

This is an Open Access document downloaded from ORCA, Cardiff University's institutional repository: <https://orca.cardiff.ac.uk/id/eprint/131802/>

This is the author's version of a work that was submitted to / accepted for publication.

Citation for final published version:

Zhang, Mo, Geng, Ruoqi , Hong, Zhisheng, Song, Wenhao and Wang, Wangshuai 2020. The double-edged sword effect of service recovery awareness of frontline employees: from a job demands-resources perspective. *International Journal of Hospitality Management* 88 , 102536. 10.1016/j.ijhm.2020.102536

Publishers page: <http://dx.doi.org/10.1016/j.ijhm.2020.102536>

Please note:

Changes made as a result of publishing processes such as copy-editing, formatting and page numbers may not be reflected in this version. For the definitive version of this publication, please refer to the published source. You are advised to consult the publisher's version if you wish to cite this paper.

This version is being made available in accordance with publisher policies. See <http://orca.cf.ac.uk/policies.html> for usage policies. Copyright and moral rights for publications made available in ORCA are retained by the copyright holders.



The double-edged sword effect of service recovery awareness of frontline employees: from a job demands-resources perspective

Abstract

Drawing on job demands-resources (JD-R) theory, this study examines the double-edged sword effect of service recovery awareness (SRA) on post-recovery satisfaction via frontline employees' (FLEs) emotional responses (including emotional exhaustion and work engagement). The moderating effect of perceived psychological empowerment (PPE) was also assessed. Dyadic and matched responses from 267 five-star hotel FLEs and customers indicated that SRA is appraised as a challenging demand that is positively associated with post-recovery satisfaction through work engagement. However, SRA is also considered a hindrance demand that leads to emotional exhaustion, which is negatively related to post-recovery satisfaction. PPE amplified the impact of SRA on work engagement and buffered the impact of SRA on emotional exhaustion. The theoretical contribution, managerial implications, and suggestions for future research of this study are discussed in detail.

Keywords

Service recovery awareness, emotional exhaustion, work engagement, job demand- resource theory, frontline employee

1. Introduction

Service failure is inevitable, even when the service design was perfect, especially in the hospitality industry (Koc, 2019). To address such situations, hotels spend increasing efforts to enable service staff to handle customer complaints, such as empowerment; however, many customers remain dissatisfied after service recovery. According to the 2018 Hospitality Industry Complaint Platform in China, there are 29.92% of customers had experienced at least one service failure in the last one year, yet only around 10% of complained customers satisfied after service recovery. One of the key drivers of the failed service recovery might reside in the experience during the intense interaction between frontline employees (FLEs) and customers (Chan and Wan, 2012), because FLEs are the direct implementers who deliver the service (Karatepe et al., 2018). Therefore, the attitudes and behaviors of FLEs are the significant elements that influence on the satisfaction of complained customer (Ogbeide et al., 2017). The appropriate empowerment provide FLEs a contingency approach to handling service failure that buffers the impact of job stressors and outcomes (Campus, 2019; Koc, 2013). Hence, how to empower FLEs to encourage them to take responsibility and display positive emotion in service recovery is essential for the hospitality industry (Koc, 2019). As a result, a robust body of existing research examines the impacts of the attitudes of FLEs in service recovery (Ogbeide et al., 2017; Rafaeli et al., 2016), such as emotional exhaustion (Riedl et al., 2019) and work engagement (Guchait et al., 2014). Researchers typically view the FLEs' emotional responses from a job perspective, and thus focus on role conflicts (Michel et al., 2009) and social stressors (Hwang and Han, 2018); however, they fail to emphasize that FLEs' attitudes depend on their orientation toward service recovery. In particular, FLEs who fully understand the importance of service recovery and consider service failure handling as a part of responsibility rather than an additional task is more likely to represent positive attitudes when performing service recovery. Service recovery awareness (SRA) is adopted to describe this phenomenon, which is defined as the degree of personal cognition toward service failure handling.

Based on job demand-resource (JD-R) theory, existing research distinguishes between challenge and hindrance job demands (Kim and Beehr, 2018); challenge demands to create a potential for promoting personal growth, while hindrance demands cause undesirable constraints that inhibit the employee's willingness to

engage (Bakker and Demerouti, 2017). Researchers argue that hindrance demands may be appraised as challenge demands (and vice versa) depending on the context. However, there is a lack of research that identifies which job demands need to be experienced as either a hindrance and a challenge to determine the conditions under which job demands act as challenges versus hindrances. We seek to address this gap in the literature to explore the causal mechanisms that explain the dual impacts of FLEs' service recovery awareness (SRA) on consumers' post-recovery satisfaction. In particular, we consider SRA influences outcomes through both a health impairment process (emotional exhaustion) and a motivational process (work engagement). In other words, SRA has double-edged sword effects in service recovery. The present research is the first to consider FLEs' SRA as a potential job demand for their emotional responses. A combination causes analytical results indicated that the FLEs with high level of SRA perform well in complaint handling, even for the stressed FLEs (Zhang, 2019). Yet, the mechanism of SRA that dual impact on customer post-recovery satisfaction still needs to be explored. Accordingly, our research adds to the service recovery literature stream by exploring the impact of FLEs' personal cognition based on JD-R theory.

This research also explores whether perceived psychological empowerment (PPE), which is considered a job resource in the JD-R model, balances the double-edged sword effects of SRA. Existing empirical results confirm that organizational empowerment is positively associated with SRA, which is related to FLEs' attitudes facing service recovery that service firms should monitor (Zhang and Geng, 2019). In this study, PPE moderates the relationship between SRA and FLEs' emotional responses (see Fig. 1). These results support the basic propositions of JD-R theory and extend the JD-R model in the service recovery context by uncovering the condition under which SRA act as challenges rather than hindrances (Bakker et al., 2017). Practically, this research informs managers that it can be beneficial to enhance SRA and monitor FLEs' PPE, and the results reaffirm the importance of a proper empowerment strategy for FLEs in the hospitality industry.

In the following section, we define the key constructs, review prior literature, and develop our hypotheses. We then introduce the empirical study and discuss the methods used, followed by the empirical results. The paper ends with a discussion and implication section.

2. Conceptual framework

2.1 The job demand-resources theory

JD-R theory has been used to explicate the mechanisms of how job characteristics influence job performance (Menguc et al., 2017). JD-R theory suggests that all types of job characteristics can be classified into two categories: job demands and job resources. Job demands are “those physical, psychological, social, or organizational aspects of the job that require sustained physical and/or psychological effort and are associated with certain physiological and/or psychological costs” (Demerouti et al., 2001), and job resources are those aspects “that are functional in achieving work goals, reduce job demands and the associated physiological and psychological costs, or stimulate personal growth, learning and development” (Bakker and Demerouti, 2017). Moreover, JD-R theory assumes that dual pathways lead to job performance. Specifically, Demerouti (2001) suggested that job demands are the unique predictors of strain that lead to negative outcomes, whereas job resources are the unique predictors of work engagement which is recognized as a motivational process. In addition, existing research claims that job resources can buffer the impact of job demands on strain (Walsh et al., 2015).

As above, compared with job resources, job demands are considered to act as a predictor of health-impairment. However, some researchers argue that job demands also play a motivational role, and they distinguish between job demands that are a hindrance and those that create a challenge (Du et al., 2014). Hindrance job demands are appraised as an impediment to learning, personal development and growth, whereas challenging job demands refer to “good” stressors that are appraised as supporting employees’ growth and development. Existing research discusses whether challenge demands may be appraised as hindrance demands, and vice versa (Lesener et al., 2019). However, research on the conditions under which job demands act as hindrances versus challenges is lacking.

2.2 Service recovery and post-recovery satisfaction in hospitality industry

Service recovery refers to the methods that were designed and implemented to resolve problems after a service failure occurs in order to alter customers’ negative attitudes and to avoid losing customers (Koc, 2019; Vaerenbergh et al., 2019). FLEs play a crucial role in resolving problems since they directly communicate with customers (Van Vaerenbergh and Orsingher, 2016a). Post-recovery satisfaction refers

to “the subjective and emotional evaluation” that a customer perceives after service recovery (Zhang and Geng, 2019). As the ultimate aim of service recovery is to maintain customer satisfaction and avoid negative word-of-mouth (Lim et al., 2017), this study considers customers’ post-recovery satisfaction as the outcome of service recovery.

Empowerment for FLEs, which is referred to as a proactive strategy of hospitality firms that establishing a competitive advantage, is one of the strong research streams in the burgeoning field of service recovery research (Koc, 2019). FLEs experience pressures from complained customers, where empowering strategy provides job resources that FLEs can utilize, thereby buffering the negative impact of stressors (Menguc et al., 2017). The innovative studies investigated the role of FLEs’ empowerment in relation to service recovery (Schumacher and Komppula, 2016; Sok and O’Cass, 2015). For instance, Koc’s (2013) compared power distance in two cultures to explore empowerment in the speed of recovery and the ways to communicate to their superiors. Existing research considered empowerment that is designed by organization, however, the perceived empowerment from the psychological side is overlooked. Schumacher and Komppula (2016) explored the role of written instructions on FLEs’ perceived empowerment. Accordingly, the psychological mechanism of stress syndrome of FLEs and their impacts on outcomes still need to be further explored (Koc, 2019).

Little research exists on service recovery that is based on JD-R theory. Rod and Ashill (2009) adopted JD-R theory into the service recovery context by exploring the significant role of FLEs’ job resourcefulness between job demands, job resources, and FLEs’ performance. Karatepe and Eslamou (2017) conducted empirical studies among flight attendants to investigate the relationships between job crafting and service recovery. Given the direct interaction between FLEs and customers, it follows that certain job demands and resources for FLEs include work pressure and emotional labor. However, there is a lack of research that describes the antecedents of FLEs attitudes based on JD-R theory. Specifically, distinguishing between the hindrance and challenging demands of FLEs is essential for improving productivity in service recovery. Therefore, this study develops a conceptual framework based on JD-R theory to explain how to encourage FLEs to take responsibility for service recovery with low work pressure.

2.3 The double-edged sword effect of service recovery awareness

2.3.1 Service recovery awareness (SRA)

FLEs are the key implementer in service recovery (Van Vaerenbergh and Orsingher, 2016b). As a pre-recovery strategy, service firms often provide empowerment to FLEs and guide their attitudes (Boshoff and Leong, 1998). The aim is to motivate FLEs' participation in service recovery to meet dissatisfied customers' needs through effective interaction (Ogbeide et al., 2017). However, a consensus on how to ensure these organizational efforts have a positive effect on FLEs' attitudes is lacking. On the one hand, existing research shows that organizational efforts could enhance FLEs' perceived justice (Yoo and Arnold, 2016), which promotes organizational commitment (Walsh et al., 2015), and thus leads to positive emotions in service recovery. On the other hand, some authors consider that FLEs could perceive strains under organizational efforts, such as role stressors that result in negative emotional responses (Rod and Ashill, 2009), thus leading to low service recovery performance. Therefore, service firms provide job-related resources to encourage positive responses and behavior from FLEs' in service recovery; yet, this strategy increases FLEs' job demands in turn.

Accordingly, this study adopted SRA to describe the job demands, which increase due to the organizational efforts, as the definition that the degree to which FLEs recognize the importance of service failure handling and are willing to take responsibility as a part of their job, rather than an extra task (Zhang and Geng, 2019). SRA is the state of personal cognition that FLEs face with service recovery. In particular, FLEs, who with high level of SRA, fully understand the effects of a service failure for their organization, such as negative word-of-mouth, and they recognize that handle service failure immediately and appropriately is a part of their job duties. In line with this, FLEs, who is lack of SRA, would display passive behavior, because that they consider service recovery as an additional task which exhausts their emotion.

2.3.2 SRA and emotional responses

Following the above discussion, this study argued that SRA has double-edged sword effects based on JD-R theory (Bakker and Demerouti, 2017).

On the one hand, existing research describes how to foster FLEs' SRA as a motivational process (Bouckennooghe et al., 2014). First of all, FLEs with a high level

of SRA believe that they have accessible resources to utilize and confirm that they would receive rewards from their organization and achieve growth after successful service recovery. Consequently, FLEs with a high level of SRA demonstrate self-efficacy, which enhances their intention to offer a positive response (Tsarenko and Strizhakova, 2013). Further, FLEs with a high level of SRA are more likely to seek an appropriate manner to response complained customer because they consider the service failure handling as part of their work, and they fully recognize the importance of handling service failure on behalf of their organization (Yoo and Arnold, 2016). Last, FLEs who with SRA experience meaningfulness and responsibility, which satisfies FLEs' basic psychological need for competence. Thus, such FLEs conduct service recovery without hesitation to enhance their work engagement, which refers to "a positive, fulfilling, work-related state of mind that is characterized by vigor, dedication, and absorption" (Bakker and Demerouti, 2017). In sum, when SRA is appraised as a challenging demand, it fosters a motivational pathway for FLEs, leading to work engagement.

On the other hand, SRA could also be perceived as a hindrance. Based on JD-R theory, job demands are predictors of emotional exhaustion, which refers to "the lack of energy and emotional fatigue caused by excessive psychological demands" (Choi and Choi, 2014). Prior research indicated that FLEs tend to appraise hindrance stressors, thereby thwarting work engagement and irritating emotional exhaustion (Olugbade and Karatepe, 2019). FLEs with a high level of SRA, who fully understand the importance of service failure handling and consider coordinating with co-workers and meeting customers' needs as a part of their duty, feel anxious that "impede learning, growth, and goal attainment", thereby exhausting their energy (Riedl et al., 2019).

Therefore, SRA can be appraised as both challenging and hindrance demands for FLEs, resulting in two pathways that lead to work engagement and emotional exhaustion.

2.3.3 Emotional responses and post-recovery satisfaction

Given the direct communication between FLEs and customers, it follows that FLE's emotional responses would affect certain customers' experience from service failure handling (Piaralal et al., 2016).

Empirical evidence shows that emotional responses, including work engagement and emotional exhaustion, act as mediators between job demands and FLE performance. For example, Karatepe and Talebzadeh (2016) explored that work engagement mediates the effect of psychological capital on service recovery performance. Moreover, emotional exhaustion is demonstrated as a negative element in the service recovery process that mediates the effect of job demands on outcomes (Kim et al., 2012; Piaralal et al., 2016). For instance, Choi, Kim, and Lee (2014) showed that emotional exhaustion mediates the effect of customer-related social stressors on service recovery performance. Based on the abovementioned theoretical underpinnings, this study proposes that work engagement is a positive emotional response that is promoted by SRA, which results in high performance, while emotional exhaustion leads to low performance. Therefore, combined with empirical findings related to FLEs' emotional responses above, JD-R theory leads us to posit the following hypotheses:

H1: When SRA of FLEs is experienced as a challenging job demand, work engagement mediates the effect of SRA on post-recovery satisfaction.

H2: When SRA of FLEs is experienced as a hindrance job demand, emotional exhaustion mediates the effect of SRA on post-recovery satisfaction.

2.4 The moderating role of perceived psychological empowerment (PPE)

Andrade, Mendes, and Lourenco (2017) claimed that the psychological perspective associated with empowerment is one aspect of perceived organizational support that influences the impact of FLEs' commitment to their behavior. Different from empowerment, psychological empowerment focuses on how FLEs perceive empowerment to simulate positive attitudes, such as meaningfulness, self-efficacy, and resourcefulness, rather than empowerment itself as a strategy from an organizational perspective. Accordingly, PPE refers to the degree of self-efficacy that FLEs believe they have the sufficient skills to deal with service failure and that their efforts would be recognized and rewarded by their organization. In other words, PPE is interpreted as a concept connected to the FLEs' orientation toward their role at work, including the adjustment between job demands concerning their values and beliefs (Hwang and Han, 2018), their self-confidence in their capacity to fulfill the job requirements (Campus, 2019), and their awareness of how their attitudes influence the results of their work (Robinson et al., 2011). Existing research explores the critical

role of empowerment in service recovery (Piaralal et al., 2016). Yet, few studies focus on FLEs' psychological perspective to disclose how organizational empowerment affects FLEs' actions.

According to JD-R theory, PPE acts as a job resource, which could buffer the effect of job demands on emotional responses (Crawford et al., 2010). FLEs with a strong PPE could achieve a psychological balance between the work pressure and their individual goal achievements. As such, they would show a willingness to engage in service recovery because they consider problem handling as a part of their responsibility. Yoo and Arnold (2016) suggested that PPE promotes a positive attitude among FLEs toward service recovery by enhancing their job recognition, which encourages FLEs to realize the negative influence of service failure on organizational reputation. Hence, FLEs with strong PPE would consider work engagement as a growth opportunity or a way of promoting themselves, thus showing their willingness to do extra tasks to fulfill unsatisfied customers.

Moreover, FLEs with a strong PPE would achieve a psychological balance between constraints and potential outcomes, which would provide a perceived justice for FLEs in service recovery (Gong et al., 2014). In other words, Regulating their negative emotions may be easier for FLEs with a strong PPE, since they believe that they would receive the desired achievement through service failure handling, which would avoid emotional exhaustion. Consequently, those with a strong PPE aim to self-regulate their work pressure, thus reducing the opportunity for emotional exhaustion. At the same time, those with a strong PPE would more likely be encouraged to provide a positive service recovery because they have the ability and resources to fulfill the customers' needs. Therefore, JD-R theory combined with empirical findings leads us to hypothesize the following:

H3: PPE moderates the impact of SRA on work engagement: FLEs displaying high level of PPE will represent more work engagement with SRA than FLEs with low level of PPE.

H4: PPE moderates the impact of SRA on emotional exhaustion: FLEs displaying high level of PPE will represent less emotional exhaustion with SRA than FLEs with low level of PPE.

Fig 1 presents the conceptual framework of this study.

Insert Fig 1. here

3. Methods

3.1 Unit of analysis

This study collected dyadic data at the employee-customer level (Wilhelm, 2011; Wang et al., 2016). The survey was distributed to FLEs and customers containing a set of questions that were unique to each type of respondent. The question data for the FLEs included SRA, PPE, work engagement, and emotional exhaustion, while that for the customers included post-recovery satisfaction. Consistent with past and recent studies (Karatepe et al., 2018), judgmental sampling is used, which allows the researchers to use certain criteria to specify the sample. This study utilized full-time FLEs with more than one year's experience working in the hospitality industry and the star rating of the hotel. Consequently, experienced full-time FLEs such as front desk agents and room service agents in five-star hotels in China represented the sample of this study.

3.2 Sampling and data collection

The time-lagged data was collected from five 5-star domestic hotels in China. Permission was obtained from these hotels, and the managers in the customer services department assisted us in the data collection. For the employees, the FLEs were selected since they have direct interactions with customers from check-in to check-out. Therefore, data was collected based on the service failure events between employees and customers. In particular, managers identified a set of service failure events that were logged the previous day in their customer service system every day. According to each event (the unique code in the customer service system), the managers first sent an "employee questionnaire" to the involved employee asking them to complete the survey regarding the specific event. Once the service failure event was resolved (shown as "closed" in the customer complaint system), the managers sent out a "customer questionnaire" to the involved customer to review the complaint. Finally, the questionnaires were matched based on the room or case code in the hotel's

customer complaint system.

The data collection was conducted between April and October 2016. Of 500 surveys, 267 usable dyadic responses were returned by giving a response rate of 53.4%. Of the employees, 48.29% were male and 51.71% were female, and 70.10% of employees were aged between 26 and 35. Of the customers, 42.01% were male and 57.99% were female. In particular, the normal probability plot was used to test the normality of each variable, which compared the cumulative distribution of actual data values with the cumulative distribution of a normal distribution (Lin et al., 2011). The results indicated that all variables met the requirement of normality.

3.3 Measures

In this study, the variables were measured based on the existing literature and field interviews. First, the questionnaire was developed based on the related literature in English. A back-translation method was adopted to translate the questionnaire into Chinese and ensure conceptual equivalence. Next, a focus group was conducted with seven bilingual academics in the field of service operations to review questionnaire based on relevance and completeness to the content. Then, a pilot survey was carried out with 50 hotel managers in the customer service section to statistically verify the reliability and validity. Finally, some wordings were refined to increase the clarity of the questionnaires. A five-point Likert scale was used that ranging from 1 (strongly disagree) to 5 (strongly agree), to all constructs; the details are listed in the Appendix.

3.3.1 SRA

This study measured SRA, adopting Ashill (2008), Rod and Ashill (2009), and Schminke et al. (2014), using a six-item scale, with a Cronbach's α of 0.803. Example items include, "I fully understand the impact of service failure on our hotel," "I fully understand that service failures should be handled positively and efficiently," and "I want to do extra tasks for service recovery."

3.3.2 Work engagement

This study measured work engagement using a five-item scale created by

Schaufeli et al. (2016) and Karatepe and Olugbade (2016). The Cronbach's α was 0.745. Example items include, "I should address service failures in accordance with the hotel's policy" and "I can find the appropriate approach to handling service failures."

3.3.3 *Emotional exhaustion*

We measured emotional exhaustion using Choi et al. (2014) and Karatepe and Choubtarash's (2014) four-item scale, which had a Cronbach's α of 0.801. Example items include, "I feel emotionally drained from service recovery," and "Service failure handling is really challenging for me."

3.3.4 *PPE*

This study measured PPE using Lin's (2009) four-item scale, with a Cronbach's α of 0.905. Example items include, "In service recovery, I can make decision about how to deal with service failure," and "My company fully empowers me in service failure handling."

3.3.5 *Post-recovery satisfaction*

This study measured post-recovery performance using Seider et al. (2005) and Liu et al.'s (2016) four-item scale, with a Cronbach's α of 0.702. Example items include, "Overall, I feel satisfied with the service recovery that is provided by FLE."

Previous studies have suggested that gender, age, and job tenure might have an impact on SRA, emotional responses, and post-recovery satisfaction (Chen and Lee, 2017). Therefore, gender, age, and job tenure served as control variables in this study.

3.4 Common method bias and endogeneity

Although common method bias may not be the concern in this study as this study collected dyadic and time-lagged data (Podsakoff et al., 2003), the potential threat cannot be fully eliminated. Thus, Harman's single-factor was applied the test to assess this potential issue. The results revealed that the largest variance explained by any single factor was 26.78%, suggesting that common method bias is not a concern. In addition, an unmeasured common method factor was used to re-estimated the

measurement model, including SRA, WE, EE, PPE, because all these variables were self-reported by FLEs (Podsakoff et al., 2003). The results indicated that a significant chi-square difference between the measurement model and the unmeasured common factor model ($\Delta\chi^2 = 13.806$, $df=64$, $p<0.001$). The issue of endogeneity could be a concern of this study from two perspectives in the survey method: (1) measurement error and (2) simultaneity (Guide and Ketokivi, 2015). This potential issue was resolved in two ways. First, we collected dyadic data from both employees and customers to reduce the potential threat of measurement errors (Guide and Ketokivi, 2015). In doing so, the independent variables from the employees' side and the dependent variable from the customers' side were matched. Therefore, the issue of endogeneity was reduced which may be caused by measurement error. Second, this study argues that the SRA of FLEs influences the post-recovery performance. In other words, the trajectory of the respected relationship goes from the service recovery to post-recovery performance, and the issue of simultaneity often occurs when two factors affect each other simultaneously (Antonakis et al., 2014). Subsequently, this study collected data by having a time lag between our independent variables and dependent variables to ensure the post-recovery performance is shaped by the service recovery. Therefore, it is confident that the simultaneity is not a concern of the endogeneity in this study.

4 Results

4.1 Measurement validation

To validate the measurement, we assessed the scale reliability, unidimensionality, and convergent and discriminant validity. First, eigenvalues were greater than 1 in each analysis, lending preliminary support to a claim of unidimensionality in the constructs by using SPSS 20.0. In addition, the results of Cronbach's alpha values greater than 0.7 offer adequate evidence of reliability (Bentler, 2009). Second, this study performed confirmatory factor analysis (Amos 17.0) to assess the fit of measurement. In particular, the individual items, item loading, and reliabilities are

shown in the Appendix, while the means and standard deviations are shown in Table 1. All the item loadings are greater than 0.60.

Next, convergent and discriminant validity were evaluated. Convergent validity is evaluated by conducting factor loadings, composite reliability and the average variance extracted (Fornell and Larcker, 1981). The internal consistency measures were adopted to further support the convergent validity, with recommended composite reliability scores above 0.6 (Karatepe and Kaviti, 2016). Table 1 shows that the composite reliabilities ranged between 0.606 and 0.766. Furthermore, the AVE of all variables was above 0.4. Therefore, all three conditions for convergent validity were met.

Further, the discriminant validity of the variables was assessed by using the test recommended by Fornell and Larcker (1981). The requirement is that the square root of the AVE for each variable should exceed all the corresponding correlations between that and any other variables. The factor correlation matrix represented in Table 1, indicates that the largest correlation between any pair of variables is 0.644 and the smallest square root of the AVE was 0.673. Thus, the test of discriminant validity was also met. Additionally, the fit of the measurement model was acceptable with RMSEA=0.067, SRMR=0.078, GFI=0.813, CFI=0.8172, NFI=0.720.

4.2 Hypothesis test results

4.2.1 Descriptive statistics

Table 1 shows correlations and descriptive statistics for all constructs, including SRA, work engagement, emotional exhaustion, PPE, and post-recovery satisfaction. These results indicate that all constructs are related to each other significantly, except for emotional exhaustion and job engagement. Emotional exhaustion is significantly and positively related to PPE ($\gamma = -0.0045$, $p < .05$), and significantly and negatively related to post-recovery satisfaction ($\gamma = -0.056$, $p < .05$).

4.2.2 The mediation effect of emotional responses of FLEs

The hierarchical moderated regression analyses were applied to test the

hypotheses because the proposed model contains the mediating terms of work engagement and emotional exhaustion. As shown in Table 2, the three-step variance partitioning procedure was adopted developed by Jaccard et al. (2003). First, gender, age, education, and work experiences were set as the control variables in model 5, and none were found to be statistically significant on post-recovery satisfaction. Then model 6 is included SRA as the independent variable, with a statistically significant and positive effect ($\beta = .444, p < .001$). Third, the mediator variable of work engagement (WE) is included in model 7 and emotional exhaustion (EE) in model 8. In model 7, the WE has a statistically significant and positive effect ($\beta = .381, p < .001$) on the post-recovery satisfaction. However, the value of SRA was significantly reduced ($\beta = -.161, p < .05$), indicating that WE partially mediated the relationship between SRA and post-recovery performance. In model 8, EE had a statistically significant and negative effect ($\beta = -.095, p < .01$) on the post-recovery satisfaction. Meanwhile, the value of SRA has significantly increased ($\beta = .476, p < .001$), indicating that EE partially mediated the relationship between SRA and post-recovery satisfaction.

To approve the significance of the mediating effects, the Bootstrap method was further adopted (Zhao et al., 2010). In doing so, 2,000 bootstrap resamples is be employed to investigate whether WE and EE mediate the relationship between SRA and post-recovery satisfaction. The bootstrap method is a nonparametric resampling procedure that uses a sample from the full data set (Zhao et al., 2010). Consequently, the mediating effects are calculated in the resamples to generate the bootstrapping sampling distribution of the mediating effects (Zhao et al., 2010). As a result, the mediating effect of WE in the relationship between SRA and post-recovery satisfaction was statistically significant as 0.2821 at $p < .01$ with a 95% confidence interval (-.1417, -.4402). Moreover, the mediating effect of EE in the relationship between SRA and post-recovery satisfaction was negative and statistically significant as -0.0298 at $p < .01$, with a 95% confidence interval (-.075, -.0045). According to the

results, WE and EE are statistically significant, mediating the relationship between SRA and post-recovery satisfaction; thus, H1 and H2 are supported.

4.2.3 The moderation effect of PPE

To reduce multicollinearity, the “mean-centering” technique was applied by using deviation scores for the dependent, independent, and moderator variables (Shieh, 2011). The products of mean-centered scores were subsequently used as interaction terms (PPE * SRA). The value of the maximum variance inflation factor in all regression models is less than 1.69, which indicates that multicollinearity is not a concern in this study (O’Brien, 2007). Table 2 summarizes the results of the moderation tests. The moderating effect of PPE was then tested. H3 proposed a moderating effect of PPE between SRA and WE. M10 (Table 2) shows that (PPE * SRA) meets the significance for WE ($\beta = -0.013, p < .05$). H4 proposed that PPE could moderate the relationship between SRA and EE. M12 (Table 2) shows that (PPE*SRA) is a significant predictor of emotional exhaustion ($\beta = 0.233, p < .001$). Therefore, H3 and H4 are supported.

To show the moderating impact of PPE between SRA and emotional responses, the simple slopes analysis was applied to provide graphs of the moderating impact (Aiken et al., 1991). In doing so, PPE was split into high (one standard deviation or more above the mean) and low (one standard deviation or more below the mean) levels (Aiken et al., 1991). All variables are mean-centered, and the constant is nonexistent because the coefficients are standardized (Aiken et al., 1991). As Fig. 2 shows, when the level of PPE is high, the SRA has a stronger effect on the WE of FLEs. However, when the level of PPE is low, the positive effect of SRA on the WE of FLEs becomes weaker. Thus, PPE positively moderates the positive relationship between SRA and WE. As Fig. 3 shows, PPE negatively moderates the positive impact of SRA on the EE of FLEs.

INSERT Fig 2. HERE

INSERT Fig 3. HERE

Table 1 Correlations and descriptive statistics (N = 267)

Variables	Mean	S.D.	Composite reliability	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
(1) Gender	1.5189	0.5005		1								
(2) Age	2.0550	0.5905		-0.062	1							
(3) Education	2.1375	0.4789		-0.025	-0.076	1						
(4) Years of working	3.5773	1.0970		-0.033	0.680**	-0.079	1					
(5) Service recovery awareness	4.1495	0.4432	0.697	0.007	0.149*	-0.016	0.016**	1				
(6) Work engagement	4.0103	0.5090	0.616	0.025	0.067	0.020	0.087	0.644**	1			
(7) Emotional exhaustion	3.5876	0.7065	0.606	-0.012	-0.045	0.025	-0.073	0.190**	0.038	1		
(8) Perceived psychological empowerment	3.8436	0.5232	0.766	-0.018	0.081	-0.031	0.131*	0.460**	0.512**	0.045*	1	
(9) Post-recovery satisfaction	3.9553	0.5091	0.683	0.054	0.083	0.018	0.120*	0.396***	0.478**	-0.056*	0.454**	1

2

Note: *** $p < .001$; ** $p < .01$; * $p < .05$

Table 2 Results of Hierarchical Regression Analysis and Bootstrap Test

Variables	Mediation effect								Moderation effect			
	WE		EE		Post-recovery satisfaction				WE		EE	
	M1	M2	M3	M4	M5	M6	M7	M8	M9	M10	M11	M12
Gender	0.030	0.020	-0.019	0.009	0.060	0.054	0.047	0.052	0.026	0.024	-0.025	0.009
Age	0.015	-0.026	0.011	0.061	0.006	-0.019	-0.009	-0.020	-0.014	-0.016	-0.010	0.028
Education	0.030	0.030	0.029	-0.043	0.032	0.032	0.021	0.035	0.037	0.040	0.028	-0.027
Years of working	0.036	0.003	-0.051	0.090	0.056	0.036	0.035	0.030	-0.008	-0.010	-0.063	-0.034
Service recovery awareness (SRA)		0.744***		0.331***		0.444***	0.161*	0.476***	0.600***	0.658***	0.365***	-0.677***
Work engagement (WE)							0.381***					
Emotional exhaustion (EE)								-0.095**				
Perceived psychological empowerment (PPE)									0.269***	0.268***	-0.063**	-0.044**
SRA * PPE										-0.013*		0.233**
R2		0.416		0.048		0.164	0.248	0.181	0.476	0.482	0.050	0.973
△R2		0.406		0.031		0.149	0.233	0.163	0.465	0.469	0.030	0.972
F		40.686***		2.868**		11.187***	15.651***	10.426***	43.082***	37.622***	2.472**	146.792***
Mediating effect							0.2821	-0.0298				
99% Confidence interval							[0.1417, 0.4402]	[-0.0750,-0.0045]				

Note: *** $p < .001$; ** $p < .01$; * $p < .05$

5. Discussion and Conclusion

The application of JD-R theory extends theory and research in the management of FLEs in service recovery literature by leading us to consider the double-edged sword effect of SRA and the moderating role of PPE. The empirical results were mixed. Specifically, our analyses confirmed that SRA of FLEs is experienced as hindrance demands (and vice versa) depending on the level of PPE.

5.1 Theoretical contributions

By applying and extending JD-R theory in service recovery, there are three aspects of theoretical implications that bear mentioning. First, while the job stressors that FLEs experience has been studied in service recovery context, such as role conflict, role overload, role ambiguity (Ashill and Rod, 2011), customer verbal aggression (Yoo et al., 2015), performance-focused climate (Menguc et al., 2017), this study is the first investigation of FLEs' SRA as a key job demand. This enhances prior work in service recovery insofar as job stressors as the predictors of emotional responses (Piaralal et al., 2016). Combining with existing research, this study argued SRA of FLEs as a job demand from a psychological perspective, which refers to the psychological aspects of the service recovery that require sustained attention and careful handling. Identifying SRA as job demand has special importance for service managers.

Second, this study explored the psychological processes involved in the work engagement and emotional exhaustion in service recovery by adopting the JD-R model. Specifically, the empirical results demonstrated that SRA enhances FLEs' performance by irritating their work engagement (Hypothesis 1), where SRA is evaluated as challenging demands in the JD-R framework. At the same time, emotional exhaustion mediates the effect of SRA on post-recovery satisfaction (Hypothesis 2), where SRA is appraised as hindrance demands for FLEs. These results answered the recent call for research into whether job demands play a motivational role in the service recovery context (Bakker and Demerouti, 2017), which adds literature in JD-R theory. When facing a service failure situation, FLEs experiencing job demands are more likely to display lower work engagement and feelings of burnout, although research has reported mix findings. For instance, Karatepe and Sokmen (2006) explored even positive effects of role conflict on post-recovery performance, however, role conflict is mostly negative associated with

outcomes (Siltaloppi et al., 2016). One reason may be that personal demands are overlooked in JD-R theory, which considers the physical and psychological costs from individual perspective that forcing employees to invest effort in their work (Bakker and Demerouti, 2017). SRA is one of the personal demands that are related to more anxious because FLEs understand the importance of service failure handling, whereas it is associated with less more engagement because considering service failure handling as a part of job duty. Thus, SRA is involved in both the health-impairment process and in the motivational process.

Third, this study found that PPE is a certain condition under which SRA acts as challenges versus hindrances. More specifically, when PPE is high, the effect of SRA on work engagement is stronger (Hypothesis 3), while the effect of SRA on emotional exhaustion is weaker (Hypothesis 4). These results indicated that PPE, which is appraised as a job resource, buffers the health impairment processes and amplifies the motivational processes. First of all, by confirming the moderation effect of PPE on the relationship between SRA and emotional responses, we offer support for JD-R theory and call for more job demands research that includes hindrances and challenges in the entire framework (Bakker and Demerouti, 2017; Kim and Beehr, 2018). Secondly, these results expanded existing research in FLEs management in service recovery. Empowerment is one of the organizational efforts that aims to enhance the FLEs performance in service recovery. The ways that employees to communicate to their superiors impact on FLEs behaviors (Koc, 2013). Moreover, FLEs who were empowered to spend monetary compensation perform more confidence in service recovery (Ostrom et al., 2015). However, this study explained the reason that why hospitality firms often failed to motivate FLEs through empowerment. PPE is the psychological mechanism of FLEs facing organizational efforts. For FLEs with high level of PPE, they are more active to seek how to solve problems, while FLEs who is lack of PPE, they more likely evaluate SRA as a hindrance demands and are more anxious about the responsibility that they should take. This represents a finding that service managers should consider when constructing and implementing the error management support program.

In short, our study provides empirical evidence for a double-edged sword effect of SRA and uncovered the condition of PPE in which job demands (SRA) act as challenges verses hindrances.

5.2 Managerial implications

Implications for managerial practice include how to motivate FLEs to engage in service recovery through organizational efforts, which flow from our research.

First, the study provided evidence that hospitality firms should consider the double-edged sword effect of SRA in case of empowerment strategy. Often hospitality firms strive to encourage FLEs from training, rewards, and empowerment that facing service failures. The aim of these approaches is emphasizing the importance of service failure on behalf of service firms and encouraging FLEs to take responsibility for complaints handling. In other words, these organizational efforts enhance the SRA of FLEs as result. However, this study indicated that SRA is appraised as a job demand that exhausting FLEs energy, even though it could display as a positive stressor when FLEs with high level of PPE. Providing replete error training and priority of complaint handling would lead FLEs to feel anxious when they experience SRA as a hindrance demand. Whereas, FLEs, who is lack of SRA, would represent low willingness to participant in service recovery. Therefore, the manager should understand the double-edged effects of SRA on post-recovery performance. There is no unique organizational strategy for service recovery that fitting all FLEs.

Second, this study provides a new perspective for hospitality organizations on how to avoid SRA is appraised as a negative stressor versus positive stressor. The dark side of SRA could be weakened. The results suggest that managers should monitor the PPE of FLEs, rather than empowerment itself. That is, FLEs received empowerment from organization, which further create their PPE that a cognitive state of FLEs toward empowerment strategy. In particular, PPE amplifies the positive effect of SRA and buffers the negative effect. When FLEs cannot perceive the empowerment from a psychological perspective, they tend to appraise SRA as a hindrance demand that leads to health impairment processes and results in low performance. Therefore, this study proposes an approach for managers to help FLEs enhance post-recovery performance that amplifying the bright side of SRA.

5.3 Limitation

Among the limitations of our research is that we only consider empowerment as an organizational effort in service recovery, and we explore the moderation effect of PPE. Based on JD-R theory, personal resources, such as job resourcefulness(Chen,

2019), personality traits (Lin, 2010), also influence the effect of SRA. More conditions that moderate the sword-edge effects of SRA could be further explored in the future. Next, other factors associated with the service recovery journey (Vaerenbergh et al., 2019), such as customer participation, customer emotion, also influence the effect of SRA. In future research, we could consider more indicators as job resources to uncover the conditions under which SRA acts as challenges rather than hindrances.

An additional limitation may be the methodology used in this research because we conducted a survey to investigate the attitudes and behaviors of FLEs in service recovery. Although we collect dyadic data at the employee-customer level, these data ignore the diversity of the service failure context. Thus, the implication for future research is to examine various scenarios and field studies to explore more details about the psychological mechanism of FLEs with SRA to perform service failure handling.

References

- Aiken, L.S., West, S.G. and Reno, R.R. (1991). *Multiple regression: Testing and interpreting interactions*. Sage.
- Antonakis, J., Bendahan, S., Jacquart, P. and Lalive, R., (2014). Causality and endogeneity: Problems and solutions. In D.V. Day (ed.), *The Oxford handbook of leadership and organizations* (p. 93-94). Oxford Handbooks Online.
- Ashill, N.J. and Rod, M. (2011), “Burnout processes in non-clinical health service encounters”, *Journal of Business Research*, Elsevier Inc., Vol. 64 No. 10, pp. 1116–1127.
- Bakker, A.B. and Demerouti, E. (2017), “Job Demands – Resources Theory : Taking Stock and Looking Forward”, *Journal of Occupational Health Psychology*, Vol. 22 No. 3, pp. 273–285.
- Bakker, A.B., Demerouti, E. and Bakker, A.B. (2017), “The Job Demands-Resources model : state of the art”, *Journal of Managerial Psychology*, Vol. 22 No. 3, pp. 309–328.
- Boshoff, C. and Leong, J. (1998), “Empowerment , attribution and apologis ing as dimens ions of s ervice recovery An ex perimental s tudy”, *International Journal*

- of Service Industry Management*, Vol. 9 No. 1, pp. 24–47.
- Bouckenooghe, D., Raja, U. and Abbas, M. (2014), “How does self-regulation of emotions impact employee work engagement: The mediating role of social resources”, *Journal of Management and Organization*, Vol. 20 No. 4, pp. 508–525.
- Campus, C. (2019), “Do Empowered FrontLine Employees Perform Better ? A Non-linear Approach and the Role of Service Complexity”, *European Management Review*, Vol. 16, pp. 229–242.
- Chan, K.W. and Wan, E.W. (2012), “How Can Stressed Employees Deliver Better Customer Service? The Underlying Self-Regulation Depletion Mechanism”, *Journal of Marketing*, Vol. 76 No. 1, pp. 119–137.
- Chen, C.-Y. (2019), “Does work engagement mediate the influence of job resourcefulness on job crafting?”, *International Journal of Contemporary Hospitality Management*, Vol. 31 No. 4, pp. 1684–1701.
- Chen, W.W. and Lee, H.C. (2017), “How to explain service failure? Impacts of justifications”, *Service Business*, Springer Berlin Heidelberg, Vol. 12 No. 2, pp. 1–26.
- Choi, B. and Choi, B.-J. (2014), “The effects of perceived service recovery justice on customer affection, loyalty, and word-of-mouth”, *European Journal of Marketing*, Vol. 48 No. 1, pp. 108–131.
- Crawford, E.R., LePine, J.A. and Rich, B.L. (2010), “Linking job demands and resources to employee engagement and burnout: A theoretical extension and meta-analytic test”, *Journal of Applied Psychology*, Vol. 95 No. 5, pp. 834–848.
- Demerouti, E., Bakker, A.B., Nachreiner, F. and Schaufeli, W.B. (2001), “The Job Demands – Resources Model of Burnout”, *Journal of Applied Psychology*, Vol. 86 No. 3, pp. 499–512.
- Du, J., Fan, X. and Feng, T. (2014), “Group Emotional Contagion and Complaint Intentions in Group Service Failure: The Role of Group Size and Group Familiarity”, *Journal of Service Research*, Vol. 17 No. 3, pp. 326–338.
- Fornell, C. and Larcker, D.F. (1981), “Evaluating Structural Equation Models with Unobservable Variables and Measurement Error”, *Journal of Marketing Research*, Vol. 18 No. 1, p. 39.
- Gong, T., Yi, Y. and Choi, J.N. (2014), “Helping Employees Deal With

- Dysfunctional Customers: The Underlying Employee Perceived Justice Mechanism”, *Journal of Service Research*, Vol. 17 No. 1, pp. 102–116.
- Guchait, P., Paşamehmetoğlu, A. and Dawson, M. (2014), “Perceived supervisor and co-worker support for error management: Impact on perceived psychological safety and service recovery performance”, *International Journal of Hospitality Management*, Vol. 41, pp. 28–37.
- Hwang, P. and Han, M. (2018), “Does psychological capital make employees more fit to smile? The moderating role of customer-caused stressors in view of JD-R theory”, *International Journal of Hospitality Management*, Elsevier, Vol. 77 No. October 2017, pp. 396–404.
- Karatepe, O.M. and Kaviti, R. (2016), “Test of a mediational model of organization mission fulfillment: evidence from the hotel industry”, *International Journal of Contemporary Hospitality Management*, Vol. 28 No. 5, pp. 988–1008.
- Karatepe, O.M., Yavas, U., Babakus, E. and Deitz, G.D. (2018), “The effects of organizational and personal resources on stress, engagement, and job outcomes”, *International Journal of Hospitality Management*, Elsevier, Vol. 74 No. May, pp. 147–161.
- Kim, M. and Beehr, T.A. (2018), “Challenge and hindrance demands lead to employees’ health and behaviours through intrinsic motivation”, *Stress and Health*, Vol. 34, pp. 367–378.
- Kim, T.T., Paek, S., Choi, C.H. and Lee, G. (2012), “Frontline service employees’ customer-related social stressors, emotional exhaustion, and service recovery performance: customer orientation as a moderator”, *Service Business*, Vol. 6 No. 4, pp. 503–526.
- Koc, E. (2013), “Power distance and its implications for upward communication and empowerment: Crisis management and recovery in hospitality services”, *International Journal of Human Resource Management*.
- Koc, E. (2019), “Service failures and recovery in hospitality and tourism : a review of literature and recommendations for future research”, *Journal of Hospitality Marketing & Management*, Routledge, Vol. 28 No. 5, pp. 513–537.
- Lesener, T., Gusy, B. and Wolter, C. (2019), “The job demands-resources model : A meta-analytic review of longitudinal studies”, *Work & Stress*, Taylor & Francis, Vol. 33 No. 1, pp. 76–103.

- Lim, E.A.C., Lee, Y.H. and Foo, M.-D. (2017), “Frontline employees’ nonverbal cues in service encounters: a double-edged sword”, *Journal of the Academy of Marketing Science*, Journal of the Academy of Marketing Science, Vol. 45 No. 5, pp. 657–676.
- Lin, H.H., Wang, Y.S. and Chang, L.K. (2011), “Consumer responses to online retailer’s service recovery after a service failure: A perspective of justice theory”, *Managing Service Quality*, Vol. 21 No. 5, pp. 511–534.
- Lin, W.B. (2010), “Service recovery expectation model - from the perspectives of consumers”, *Service Industries Journal*, Vol. 30 No. 6, pp. 873–889.
- Menguc, B., Auh, S., Yeniaras, V. and Katsikeas, C.S. (2017), “The role of climate: implications for service employee engagement and customer service performance”, *Journal of the Academy of Marketing Science*, Journal of the Academy of Marketing Science, Vol. 45 No. 3, pp. 428–451.
- Michel, S., Bowen, D. and Johnston, R. (2009), “Why service recovery fails: Tensions among customer, employee, and process perspectives”, *Journal of Service Management*, Vol. 20 No. 3, pp. 253–273.
- Ogbeide, G.C.A., Böser, S., Harrinton, R.J. and Ottenbacher, M.C. (2017), “Complaint management in hospitality organizations: The role of empowerment and other service recovery attributes impacting loyalty and satisfaction”, *Tourism and Hospitality Research*, Vol. 17 No. 2, pp. 204–216.
- Olugbade, O.A. and Karatepe, O.M. (2019), “Stressors, work engagement and their effects on hotel employee outcomes”, *Service Industries Journal*, Taylor & Francis, Vol. 39 No. 3–4, pp. 279–298.
- Ostrom, A.L., Parasuraman, A., Bowen, D.E., Patrício, L. and Voss, C.A. (2015), “Service Research Priorities in a Rapidly Changing Context”, *Journal of Service Research*, Vol. 18 No. 2, pp. 127–159.
- Piaralal, S.K., Bhatti, M.A., Piaralal, N.K. and Juhari, A.S. (2016), “Factors affecting service recovery performance and customer service employees: A study of Malaysian life insurance industry”, *International Journal of Productivity and Performance Management*, Vol. 65 No. 7, pp. 898–924.
- Podsakoff, P.M., MacKenzie, S.B., Lee, J.Y. and Podsakoff, N.P. (2003), “Common Method Biases in Behavioral Research: A Critical Review of the Literature and Recommended Remedies”, *Journal of Applied Psychology*, Vol. 88 No. 5, pp.

879–903.

- Rafaëli, A., Altman, D. and Gremler, D.D. (2016), “The Future of Frontline Research : Invited Commentaries”, *Journal of Service Research*, Vol. 7286, pp. 28–35.
- Riedl, E.M., Thomas, J., Riedl, E.M. and Thomas, J. (2019), “The moderating role of work pressure on the relationships between emotional demands and tension , exhaustion , and work engagement : an experience sampling study among nurses study among nurses”, *European Journal of Work and Organizational Psychology*, Routledge, Vol. 28 No. 3, pp. 414–429.
- Robinson, L., Neeley, S.E. and Williamson, K. (2011), “Implementing service recovery through customer relationship management: Identifying the antecedents”, *Journal of Services Marketing*, Vol. 25 No. 2, pp. 90–100.
- Rod, M. and Ashill, N.J. (2009), “Symptoms of burnout and service recovery performance: The influence of job resourcefulness”, *Managing Service Quality*, Vol. 19 No. 1, pp. 60–84.
- Schumacher, S. and Komppula, R. (2016), “A case study on service recovery: Frontline employees’ perspectives and the role of empowerment”, *European Journal of Tourism, Hospitality and Recreation*, Vol. 7 No. 2, pp. 117–127.
- Sitaloppi, J., Koskela-Huotari, K. and Vargo, S.L. (2016), “Institutional Complexity as a Driver for Innovation in Service Ecosystems”, *Service Science*, Vol. 8 No. 3, pp. 333–343.
- Sok, P. and O’Cass, A. (2015), “Achieving service quality through service innovation exploration-exploitation: The critical role of employee empowerment and slack resources”, *Journal of Services Marketing*, Vol. 29 No. 2, pp. 137–149.
- Tsarenko, Y. and Strizhakova, Y. (2013), “Coping with service failures: The role of emotional intelligence, self-efficacy and intention to complain”, *European Journal of Marketing*, Vol. 47 No. 1, pp. 71–92.
- Van Vaerenbergh, Y. and Orsingher, C. (2016a), “Service Recovery: An Integrative Framework and Research Agenda”, *Academy of Management Perspectives*, Vol. 30 No. 3, pp. 328–346.
- Van Vaerenbergh, Y. and Orsingher, C. (2016b), “Service Recovery: An Integrative Framework and Research Agenda”, *Academy of Management Perspectives*, No. April, available at:<https://doi.org/10.5465/amp.2014.0143>.
- Vaerenbergh, Y. Van, Varga, D. and Keyser, A. De. (2019), “The Service Recovery

- Journey : Conceptualization , Integration , and Directions for Future Research
The Service Recovery Journey : Conceptualization , Integration , and Directions
for Future Research”, *Journal of Service Research*, Vol. 22 No. 2, pp. 103–119.
- Walsh, G., Yang, Z., Dose, D. and Hille, P. (2015), “The Effect of Job-Related
Demands and Resources on Service Employees’ Willingness to Report
Complaints: Germany Versus China”, *Journal of Service Research*, Vol. 18 No.
2, pp. 193–209.
- Yoo, J. and Arnold, T.J. (2016), “Frontline Employee Customer-Oriented Attitude in
the Presence of Job Demands and Resources: The Influence Upon Deep and
Surface Acting”, *Journal of Service Research*, Vol. 19 No. 1, pp. 102–117.
- Yoo, J.J.E., Kim, T.T. and Lee, G. (2015), “When Customers Complain: The Value of
Customer Orientation in Service Recovery”, *Cornell Hospitality Quarterly*, Vol.
56 No. 4, pp. 411–426.
- Zhang, M. (2019), “The Bright Side of Stressed Frontline Employees in Service
Recovery : The Combination Causes of Organizational Empowerment and
Self-Regulation Processes”, *Psychology Research and Behavior Management*,
Vol. 12, pp. 1087–1097.
- Zhang, M. and Geng, R. (2019), “Empowerment in service recovery : the role of
self-regulation process of frontline employee”, *Management Decision*, Vol.
Forcoming, available at:<https://doi.org/10.1108/MD-10-2018-1073>.

Appendix

Please indicate to what extent you agree with the following statements (1 = totally disagree to 5 = totally agree)	Loading
FLEs version	
Service recovery awareness (AVE = 0.446; Cronbach's α = 0.803)	
I fully understand the impact of service failure on our hotel.	0.740
I fully understand that service failures should be handled positively and efficiently.	0.767
I fully understand that service failures should be handled in a timely manner.	0.693
I am used to reporting to my supervisor immediately after service failure occurs.	0.664
I want to coordinate with other employees in handling service failures.	0.680
I want to do extra tasks for service recovery.	0.544
Work engagement (AVE = 0.458; Cronbach's α = 0.745)	
I should address service failures in accordance with the hotel's policy.	0.692
I realize that the hotel's arrangement in service recovery is rational.	0.669
I can find the appropriate approach to handling service failures.	0.745
I feel happy with my reward given based on my performance in service recovery.	0.720
I feel happy with the recognition given me based on my performance in service recovery.	0.678
Emotional exhaustion (AVE = 0.539; Cronbach's α = 0.801)	
I feel emotionally drained from service recovery.	0.802
Service failure handling is really challenging for me.	0.762
I feel worn out at the end of handling a service failure.	0.834
Working with people in service recovery is really a strain for me.	0.788
Perceived psychological empowerment (AVE = 0.478; Cronbach's α = 0.905)	
I am self-assured about my capabilities to perform service recovery.	0.752
I have considerable opportunity for independence and freedom in how I conduct service recovery.	0.654
I have significant autonomy in determining how I conduct service recovery.	0.692
I can decide on my own how to deal with service failure.	0.664
Customer version	
Post-recovery satisfaction (AVE = 0.531; Cronbach's α = 0.702)	
I am pleased with the overall service recovery provided by the employee.	0.681
I feel delighted with the overall service recovery provided by the employee.	0.723
I am completely satisfied with the service recovery experience.	0.752
I am happy with the overall service recovery provided by the employee.	0.755