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Lagged effect of daily surface acting on subsequent day's fatigue

Yucheng Zhang [a], Long Zhang[b], Hui Lei[b], Yumeng Yue[c] and Jingtao Zhu[d]

[a]School of Economics and Management, Hebei University of Technology, Tianjin, People's Republic of China; [b]School of Business Administration, Hunan University, Changsha, People's Republic of China; [c]School of Management, UNSW Business School, The University of New South Wales, Sydney, Australia; [d]Rotterdam School of Management, Erasmus University Rotterdam, Rotterdam, The Netherlands

ABSTRACT

The present research investigated the causal relationship between daily surface acting and fatigue at the within-person level. With a longitudinal approach – experience sampling method – based on 10 successive days' data, this study explored the lagged consequence of service employees' daily surface acting. The results of multilevel analysis showed that the daily performance of surface acting decreased service employees' subsequent day's emotional well-being in the form of increased fatigue. Further, sleep conditions were found to alleviate this detrimental effect. This within-person level investigation of the causal lagged effect of daily surface acting and its moderating contextual factor complements the current emotional labor literature that has overly focused on the between-person level. The theoretical and managerial implications were discussed.

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Surface acting; fatigue; emotional well-being; emotional labor; sleep characteristics

Introduction

The increasing demand for employees' regulated emotional display in the service industry has encouraged scholars to investigate emotional labor and its impacts (Grandey, 2000; Hochschild, 1983). Literature suggests that proper management of emotional labor, when engaged with autonomy and job involvement, would be beneficial for management, customers, and employees (Kiely, 2005). In contrast, mismanagement of emotional labor exposes the employees to the risk of being exploited and thus, leads to poor emotional well-being, such as fatigue (Constanti & Gibbs, 2005; Luong & Rogelberg, 2005).

Surface acting, as an important topic in emotional labor, defined as manipulating external displays without changing one's internal feelings (Diefendorff & Richard, 2003; Grandey, 2000), has captivated much scholarly attention. Research has shown that surface acting is consistently associated with negative individual and organizational outcomes. For example, surface acting has been demonstrated to predict negative individual outcomes, such as burnout, emotional exhaustion, and psychological strain, which in turn, are detrimental to organizational performance (see meta-analysis, Hülsheger & Schewe, 2011). One of the most widely recognized effects of surface acting is resource drain.

CONTACT Long Zhang lyon.long.zhang@gmail.com School of Business Administration, Hunan University, Changsha, People's Republic of China.

Studies based on the resource depletion perspective have suggested that the frequent performance of surface acting over a long period of time may threaten service employees' possession of valuable resources (Halbesleben, Neveu, Paustian-Underdahl, & Westman, 2014; Hobfoll, 1989), thus leading to decreased well-being (Brotheridge & Lee, 2002), low job satisfaction (Grandey, Fisk, & Steiner, 2005), and even high turnover rates (Goodwin, Groth, & Frenkel, 2011). However, most studies to date have been conducted at the between-person level and argued that the resource-draining effect results from employees' chronic engagement in surface acting. For instance, Brotheridge and Grandey (2002) argued that surface acting is positively related to emotional exhaustion and depersonalization at the between-person level. Similarly, Holman, Chissick, and Totterdell (2002) studied 347 customer service agents in two UK call centers and found that surface acting has a negative effect on employee well-being at the between-person level. This over-emphasis on surface acting's chronic effects leads to an interesting research question of whether the daily performance of surface acting will have a similar resource-draining effect on employees' daily emotional well-being. This study, therefore, aims to take some first steps to fill this void by investigating the lagged effects of daily surface acting using a longitudinal approach – experience sampling method (ESM). Based on the resource depletion perspective, we argue that daily surface acting leads to negative daily emotional well-being in the form of fatigue. We further propose that this negative effect can be mitigated through replenishing activities, such as sleep.

Overall, this research contributes to the literature in three ways. First, studying surface acting from a within-person perspective provides an alternative approach that complements the traditional between-person perspective research. Literature has shown that service employees' performance of surface acting varies from day to day (Judge, Woolf, & Hurst, 2009; Scott & Barnes, 2011; Scott, Barnes, & Wagner, 2012; Wagner, Barnes, & Scott, 2014), and this variation can account for momentary psychological changes in service employees (Judge et al., 2009; Scott & Barnes, 2011; Wagner et al., 2014). Given that surface acting is an activity that varies from moment to moment, previous studies, which claimed to investigate surface acting at the within-person level, actually operationalized it at the between-personal level, thus suffering from an 'ecological fallacy' (Blakely & Woodward, 2000). This misalignment in the level of analysis may result in misleading conclusions (Rousseau, 1985). Based on a multilevel analysis, the present study explores whether service employees' daily performance of surface acting can be resource draining by linking daily fluctuations in surface acting to employees' daily level of fatigue.

Second, by applying a longitudinal approach – ESM, this research examines the causal lagged effects of surface acting, and the contextual factors that moderate this effect. This endeavor continues and extends previous research, which used either experimental methods or cross-sectional data and only studied the immediate effect of surface acting. While lab studies have revealed that employees' emotional exhaustion level, which is a broad form of fatigue, increases immediately after they engage in surface acting, little attention has been paid to whether this effect of surface acting can be prolonged to influence employees' fatigue beyond the present episode (Goldberg & Grandey, 2007). The examination of this lagged effect of surface acting is important because such lagged effects can act as bridges linking the immediate reactions to long--term attitudes and stress (Dudenhöffer & Dormann, 2013). This study examines the lagged effects of service employees' daily performance of surface acting on their level of fatigue.

This approach is consistent with Beal, Weiss, Barros, and Macdermid's (2005) model of episodic behaviors, which suggests that workplace behaviors not only have immediate effects but also spillover to influence employees' subsequent lives.

Third, this study reveals an important boundary effect, sleep, between surface acting and its consequence. Thus, the study depicts a rich picture in explaining the surface acting–fatigue relationship. The article investigates the boundary condition under which the performance of surface acting is more or less likely to spillover and influence the subsequent day's fatigue. To address this issue, we suggest that employees' sleep can contribute to the resource-replenishing process, thus mitigating the spillover effect of surface acting on fatigue. In particular, we investigate the role of sleep quantity and sleep quality in moderating the surface acting–fatigue link. The research thus contributes to the current literature of sleep by further demonstrating the difference between sleep quantity and sleep quality, and uncovering sleep quantity's moderating function in the relationship between surface acting and fatigue in the context of service industry.

In additional to the above-mentioned theoretical contribution, the present research also aims to enlighten the managerial practice in service industries by reporting the deleterious effects of surface acting and, more importantly, how the negative consequences of surface acting could be intervened. Since the business success and employees' well-being in service industries have been argued to depend largely on the efficient management of emotional labor (Ashforth & Humphrey, 1993), our study provides a solid reference with which both management scholars and practitioners could improve employees' work conditions and potential business outcomes in service industries.

In the following sections, we first provide a theoretical framework based on a critical review of the relevant literature. We then propose and empirically test our hypotheses. Next, the method and results are presented, and the important implications for both research and practice are examined. Finally, limitations and directions for future research are discussed.

Theory and hypotheses

Surface acting, ego depletion model of self-regulation and the within-person perspective

The growth of the service sector has encouraged employees to engage in emotional labor in addition to physical and mental work (Groth, Hennig-Thurau, & Walsh, 2009; Hochschild, 1983). Emotional labor refers to an emotional regulation process in which employees change their external displays to match the organizational display requirements (Grandey, 2000; Hochschild, 1983). There are essentially two ways of accomplishing this process: employees can either change their external displays to meet the display requirements (i.e. surface acting), or change their internal feelings so that they become aligned with the emotions they ought to display (i.e. deep acting) (Hochschild, 1983; Kiely, 2005). In this paper, we mainly focus on surface acing as it has been identified as a more stressful form of emotional labor (Yoo & Arnold, 2014), and more detrimental compared with deep acting (see meta-analysis, Hülsheger & Schewe, 2011).

A widely applied perspective in investigating surface acting is the ego depletion model of self-regulation (Goodwin et al., 2011). This model assumes that an individual has fixed

resources to exert toward self-regulation (Baumeister, Bratslavsky, Muraven, & Tice, 1998). Using a physical analogue, self-regulation operates similarly to resources such as muscle or strength in that people will feel empty or fatigued if the required amount of self-regulation surpasses the amount that they have in their reservoir (which can also be called their 'will-power'), just as people feel exhausted after running a marathon (Muraven & Baumeister, 2000). For example, Webb and Sheeran (2003) tested the ego depletion model using a dual-task paradigm in which participants were asked to finish two consecutive unrelated tasks in an experiment. The first task differed (high self-control demanding versus low self-control demanding) based on which group the participants were assigned to, whereas the second task was the same for all participants in terms of the degree of self-control demand. The ego depletion theory predicts that people who perform the high self-control demanding task in the first round would perform worse in the second task. This is because the first task drew down their resources and left them little to use in the second task. A recent meta-analysis supported the ego depletion theory with presenting a strong effect of past self-regulation on the subsequent self-regulation effectiveness (Hagger, Wood, Stiff, & Chatzisarantis, 2010).

Surface acting has traditionally been treated as service employees' behavioral response to stable job demands (Glomb, Kammeyer-Mueller, & Rotundo, 2004; Zapf, 2002). Researchers have approached it from a between-person perspective and examined how employees differ from each other in their performance of surface acting (Hülsheger, Alberts, Feinholdt, & Lang, 2013; Philipp & Schüpbach, 2010). However, in addition to the stable job demands, the degree of discrepancy between the emotional expression specified by the display rules and the employees' actual emotional feelings also influences employees' performance of surface acting (Diefendorff & Gosserand, 2003). While the display rule component is stable, the other side of this equation, employees' actual emotions, varies over time. Employees' actual emotional feelings change as they encounter different types of workplace events, and therefore are highly fluctuating from moment to moment (Ashkanasy & Humphrey, 2011). Thus, the change of employees' display of surface acting largely depends on their changes in emotion (Beal, Trougakos, Weiss, & Green, 2006). In line with this idea, Gross (1998) model of emotional regulation also proposed that affective states play an important role in determining people's use of emotional regulation strategies. Such a within-person view of surface acting has been supported by recent studies (e.g. Judge et al., 2009; Scott et al., 2012; Scott & Barnes, 2011; Wagner et al., 2014), which have demonstrated that at least 40% of the variance in surface acting resides at the within-person level, meaning that service employees vary their usage of surface acting over time.

Daily surface acting and fatigue

According to the ego depletion theory, task demands can produce states of exhaustion because of resource depletion (Baumeister et al., 1998). Hence, as a regulatory resource demand, the performance of surface acting will deplete employees' resources (Gross, 1998; Richards & Gross, 2000). For example, Pugh, Groth, and Hennig-Thurau (2011) documented the correlation between surface acting and employees' well-being, including emotional exhaustion and job satisfaction. Inspired by this stream of research, the present study aims to explore daily surface acting's lagged influence on fatigue, which

is defined as 'a state of reduced alertness and energy due to depleted resources' (Gross et al., 2011, p. 654). Fatigue has been found to be one of the most salient reactions when individuals experience intense resource depletion (Gross et al., 2011). The performance of surface acting involves continuously monitoring one's state (Gross, 1998). Thus, it requires employees to exert relatively high levels of self-regulation for a certain period of time. Previous research has established that long-term performance of surface acting can lead to symptoms related to resource depletion, such as emotional exhaustion (Grandey, 2003), burnout (Zapf, Seifert, Schmutte, Mertini, & Holz, 2001), and stress (Pugliesi, 1999). However, relatively little attention has been paid to whether and how the daily performance of surface acting can have similar effects. Bearing in mind the similar regulatory demands that daily surface acting requires of people, daily surface acting is expected to deplete employees' daily resources in the form of fatigue, which is a temporary state that varies from day to day (Hu, Hsu, Lee, Chang, & Hsu, 2011).

Work–family research using ESM has illustrated that employees' surface acting at work can reduce their affective well-being at home (Sanz-Vergel, Rodríguez-Muñoz, Bakker, & Demerouti, 2012). This process is similar to that of the resource loss spiral described by the conservation of resource theory (Hobfoll, 1989), which suggests that individual's capacity to regulate behaviors is deposited, or conserved when the future loss of such capacity is at risk. In a similar vein, literature using longitudinal research design has shown that the use of surface acting has prolonged effects on emotional exhaustion (Hülsheger, Lang, & Maier, 2010). Thus, employees' performance of surface acting on a certain day may influence their level of fatigue on the next day due to the dysfunctional psychological state that it can cause (Rosenthal, Wilson, & Futch, 2009). Therefore, this paper argues that employees' daily surface acting can influence their subsequent day's fatigue. In summary, we hypothesize that service employees' daily surface acting will increase the level of fatigue at work, and this effect will be prolonged to the next day. Thus, the following hypothesis is proposed:

Hypothesis 1: Daily surface acting is positively related to the subsequently day's fatigue.

Moderating role of sleep quantity and quality

The state of resource depletion usually does not last long if people have opportunities to replenish and to recover. Routine activities such as positive mood experiences (Tice, Baumeister, Shmueli, & Muraven, 2007), the intake of glucose (Denson, Hippel, Kemp, & Teo, 2010; Gailliot et al., 2007), high-quality sleep (Diestel, Rivkin, & Schmidt, 2015; Lanaj, Johnson, & Barnes, 2014; Sonnentag, Binnewies, & Mojza, 2008; Wagner, Barnes, Lim, & Ferris, 2012), and simply taking a break (Trougakos, Hideg, Cheng, & Beal, 2014) carry replenishing functions that help people recover from resource depletion. Building on these ideas, this study focuses on the function of sleep in helping people restore themselves from resource depletion.

Sleep is an important activity for people to replenish after resource depletion. Psychology and physiology research has shown that one night's loss of sleep can impair executive functioning, which in turn harms people's implementation of self-regulation (Nilsson et al., 2005). A high-quality night's sleep, on the other hand, can help people recover from a state of resource depletion (Lanaj et al., 2014). Literature has shown that good sleep is

significantly related to fewer resource depletion symptoms, including less unethical conduct (Barnes, Schaubroeck, Huth, & Ghumman, 2011), better cognitive performance (Collins, 1977), less cyber loafing (Wagner et al., 2012), and more innovative thinking (Harrison & Horne, 1999). Based on the replenishing function of sleep, we expect sleep to have a similar function in mitigating the resource depletion effects caused by the performance of daily surface acting.

Sleep can be categorized into sleep quantity and sleep quality, which are two independent constructs (Barnes, 2012). A person can sleep for a long time with poor quality, such as a long sleep that is frequently punctuated by awakenings. In contrast, a person can also have a short but high-quality sleep. Furthermore, empirical studies have shown that sleep quantity and sleep quality are weakly correlated (Barnes et al., 2011; Barnes, Lucianetti, Bhave, & Christian, 2014).

Sleep quantity indicates the amount of time that people spend on sleep (Barnes, 2012). Employees with long sleep hours can have sufficient time to recover the resources that are depleted by daily surface acting. The length of sleep indicates how long employees have to restore their energy (Foster & Ren, 2015). Depleted resources can be sufficiently supplemented when employees have sufficient time to replenish (Kiely, 2005). Thus, the effects of daily surface acting on the subsequent day's fatigue could be weakened. In contrast, employees with short sleep hours have limited time to restore their resources. Hence, these employees would accumulatively lose their resources, which is expected to strengthen the effects of daily surface acting on the next day's fatigue. Therefore, we hypothesize the following:

> Hypothesis 2: Sleep quantity moderates the effect of daily surface acting on the subsequent day's fatigue such that the relationship is weaker when employees' sleeping hours are long rather than short.

Sleep quality, on the other hand, indicates the quality of falling asleep, staying asleep, and the number of awakenings experienced during the night (Barnes, 2012). Research has shown that sleep quality has parallel additive effects with sleep quantity (Barnes et al., 2011). Further, both sleep quantity and sleep quality have similar nomological networks (Barnes, 2012; Brunetto, Shacklock, Teo, & Farr-Wharton, 2014). Thereby, we expect that sleep quality has a consistent moderating effect with sleep quantity on the relationship between daily surface acting and fatigue. Employees who have high sleep quality have high efficiency in resource restoration. Thus, when they experience resource depletion, they can recover quickly. On the contrary, for employees who have poor sleep quality, the time costs of the resource restoration process will increase. As a result, those employees will experience continuing resource depletion with less recovering, which in turn could strengthen the negative effect of daily surface acting on fatigue. Therefore, the third hypothesis concerns the moderating role of sleep quality on the relationship between daily surface acting and the subsequent day's fatigue:

> Hypothesis 3: Sleep quality moderates the effect of daily surface acting on the subsequent day's fatigue such that the relationship is weaker when employees have high sleep quality rather than low.

Method

Participants and procedure

A longitudinal approach – ESM was adopted based on 10 successive days of data on 56 sales representatives from a retailer of electronic applications in China. An announcement of the study, together with a letter assuring confidentiality and voluntary participation, were distributed to the sales representatives by the human resources (HR) department in the participating company. We did not start the distribution of our surveys until all potential participants indicated whether they were interested in participating. Ultimately, one employee failed to complete any survey, making the final sample size 55. Before starting distributing the survey, we clearly claimed that we are independent researchers who have no conflict of interests with the participants or their stakeholders. The confidentiality and anonymity were guaranteed to the participants.

The sales representatives in our investigation are sales clerks working in a certain market segment who are trying to effectively sell certain brands of electronic applications to customers. Facing substantial competition from online shopping platforms such as Taobao and eBay, traditional retailers are increasingly emphasizing the customer's shopping experience improvement (Rigby, 2011). The data collection process comprised two phases. First, participants completed a questionnaire (called the 'initial measurement') on their demographic variables. Approximately one week after the first phase, two surveys (i.e. a 'morning measure' and an 'evening measure') per day were conducted for 10 successive days. Before the start of work, every participant who went to work was asked to complete a survey (called the 'morning measure') to report their current level of fatigue and the quantity and quality of the previous night's sleep. At the end of each day, the participants were asked to complete another survey (called the 'evening measure'), right after they finish their daily work, to report their performance of surface acting during the day. ESM studies in both Western countries and China have demonstrated that materialistic incentive is an effective tool for guaranteeing data quality, as completing ESM survey could be burdensome for the participants (Beal, Trougakos, Weiss, & Dalal, 2013; Wang, Liao, Zhan, & Shi, 2011). Especially, scholars found that financial incentive is negatively associated with drop-out rate (Frick, Bächtiger, & Reips, 2001). Thus, all of our participants received 100 Chinese Yuan (equivalent to approximately 16.5 US dollars) after they completed the surveys of this study.

One aspect worth noting is that because we intended to test the lagged effects, data for consecutive two days were necessary. Consequently, the maximum number of cases each person could provide was 10 (because the 'morning measure' of the first day and the 'evening measure' of the last day cannot be paired). Furthermore, because each participant had their own shifts, we also had to delete data for days that followed or were preceded by days off. After cleaning the data, the final useful data set contains 435 paired cases, meaning that each person provided 8.1 cases on average.

Measurements

In this section, we first introduced the details of all measurements in our model, including surface acting, fatigue, and sleep quantity and quality. We then explained the control variables included in our analysis. Lastly, we clarified the survey design procedure.

Surface acting

We measured surface acting using the scale from Brotheridge and Lee (2003) and Judge et al. (2009) every evening right after the participants finished their work. The response options range from 1 (strongly disagree) to 5 (strongly agree). Employees were asked to indicate 'During today's work, how often have you felt or behaved in the way that is described below?' based on three items. One sample item was 'I just pretended to have the emotions I needed to display to this customer.'

Fatigue

Fatigue was measured using the scale from Gross et al. (2011). The participants rated five adjectives ('spent', 'exhausted', 'in need of recovery', 'rested', and 'recuperated') each day right before they started to work. The response options range from 1 (strongly disagree) to 5 (strongly agree), indicating how well each adjective represented their momentary state.

Sleep quality and quantity

Sleep quality was measured using the same scale used by Barnes et al. (2011), which ranges from 1 (strongly disagree) to 5 (strongly agree). Each day before the employees started their work, they were asked to indicate how well the descriptions fit their previous night's sleep. The items included 'Had trouble falling asleep' and 'Woke up after your usual amount of sleep'. The items were reverse coded to indicate the quality of sleep. Sleep quantity was calculated by asking employees what time they went to bed the day before and what time they got up in the morning.

Control variables

At the between-person level, based on the extant surface acting and ego depletion research, we controlled for two demographic variables – age and work tenure (Wagner et al., 2012). At the within-person level, following previous research we controlled for employees' fatigue on the previous day as we intended to examine the lagged effect (Hammer, Neal, Newsom, Brockwood, & Colton, 2005; Hülsheger et al., 2010).

Survey design

To maintain the psychometric properties of the measurement of all latent variables, we followed the translation–back-translation method proposed by Brislin (1970). We chose the well-established scale from previous research to guarantee the quality of the measures. Especially, we carefully took the specificity of our research context and research question into account. Instead of applying the traditional ESM approach, which collects data once a day, our study included both morning and evening measures. We did not use a larger frame than one day because we used sleep as the moderator and normally people sleep once per day. The 'morning measure' was conducted right before the participants started their work to collect data about their state of 'fatigue' at the beginning of the n day, and the last night's 'sleep quantity and quality' ($n-1$ day's sleep quantity and quality). The 'evening measure' was conducted right after the participants finished their work to collect data about their 'surface acting' during the day (n day's surface acting), which is used to predict the next day's 'fatigue' ($n+1$ day's fatigue). This way, we could control for the employees' prior states of fatigue (n

day's fatigue), and therefore had stronger evidence about the causality of the relationship between daily surface acting and the subsequent days' fatigue. A bilingual Ph.D. student who specializes in organizational behavior was hired for the initial translation from English to Chinese. The Chinese survey was then translated back into English by a Chinese postgraduate student majoring in English. Differences between the original version and the back-translation version were discussed between the two translators and the authors of this article to reach consensus. All latent variables in our model are continuous variable in nature.

Analytical strategies

Given the hierarchical nature of our data (the daily level represents level 1, while the between-person level represents level 2), we used multilevel modeling to estimate all hypotheses in our model. We estimated all coefficients using the multilevel package in R. More specifically, all daily measured variables were analyzed based on their group means rather than on their grand means. Adopting this method of centering can ensure that our within-individual effects were not confounded by any possible differences among the individuals in the study (Dimotakis, Scott, & Koopman, 2011).

Results

Means, standard deviations, reliabilities, and zero-order correlations of all variables are shown in Table 1.

To test Hypothesis 1, we first regressed day $t+1$'s fatigue before work on day t's surface acting. Further, to rule out the possibility of continuity of fatigue across days, we controlled for day t's fatigue before work. As shown by Model 1 in Table 2, day t's surface acting has a significant, positive effect on day $t+1$'s fatigue before work ($b = 0.12$, $p < .05$) after controlling for day t's fatigue before work. Thus, Hypothesis 1 was supported.

To test Hypotheses 2 and 3, we added sleep quality and sleep quantity as well as their respective interaction terms with surface acting into our model. For Hypothesis 2, as shown by Model 2 in Table 2, the interaction between day t's surface acting and sleep quantity has a significant, negative effect on day $t+1$'s fatigue ($b = -0.13$, $p < .05$). A *post hoc* simple slope analysis revealed that the effect of daily surface acting on fatigue

Table 1. Descriptive statistics, correlations, and reliabilities.

	Mean	SD	1	2	3	4	5	6
1. Age	38.8	9.32	–	.33*	.06	.04	.06	.15*
2. Gender	25.02	17.60		–	−.11*	.05	−.06	−.02
3. Surface acting	1.97	0.97			(.85)	.24**	.43**	.08
4. Fatigue	2.32	0.82			.12*	(.91)	.32**	.07
5. Sleep quality	3.00	0.71			−.04	−.09*	(.86)	.01
6. Sleep quantity	8.16	1.39			.04	−.01	.06	–

Notes: Correlation coefficients above the main diagonal reflect correlations at between-person level, while coefficients below the main diagonal reflect correlations at the within-person level; numbers appeared in the main diagonal reflect Cronbach's α for each variable.

*$p < .05$. **$p < .01$. ***$p < .001$, (two-tailed).

Table 2. Result of multilevel regression.

	Day $t+1$ fatigue Model 1	Day $t+1$ fatigue Model 2	Day $t+1$ fatigue Model 3
Between-person effects			
Age	0.06 (0.02)	0.06 (0.02)	0.06 (0.02)
Tenure	0.09 (0.05)	0.09 (0.05)	0.09 (0.05)
Within-person effects			
Day t Fatigue	0.05 (0.06)	0.05 (0.06)	0.05 (0.06)
Day t Surface acting	0.12* (0.06)	0.11* (0.06)	0.12* (0.06)
Day t Sleep quality			−0.04 (0.08)
Day t Sleep quantity		0.01 (0.03)	
Day t Surface acting * Sleep quality			−0.04 (0.20)
Day t Surface acting * Sleep quantity		−0.13* (0.07)	

*$p < .05$. **$p < .01$. ***$p < .001$, (two-tailed).

remains high when sleep quantity is low (simple slope = 0.25, $z = 2.71$, $p < .01$) yet becomes non-significant when sleep quantity is high (simple slope = −0.01, $z = -0.15$, n.s.). Hence, Hypothesis 2 was supported. To better demonstrate this interaction term, we plotted it following the approach taken by Aiken, West, and Reno (1991) (see Figure 1). For Hypothesis 3, as shown by Model 3 in Table 2, the interaction effect between day t's surface acting and sleep quality on day $t+1$'s fatigue was negative but insignificant ($b = -0.04$, $p > .05$). Thus, Hypothesis 3 was not supported.

Discussion

Using a longitudinal approach, the present study advanced the understanding of the causal relationship between daily surface acting and the subsequent day's fatigue. It demonstrated the resource depletion consequences caused by daily surface acting in its lagged form and its boundary condition, sleep, which alleviates this deleterious consequence. In the consequential sections, we discuss the theoretical and managerial implications of our findings.

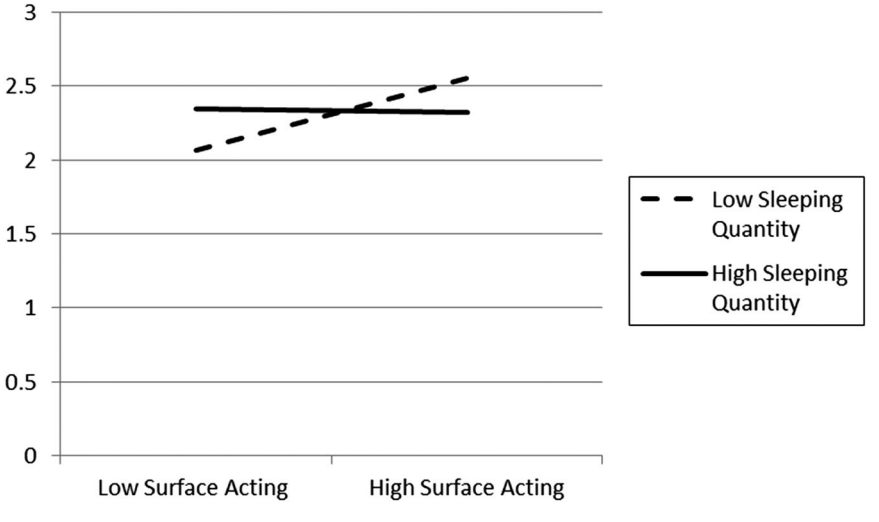

Figure 1 . The interaction effect of surface acting and sleep quantity on fatigue.

Theoretical implications

Our findings have three primary theoretical implications for the extant literature. First, we applied a within-person perspective to investigate the consequences of daily surface acting. Employees' attempts to regulate their emotions through surface acting are often associated with various negative organizational and customer outcomes (Hülsheger & Schewe, 2011; Mesmer-Magnus, Dechurch, & Wax, 2012). Unlike the traditional cross-sectional studies, which treat emotional labor as stable over time, recent literature has started to investigate the intra-individual variance in surface acting and has revealed that daily fluctuations of surface acting have salient influences on employees' momentary states (Judge et al., 2009; Scott et al., 2012; Scott & Barnes, 2011; Wagner et al., 2014). In line with this trend, we found a lagged effect of daily performance of surface acting based on a longitudinal approach – ESM. This finding complements the current emotional labor literature by demonstrating the lagged resource depletion consequences resulted from daily surface acting. Our results challenges and extends the traditional view on surface acting, which argued that 'surface acting had no relevant long-term effect on emotional exhaustion and dedication' (Philipp & Schüpbach, 2010, p. 501). What we found in the research, yet, revealed that daily performance of surface acting has a negative lagged effect on fatigue. It may be interpreted as the boundary condition of different contexts and industries. We suggest that this finding of daily surface acting's detrimental lagged consequence contributes to the investigation of emotional labor in the service industry, as it implies how service industry is unique in emotional labor's influence. Surface acting, as a construct with high daily variance, researching it through a within-person perspective provides a valid and novel approach to the existing literature-it puts new wine into an old bottle.

Second, adopting a longitudinal approach (ESM) to investigate surface acting and its consequence, this study advances our understanding of the causal relationship between daily surface acting and the subsequent day's fatigue. We examined the lagged effect of employees' daily surface acting by using ESM and longitudinal data, which is a more robust approach in examining surface acting's causal effects compared with the previous cross-sectional studies. In addition, by controlling for the service employees' previous state (i.e. the previous day's fatigue), we have stronger evidence that the variance in fatigue is caused by the daily surface acting and the interaction term between surface acting and sleep quantity. For the investigation of the lagged effects, while previous research has mainly used experimental approach, which is problematic in providing robust external validity (Goldberg & Grandey, 2007; Richards & Gross, 2000), our research adopted a survey research design to establish the external validity of daily surface acting's lagged effect. Furthermore, examining the lagged effects, which take time to measure, can allow researchers and managers to develop possible intervening techniques to buffer the detrimental effects of surface acting (Dudenhöffer & Dormann, 2013). In the later section, we discuss that it is feasible for managers to implement some HR practices to alleviate the negative effects of daily surface acting.

Third, by revealing sleep quantity as a moderator in the relationship between employees' daily surface acting and the subsequent day's fatigue, this research explores an important contextual factor in this relationship. Therefore, the study provides a clearer and more holistic picture of how employees' sleep quantity influences the effects of the subsequent day's fatigue caused by their daily surface acting. In addition, by differentiating between

sleep quantity and sleep quality, this study clarifies a common misunderstanding that sleep quantity and quality are connected, which is in line with Barnes (2012) argument that sleep quantity and quality are two different and independent constructs. Our results also support the restoring function of sleep quantity (Lanaj et al., 2014). We found that employees who sleep for longer hours can better mitigate the negative effects of surface acting on fatigue. However, we did not find a similar moderation effect of sleep quality. Such a pattern confirms and extends Barnes (2012) work on sleep and self-regulation, and thus advances the understanding of sleep's function. Specifically, while partly based on a lemma of the 'parallel additive effects' of sleep quantity and quality (p. 236), Barnes (2012) made general theoretical propositions about direct consequences of sleep quantity and quality's parallel effects, our study empirically tested the distinct moderating effects between sleep quantity and quality in the service industry. Our findings suggest that in the context of emotional labor in the service industry, the impacts of sleep quantity and quality on employee outcomes may function through different mechanisms or may depend on other factors. Sleep quantity indicates whether people have the opportunity to restore their resources, whereas sleep quality indicates whether people can efficiently restore their resources (Pilcher, Ginter, & Sadowsky, 1997). The length of the sleep moderates the negative effects of surface acting, even when the sleep is not deep. This finding implies that sleep quantity may have a 'placebo effect' in mitigating the service employees' fatigue caused by surface acting (Shapiro & Morris, 1978).

Managerial implications

The findings from this article have two important practical implications for management. First, this study revealed that surface acting negatively impacts employees' emotional well-being in the form of fatigue. Therefore, we recommend that organizations should educate their front-line managers about the negative effects of surface acting, so that the front-line managers can make informed decisions in managing service workers. Front-line managers in service industries are advised to remind their service employees of the importance of balancing between surface acting and deep acting, which has been shown as less psychologically harmful to service quality (Grandey, 2003). Meanwhile, organizations may have underestimated the detrimental effects of surface acting on employees' well-being and overestimated its positive effects on work performance. Precedent studies have demonstrated that surface acting might be negatively associated with work performance (Chen et al., 2012; Hülsheger & Schewe, 2011). We therefore suggest managers to refrain from simply focusing on surface acting techniques to encouraging employees to deliver customer service with authenticity and value of customer orientation.

Second, the examination of the boundary effects in the relationship between daily surface acting and its consequence provides possible intervention techniques for managers to mitigate the negative effects caused by daily surface acting. The results show that sleep quantity is a significant contextual factor that alleviates the detrimental effects produced by daily surface acting, which offers important implications to HR practices. Providing time and facilities, such as staff rest rooms, to encourage employees to take a small nap during the lunch break would mitigate the fatigue caused by daily surface acting. For example, organizations usually give employees an approximately one hour lunch break (Trougakos et al., 2014). In the Chinese banking industry, due to the

demanding emotional labor, some banks provide a relatively long lunch break (around two hours) and staff rest rooms for employees to take a small nap after lunch. In fact, in some places professional power nap center is created to provide employees with the facility to take a nap during the work (Santos-Silva, Jankavski, & Lorenzi-Filho, 2016). These practices are valuable to both Western and Eastern organizations in the service industries. Additionally, managers should educate the service workers about the importance of obtaining a reasonable quantity of sleep so that they understand the function of sleep quantity in alleviating the detrimental effects caused by daily surface acting and behave accordingly. Further, we recommend organizations to implement scientific shift plans to ensure service employees to take necessary and reasonable sleep during the night. Finally, organizations are advised to enforce strict policies to control overtime work, especially in organizations where incentives are given based on the time commitment, to avoid the deliberate extension of working hours by employees pursuing higher monetary incentives.

Limitations and avenues for future research

By using ESM and controlling for possible confounding factors, our results strongly supported the proposed theoretical model. However, this research also suffers from two limitations. First, it is important to examine both sensitization and satiation effects when testing lagged models (Wickham & Knee, 2013). Sensitization and satiation effects represent the extent to which events that occurred on the previous day change the way that events that occur on the subsequent days are experienced. Sensitization effects indicate that what happened yesterday can strengthen people's reaction to today's events, while satiation effects indicate that what happened yesterday may attenuate that reaction. Therefore, incidences of workplace events, such as customer mistreatment (Wang et al., 2011), coworker conflict (Harris, Harvey, & Booth, 2010), and abusive supervision (Tepper, 2000), may strengthen or attenuate employees' resource depletion symptoms from surface acting in the immediate future. Thus, future research could benefit by incorporating measures related to these workplace events.

Second, because our data were collected from a single company in China, there might be problems with the generalizability of the results. While most emotional labor research is conducted in hospitals (e.g. Grandey, Foo, Groth, & Goodwin, 2012) and call centers (e.g. Grandey, Dickter, & Sin, 2004), our sample represents a type of job that has received little attention. Thus, it is important for future research to test our model in other 'emotional labor' jobs. In addition, although our research is not limited to a specific cultural context, the cultural background of our sample (i.e. China) may still have some influence on our results. Given that China is characterized as a high *mianzi* (face value) country where people do not usually express authentic emotion, employees might experience lower stress from surface acting. Therefore, we suggest that future studies replicate our study in other countries such as the USA or conduct further cross-cultural research that examines the boundary conditions of cultures on surface acting.

Conclusion

Using a longitudinal approach with an ESM, this study explored the causal consequence of service employee's daily surface acting and its boundary condition. Our results suggested

that service employees' performance of daily surface acting increases their next day's fatigue, and this relationship is mitigated by sleep quantity. While previous literature over-emphasized the chronic effects of surface acting at the between-person level, this within-person level research investigated the lagged effect of the daily performance of surface acting and linking the immediate reactions to longer term attitudes and stress. Further, the study contributes to our knowledge of the causal relationship between daily surface acting's and the subsequent day's fatigue through a longitudinal approach. Finally, it identified sleep quantity as a contextual factor that moderates this relationship. Taking together, this research advances the understanding of the lagged effect of emotional labors' daily surface acting in the context of service industry.

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ORCID

Yucheng Zhang http://orcid.org/0000-0001-9435-6734

References

Aiken, L. S., West, S. G., & Reno, R. R. (1991). *Multiple regression: Testing and interpreting interactions*. Thousand Oaks: Sage.

Ashforth, B. E., & Humphrey, R. H. (1993). Emotional labor in service roles: The influence of identity. *Academy of Management Review*, *18*(1), 88–115.

Ashkanasy, N. M., & Humphrey, R. H. (2011). Current emotion research in organizational behavior. *Emotion Review*, *3*(2), 214–224.

Barnes, C., Lucianetti, L., Bhave, D., & Christian, M. (2014). You wouldn't like me when I'm sleepy: Leader sleep, daily abusive supervision, and work unit engagement. *Academy of Management Journal*, *58*, 1419–1437.

Barnes, C. M. (2012). Working in our sleep: Sleep and self-regulation in organizations. *Organizational Psychology Review*, *2*(3), 234–257.

Barnes, C. M., Schaubroeck, J., Huth, M., & Ghumman, S. (2011). Lack of sleep and unethical conduct. *Organizational Behavior and Human Decision Processes*, *115*(2), 169–180.

Baumeister, R. F., Bratslavsky, E., Muraven, M., & Tice, D. M. (1998). Ego depletion: Is the active self a limited resource? *Journal of Personality and Social Psychology*, *74*(5), 1252–1265.

Beal, D. J., Trougakos, J. P., Weiss, H. M., & Dalal, R. S. (2013). Affect spin and the emotion regulation process at work. *Journal of Applied Psychology*, *98*(4), 593–605.

Beal, D. J., Trougakos, J. P., Weiss, H. M., & Green, S. G. (2006). Episodic processes in emotional labor: Perceptions of affective delivery and regulation strategies. *The Journal of Applied Psychology*, *91*(5), 1053–1065.

Beal, D. J., Weiss, H. M., Barros, E., & Macdermid, S. M. (2005). An episodic process model of affective influences on performance. *The Journal of Applied Psychology*, *90*(6), 1054–1068.
Blakely, T. A., & Woodward, A. J. (2000). Ecological effects in multi-level studies. *Journal of Epidemiology and Community Health*, *54*(5), 367–374.
Brislin, R. W. (1970). Back-translation for cross-cultural research. *Journal of Cross-Cultural Psychology*, *1* (3), 185–216.
Brotheridge, C. M., & Grandey, A. A. (2002). Emotional labor and burnout: Comparing two perspectives of 'people work'. *Journal of Vocational Behavior*, *60*(1), 17–39.
Brotheridge, C. M., & Lee, R. T. (2002). Testing a conservation of resources model of the dynamics of emotional labor. *Journal of Occupational Health Psychology*, *7*(1), 57–67.
Brotheridge, C. M., & Lee, R. T. (2003). Development and validation of the emotional labour scale. *Journal of Occupational and Organizational Psychology*, *76*(3), 365–379.
Brunetto, Y., Shacklock, K., Teo, S., & Farr-Wharton, R. (2014). The impact of management on the engagement and well-being of high emotional labour employees. *International Journal of Human Resource Management*, *25*(17), 2345–2363.
Chen, Z. G., Sun, H. W., Lam, W., Hu, Q., Huo, Y. Y., & Zhong, J. A. (2012). Chinese hotel employees in the smiling masks: Roles of job satisfaction, burnout, and supervisory support in relationships between emotional labor and performance. *International Journal of Human Resource Management*, *23*(4), 826–845.
Collins, W. E. (1977). Some effects of sleep deprivation on tracking performance in static and dynamic environments. *The Journal of Applied Psychology*, *62*(5), 567–573.
Constanti, P., & Gibbs, P. (2005). Emotional labour and surplus value: The case of holiday 'reps'. *The Service Industries Journal*, *25*(1), 103–116.
Denson, T. F., Hippel, W., Kemp, R. I., & Teo, L. S. (2010). Glucose consumption decreases impulsive aggression in response to provocation in aggressive individuals. *Journal of Experimental Social Psychology*, *46*(6), 1023–1028.
Diefendorff, J. M., & Gosserand, R. H. (2003). Understanding the emotional labor process: A control theory perspective. *Journal of Organizational Behavior*, *24*, 945–959.
Diefendorff, J. M., & Richard, E. M. (2003). Antecedents and consequences of emotional display rule perceptions. *Journal of Applied Psychology*, *88*, 284–294.
Diestel, S., Rivkin, W., & Schmidt, K.-H. (2015). Sleep quality and self-control capacity as protective resources in the daily emotional labor process: Results from two diary studies. *Journal of Applied Psychology*, *100*(3), 809–827.
Dimotakis, N., Scott, B. A., & Koopman, J. (2011). An experience sampling investigation of workplace interactions, affective states, and employee well-being. *Journal of Organizational Behavior*, *32*(4), 572–588.
Dudenhöffer, S., & Dormann, C. (2013). Customer-related social stressors and service providers' affective reactions. *Journal of Organizational Behavior*, *34*, 520–539.
Foster, D., & Ren, X. N. (2015). Work-family conflict and the commodification of women's employment in three Chinese airlines. *International Journal of Human Resource Management*, *26*(12), 1568–1585.
Frick, A., Bächtiger, M.-T., & Reips, U.-D. (2001). Financial incentives, personal information and drop-out rate in online studies. In U.-D. Reips & M. Bosnjak (Eds.), *Dimensions of internet science* (pp. 209–219). Lengerich: Pabst.
Gailliot, M. T., Baumeister, R. F., Dewall, C. N., Maner, J. K., Plant, E. A., Tice, D. M., … Schmeichel, B. J. (2007). Self-control relies on glucose as a limited energy source: Willpower is more than a metaphor. *Journal of Personality and Social Psychology*, *92*(2), 325–336.
Glomb, T. M., Kammeyer-Mueller, J. D., & Rotundo, M. (2004). Emotional labor demands and compensating wage differentials. *Journal of Applied Psychology*, *89*, 700–714.
Goldberg, L. A., & Grandey, A. A. (2007). Display rules versus display autonomy: Emotion regulation, emotional exhaustion, and task performance in a call center simulation. *Journal of Occupational Health Psychology*, *12*(3), 301–318.
Goodwin, R. E., Groth, M., & Frenkel, S. J. (2011). Relationships between emotional labor, job performance, and turnover. *Journal of Vocational Behavior*, *79*(2), 538–548.

Grandey, A. A. (2000). Emotion regulation in the workplace: A new way to conceptualize emotional labor. *Journal of Occupational Health Psychology*, *5*(1), 95–110.
Grandey, A. A. (2003). When 'the show must go on': surface acting and deep acting as determinants of emotional exhaustion and peer-rated service delivery. *Academy of Management Journal*, *46*, 86–96.
Grandey, A. A., Dickter, D. N., & Sin, H.-P. (2004). The customer is not always right: Customer aggression and emotion regulation of service employees. *Journal of Organizational Behavior*, *25*(3), 397–418.
Grandey, A. A., Fisk, G. M., & Steiner, D. D. (2005). Must 'service with a smile' be stressful? The moderating role of personal control for American and French employees. *Journal of Applied Psychology*, *90*(5), 893–904.
Grandey, A., Foo, S. C., Groth, M., & Goodwin, R. E. (2012). Free to be you and me: A climate of authenticity alleviates burnout from emotional labor. *Journal of Occupational Health Psychology*, *17*(1), 1–14.
Gross, J. J. (1998). Antecedent- and response-focused emotion regulation: Divergent consequences for experience, expression, and physiology. *Journal of Personality and Social Psychology*, *74*(1), 224–237.
Gross, S., Semmer, N. K., Meier, L. L., Kälin, W., Jacobshagen, N., & Tschan, F. (2011). The effect of positive events at work on after-work fatigue: They matter most in face of adversity. *Journal of Applied Psychology*, *96*(3), 654–664.
Groth, M., Hennig-Thurau, T., & Walsh, G. (2009). Customer reactions to emotional labor: The roles of employee acting strategies and customer detection accuracy. *Academy of Management Journal*, *52*(5), 958–974.
Hagger, M. S., Wood, C., Stiff, C., & Chatzisarantis, N. L. D. (2010). Ego depletion and the strength model of self-control: A meta-analysis. *Psychological Bulletin*, *136*(4), 495–525.
Halbesleben, J. R. B., Neveu, J. P., Paustian-Underdahl, S. C., & Westman, M. (2014). Getting to the 'COR': understanding the role of resources in conservation of resources theory. *Journal of Management*, *40*, 1334–1364.
Hammer, L. B., Neal, M. B., Newsom, J. T., Brockwood, K. J., & Colton, C. L. (2005). A longitudinal study of the effects of dual-earner couples' utilization of family-friendly workplace supports on work and family outcomes. *Journal of Applied Psychology*, *90*(4), 799–810.
Harris, K. J., Harvey, P., & Booth, S. L. (2010). Who abuses their coworkers? An examination of personality and situational variables. *The Journal of Social Psychology*, *150*(6), 608–627.
Harrison, Y., & Horne, J. A. (1999). One night of sleep loss impairs innovative thinking and flexible decision making. *Organizational Behavior and Human Decision Processes*, *78*(2), 128–145.
Hobfoll, S. E. (1989). Conservation of resources. A new attempt at conceptualizing stress. *The American Psychologist*, *44*(3), 513–524.
Hochschild, A. R. (1983). *The managed heart: Commercialization of human feeling*. Berkeley: University of California Press.
Holman, D., Chissick, C., & Totterdell, P. (2002). The effects of performance monitoring on emotional labor and well-being in call centers. *Motivation and Emotion*, *26*(1), 57–81.
Hu, H.-H., Hsu, C.-T., Lee, W.-R., Chang, J.-H., & Hsu, M.-H. (2011). Mediating and moderating processes in the relation between problem customer perceptions and work–family conflict. *The Service Industries Journal*, *31*(8), 1365–1380.
Hülsheger, U. R., Alberts, H. J., Feinholdt, A., & Lang, J. W. (2013). Benefits of mindfulness at work: The role of mindfulness in emotion regulation, emotional exhaustion, and job satisfaction. *Journal of Applied Psychology*, *98*(2), 310–325.
Hülsheger, U. R., Lang, J. W. B., & Maier, G. W. (2010). Emotional labor, strain, and performance: Testing reciprocal relationships in a longitudinal panel study. *Journal of Occupational Health Psychology*, *15*(4), 505–521.
Hülsheger, U. R., & Schewe, A. F. (2011). On the costs and benefits of emotional labor: A meta-analysis of three decades of research. *Journal of Occupational Health Psychology*, *16*(3), 361–389.
Judge, T. A., Woolf, E. F., & Hurst, C. (2009). Is emotional labor more difficult for some than for others? A multilevel, experience-sampling study. *Personnel Psychology*, *62*, 57–88.

Kiely, J. A. (2005). Emotions in business-to-business service relationships. *The Service Industries Journal*, *25*(3), 373–390.
Lanaj, K., Johnson, R. E., & Barnes, C. M. (2014). Beginning the workday yet already depleted? Consequences of late-night smartphone use and sleep. *Organizational Behavior and Human Decision Processes*, *124*(1), 11–23.
Luong, A., & Rogelberg, S. G. (2005). Meetings and more meetings: The relationship between meeting load and the daily well-being of employees. *Group Dynamics: Theory, Research, and Practice*, *9*(1), 58-67.
Mesmer-Magnus, J. R., Dechurch, L. A., & Wax, A. (2012). Moving emotional labor beyond surface and deep acting a discordance–congruence perspective. *Organizational Psychology Review*, *2*(1), 6–53.
Muraven, M., & Baumeister, R. F. (2000). Self-regulation and depletion of limited resources: Does self-control resemble a muscle? *Psychological Bulletin*, *126*(2), 247–259.
Nilsson, J. P., Söderström, M., Karlsson, A. U., Lekander, M., Kerstedt, T., Lindroth, N. E., & Axelsson, J. (2005). Less effective executive functioning after one night's sleep deprivation. *Journal of Sleep Research*, *14*(1), 1–6.
Philipp, A., & Schüpbach, H. (2010). Longitudinal effects of emotional labour on emotional exhaustion and dedication of teachers. *Journal of Occupational Health Psychology*, *15*(4), 494–504.
Pilcher, J. J., Ginter, D. R., & Sadowsky, B. (1997). Sleep quality versus sleep quantity: Relationships between sleep and measures of health, well-being and sleepiness in college students. *Journal of Psychosomatic Research*, *42*(6), 583–596.
Pugh, S. D., Groth, M., & Hennig-Thurau, T. (2011). Willing and able to fake emotions: A closer examination of the link between emotional dissonance and employee well-being. *Journal of Applied Psychology*, *96*(2), 377–390.
Pugliesi, K. (1999). The consequences of emotional labor: Effects on work stress, job satisfaction, and well-being. *Motivation and Emotion*, *23*(2), 125–154.
Richards, J. M., & Gross, J. J. (2000). Emotion regulation and memory: The cognitive costs of keeping one's cool. *Journal of Personality and Social Psychology*, *79*(3), 410–424.
Rigby, D. (2011). The future of shopping. *Harvard Business Review*, *89*(12), 65–76.
Rosenthal, B. S., Wilson, W. C., & Futch, V. A. (2009). Trauma, protection, and distress in late adolescence: A multi-determinant approach. *Adolescence*, *44*(176), 693–703.
Rousseau, D. M. (1985). Issues of level in organizational research: Multi-level and cross-level perspectives. *Research in Organizational Behavior*, *7*(1), 1–37.
Santos-Silva, R., Jankavski, C., & Lorenzi-Filho, G. (2016). The experience of a power nap center in the largest city of Brazil. *Sleep Science, 9*(3), 151-152.
Sanz-Vergel, A. I., Rodríguez-Muñoz, A., Bakker, A. B., & Demerouti, E. (2012). The daily spillover and crossover of emotional labor: Faking emotions at work and at home. *Journal of Vocational Behavior*, *81*(2), 209–217.
Scott, B. A., & Barnes, C. M. (2011). A multilevel field investigation of emotional labor, affect, work withdrawal, and gender. *Academy of Management Journal*, *54*(1), 116–136.
Scott, B. A., Barnes, C. M., & Wagner, D. T. (2012). Chameleonic or consistent? A multilevel investigation of emotional labor variability and self-monitoring. *Academy of Management Journal*, *55* (4), 905–926.
Shapiro, A. K., & Morris, L. A. (1978). The placebo effect in medical and psychological therapies. In S. L. Garfield & A. E. Bergin (Eds.), *Handbook of psychotherapy and behavior change* (2nd ed., pp. 369–410). New York: Wiley.
Sonnentag, S., Binnewies, C., & Mojza, E. J. (2008). 'Did you have a nice evening?' A day-level study on recovery experiences, sleep, and affect. *The Journal of Applied Psychology*, *93*(3), 674–684.
Tepper, B. J. (2000). Consequences of abusive supervision. *Academy of Management Journal*, *43*(2), 178–190.
Tice, D. M., Baumeister, R. F., Shmueli, D., & Muraven, M. (2007). Restoring the self: Positive affect helps improve self-regulation following ego depletion. *Journal of Experimental Social Psychology*, *43*(3), 379–384.
Trougakos, J. P., Hideg, I., Cheng, B. H., & Beal, D. J. (2014). Lunch breaks unpacked: The role of autonomy as a moderator of recovery during lunch. *Academy of Management Journal*, *57*(2), 405–421.

Wagner, D. T., Barnes, C. M., Lim, V. K. G., & Ferris, D. L. (2012). Lost sleep and cyberloafing: Evidence from the laboratory and a daylight saving time quasi-experiment. *The Journal of Applied Psychology*, *97*(5), 1068–1076.

Wagner, D. T., Barnes, C. M., & Scott, B. A. (2014). Driving it home: How workplace emotional labor harms employee home life. *Personnel Psychology*, *67*, 487–516.

Wang, M., Liao, H., Zhan, Y., & Shi, J. (2011). Daily customer mistreatment and employee sabotage against customers: Examining emotion and resource perspectives. *Academy of Management Journal*, *54*(2), 312–334.

Webb, T. L., & Sheeran, P. (2003). Can implementation intentions help to overcome ego-depletion? *Journal of Experimental Social Psychology*, *39*(3), 279–286.

Wickham, R. E., & Knee, C. R. (2013). Examining temporal processes in diary studies. *Personality and Social Psychology Bulletin*, *39*(9), 1184–1198.

Yoo, J. J., & Arnold, T. J. (2014). Customer orientation, engagement, and developing positive emotional labor. *The Service Industries Journal*, *34*(16), 1272–1288.

Zapf, D. (2002). Emotion work and psychological well-being: A review of the literature and some conceptual considerations. *Human Resource Management Review*, *12*(2), 237–268.

Zapf, D., Seifert, C., Schmutte, B., Mertini, H., & Holz, M. (2001). Emotion work and job stressors and their effects on burnout. *Psychology & Health*, *16*(5), 527–545.