrance stressor	0.13	0.04	0.07	0.22	-0.16	0.04	-0.26	-0.09

Note: \* $p < .05$ ; \*\*\* $p < .001$ ; Unstandardized regression coefficients are shown; Bootstrap sample size=20,000; LLCI=Bias corrected lower limit confidence interval; ULCI=Bias corrected upper limit confidence interval

## Discussion

Using time-lagged data, our research showed that surface acting predicted hindrance stressors and outcomes (i.e., psychological strain and creativity), and the indirect relationship between surface acting and outcomes via hindrance stressors was significant. Whereas, deep acting predicted challenge stressors and psychological strain but not creativity, and the indirect relationship between deep acting and psychological strain via challenge stressors was also significant. However, our data failed to support the indirect relationship between deep acting and creativity.

Previous studies argued that emotional acting is an effortful activity (Grandey & Gabriel, 2015). Expanding this knowledge, we highlighted the unique cognitive appraisal process of emotional labor strategies and examined their relationship with job stressors. Consistent with cognitive appraisal theory (Lazarus & Folkman, 1984), our

results showed that deep acting fostered challenge stressors, whereas surface acting fostered hindrance stressors.

Moreover, we anticipated the link between job stressors and creativity, such that challenge stressors were helpful, whereas hindrance stressors were harmful to workers' creativity. However, our data failed to support the anticipated link between challenging demands and creativity, but supported the link between hindering demands and creativity. A possible reason for this finding is that hindering demands, such as workplace politics or task uncertainty, are, to a certain extent, beyond workers' control and thus difficult to manage. Although service workers may be inclined to exert increased efforts to manage stressful demands and achieve their creativity benchmark, they are unable to effectively deal with hindrance stressor situations. Hence, hindrance stressors directly decrease workers' creativity, as such stressors make accomplishing work assignments difficult for employees.

From the perspective of resource allocation (Grawitch et al., 2010), the positive relationship between deep acting and psychological strain may be because actors are likely to direct their individual resources toward achieving performance benchmarks, thereby resulting in an inadequate available resources to confront their vulnerability from psychological strain. This finding highlighted the downside of deep acting and suggested that deep actors' wellbeing can change severely, similar to that of surface actors. Our findings on the negative link between surface acting and creativity showed that surface acting may not be the best option for service workers' creative performance, as it consumes more cognitive resources available for performing creative duties than deep acting. In addition, consistent with cognitive appraisal theory (Lazarus & Folkman, 1984), our findings are in line with those of previous studies stating that surface acting is negatively associated with cognitive performance (Gross, 2009; Richards & Gross, 2000).

### Theoretical implications

Our research contributes to the emotion and stress-related literature in numerous ways. First, based on cognitive appraisal theory of stress (Lazarus & Folkman, 1984), we highlighted the unique cognitive appraisal process of emotional labor strategies and examined their relationship with job stressors. Our results showed that deep acting fostered challenging stressors, whereas surface acting fostered hindrance stressors. These results contribute to extant emotion research (Grandey & Gabriel, 2015).

Second, though prior research reported that challenge stressors promote, whereas hindrance stressors inhibit job performance (e.g., Abbas & Raja 2019; Lazarus & Folkman, 1984; Lin et al., 2015), by examining the stressors–outcomes

link, our findings showed that challenge stressors increased psychological strain but were not related to creativity, whereas hindrance stressors increased psychological strain but decreased creativity. These results expand stress-related research by elucidating the link between stressors and outcomes, which underlines the significance of considering the resource perspective in the stress literature.

Third, based on cognitive approach (Lazarus & Folkman, 1984), and supported by the resource allocation view and emotional labor literature, we posited that deep actors would be willing to direct resources toward achieving high performance benchmarks. Thus, people possibly left with inadequate supplies to alleviate the unfavorable influence of job demands on their wellbeing. In line with these arguments, we showed that deep acting aggravated employees' psychological strain. However, our data failed to show that deep acting assisted individuals' creative performance under stressful demands appraised as challenging. Whereas surface acting aggravated psychological strain but was negatively related to employees' creativity under hindrance stressors. We tested and attempted to expand the influence of emotional acting in the same model alongside psychological strain, creativity, and job stressors, thereby contributing to the emotions literature (Horan et al., 2020; Zapf et al., 2021).

### Practical implications

Our study also provides guidance for management practices. First, our research is related to appraisal of job stressors during service interactions. In some service organizations, skills for surface acting are trained for effective service delivery; thus, employee training for the favorable cognitive reappraisal of work situations and display of desired expressions should be encouraged to foster creativity (Brotheridge & Grandey, 2002). In addition, the management should extend frequent job support to foster expertise and psychological security and reduce hindrance stressors.

Second, as job demands were positively connected to psychological strain, firms should try their best to alleviate hindering demands. For instance, the management should enable workers to elucidate their job roles and handle employee relationships in a balanced manner.

Third, our findings showed that challenging demands were unrelated to creativity, whereas hindering demands were negatively related to creativity. This finding emphasized that bosses should reflect on the individual attributes of their employees when passing on assignments, workloads, or duties. The management should provide increased support and direction to employees engaged in emotional labor to enable them to achieve their creative performance



benchmark when dealing with important and stressful job situations.

Lastly, though our findings showed that workers who use surface acting experienced reduced creativity when facing hindering situations, we should carefully note that both emotional labor strategies were psychologically susceptible to increasing strain under both types of job demands (i.e., challenge and hindrance stressors). Hence, the management should be aware of employees' wellbeing, especially deep actors, and provide them with extra resources to lessen the possible harm to their wellbeing. For instance, worker support plans can be initiated to aid workers mentally disconnect from their job during off-work periods and undergo personal resource recovery.

### Limitations and future research

The shortcomings of this study provide avenues for future studies. First, we used a time-lagged design to help alleviate the problem associated with possible method bias (Podsakoff et al., 2003). Future studies should use a longitudinal design. Second, our study focused on an Italian sample; thus, the results may be culture specific. Future studies can replicate our research in other-culture samples. Another research direction can be to investigate the link between challenge stressors and creativity and determine whether emotional resources would have long-term influences. Increasing psychological strain may slowly drain supplies, leaving employees less likely to engage in their job, thereby decreasing work performance in the long run. Alternatively, high creativity over time can promote employees' individual resources, thereby shielding them against the unfavorable influence of job demands on strain (Lin et al., 2015). Thus, future research should examine how emotional resources affect stressors–strain links over time (Bakker & Sanz-Vergel, 2013; Clarke, 2012; Horan et al., 2020; Long et al., 2015; Ma et al., 2021; MR et al., 2015; Searle & Auton, 2015; Tadić et al., 2015; Wood & Michaelides, 2016; Zapf et al., 2021).

Furthermore, future research should emphasize processes underlying the influence of emotion regulation on work outcomes. Anchored in the resource allocation view (Grawitch et al., 2010) and conservation of resources theory (Hobfoll et al., 2018), the amount of resources that workers are willing to channel to manage demands can impact their job outcomes. We did not directly examine this process; thus, future research can expand our results by investigating whether job resource allotment aspects, such as time and energy effort approaches, could explain why emotional labor strategies influence the link between job demands and psychological strain and creative performance. In addition, future studies could examine whether outside sources, such

as support from managers and coworkers, will influence workers' resource allotment mechanism, thereby making emotional labor workers less susceptible to job demands concerning their wellbeing. By considering accumulated supplies at the same time, future studies can benefit from a clear picture of how workers respond to job demands.

Another promising research avenue would be to examine the impact of other individual attributes on the link between job demands and outcomes. Specifically, future studies could reflect on unique individual attributes that may shield the unfavorable influence of job demands on outcomes. Do individual attributes that make challenging/hindering demands less “bad” exist? For instance, as hindering demands frequently entail a high sense of ambiguity (Antwi et al., 2019), future studies can investigate whether workers low in uncertainty avoidance dimensions will be less susceptible to hindrance stressors.

### Conclusions

The main contribution of our research is our attempt to expand the direct and indirect influence of emotional labor on creativity and psychological strain via challenge and hindrance stressors. Furthermore, by uniquely identifying different cognitive appraisal and resource consumption approaches, this research contributes to extant emotion and stress-related research and provides directions for future studies.

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**Data Availability** The data which supports the findings of this study is available from corresponding author on request.

### Declarations

**Conflict of interest** None.

**Ethical statement and informed consent** The study was approved by the approval board of the corresponding author. Also informed consent was sought from all participants of this study.

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