



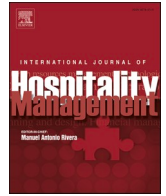
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How the COVID-19 pandemic affected hotel Employee stress: Employee perceptions of occupational stressors and their consequences

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ABSTRACT

This study sought to examine the impacts of the global coronavirus pandemic on hotel employees' perceptions of occupational stressors and their consequences. Paired *t*-tests and structural equation modeling were applied to examine the responses of 758 hotel employees in the United States. The findings showed that occupational stressors after the outbreak of the pandemic consisted of three domains: traditional hotel-work stressors, unstable and more demanding hotel-work-environment stressors, and unethical hotel-labor-practices-borne stressors. The impacts of these stressors differed from the hypothesis that traditional hotel-work stressors positively affect job satisfaction and organizational commitment. The findings showed that job satisfaction and organizational commitment significantly explained job performance, subjective well-being, and prosocial behavior, but they did not significantly influence turnover intention. Hotel employees' pre-pandemic perceptions of occupational stressors and their consequences also differed significantly from their perceptions after the pandemic had broken out.

1. Introduction

The novel coronavirus disease known as COVID-19 has caused severe consequences as a result of its rapid spread worldwide. Indeed, the latest number from the World Health Organization (World Health Organization (WHO), 2020) website as of 21 June 2020 reported more than 8.5 million cases worldwide, including approximately 456,973 deaths (<https://covid19.who.int/>). The number of cases has been expanding globally, with critically alert situations demanding multiple emergency actions by government entities around the world (Kim et al., 2020). Many countries and cities are on complete lockdowns to prevent COVID-19 from spreading. One of the severely impacted industries is the hotel industry. For example, in the United States, the room occupancy rates of hotels plummeted to 39.4% in March 2020 (Statista, 2020).

The deterioration of hotels' financial situations has wreaked havoc on employment and job security. Hotels have forced their staffs to take early retirement, be laid off, take unpaid leave, undergo a reduction in welfare benefits, and change their working shifts or positions (Edgecliffe-Johnson, 2020, March 18). These oppressive circumstances have fostered anxiety in employees about their work and have made them

fearful for their employment future.

Occupational stressors were identified in previous studies as one of the key predictors that negatively affect employee satisfaction, commitment, job performance, subjective well-being, prosocial behavior, and intention to stay (Darvishmotevali and Ali, 2020; Hwang et al., 2014; Kang et al., 2020; Kim et al., 2015; Yang and Lau, 2019). Hotel employees are in extreme states of anxiety and feel stressful to work at their workplaces during the COVID-19 pandemic. The grave situation of escalating occupational stress due to the detrimental impacts of the pandemic on all hotel employees, from frontline workers to management, motivated us to investigate the effects of the pandemic on occupational stressors and their consequences. Here, we viewed stress, which is an individual's physical or psychological response to unusual situations, as a common and essential part of life (Ivancevich and Mateson, 1980; Selye, 1976). According to the International Labor Organization (2020), however, employees must confront a huge challenge as they attempt to cope with the newly changing work environment created by the COVID-19 pandemic and its consequent impact on occupational stressors.

This study aimed to examine the impacts of COVID-19 on hotel

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employees' perceptions of occupational stressors and their outcomes. More specifically, it sought to identify the factors affecting employees' occupational stressors after the outbreak of the COVID-19 pandemic. Second, it sought to assess the status quo of job satisfaction, organizational commitment, job performance, subjective well-being, prosocial behavior, and turnover intention. Third, it attempted to identify the structural relations among the concepts. Fourth, it sought to compare the hotel workers' perceptions of occupational stressors and their consequences, as influenced by the employees' sociodemographic and job-related variables. Last, it aimed to compare hotel workers' perceptions of the occupational stressors and their consequences before and after the outbreak of the COVID-19 pandemic.

2. Occupational stressors and their consequences

2.1. Occupational stress and stressors

Research on occupational stress has long been a major focus for many hotel practitioners and academic researchers because of its significant impact on organizations (Ariza-Montes et al., 2018; Huang et al., 2018; Radic et al., 2020). For example, if an employee fails to cope with employment demands, conflict occurs between employees or between the employee and his/her job (Faulkner and Patiar, 1997). In addition, that conflict can provoke personal dysfunction that manifests in negative physiological and emotional responses in the workplace (Levi, 1981). Thus, occupational stress can be defined as "a particular individual's awareness or feeling of personal dysfunction as a result of perceived conditions or happenings in the work setting" (Parker and DeCotiis, 1983, p. 161).

Because occupational stress is viewed as one of the most important challenges of human resource management, many researchers have sought to identify the impacts of occupational stress in the hospitality industry. Some studies have indicated that occupational stressors enhance hotel employee's turnover intention (Hwang et al., 2014; Tongchaiprasit and Ariyabuddhiphongs, 2016). Other studies have shown that occupational stress reduces employee job satisfaction (Hight and Park, 2019; Yousaf et al., 2019) and job performance (Abdelhamied and Elbaz, 2018; Akgunduz, 2015). Therefore, it is meaningful and important to examine the dimensionality of occupational stressors and their impacts on internal consequences in the hotel industry.

2.2. Relationship of occupational stressors to job satisfaction

Job satisfaction is defined as the "pleasurable emotional state resulting from the appraisal of one's job as achieving or facilitating the achievement of one's job values" (Locke, 1969). Put differently, it is a judgment of the perceived relationship between employees' expectations from their work and the perceived offering they receive (Lund, 2003). Indeed, job satisfaction is a significant internal goal of every organization (Amisshah et al., 2016). Studies have found that occupational stress is a key predictor of employees' negative emotional outcomes, such as job dissatisfaction (Barsky et al., 2004; Dartey-Baah et al., 2020). In the literature on the hospitality industry, Kim et al.'s (2015) study indicated that occupational stressors, including role conflict and role ambiguity, were negatively associated with job satisfaction. In a study by Yousaf et al. (2019) that examined the impact of occupational stress and the effects of work-social support on the outcome of that stress, occupational stress was found to be the most influential factor mitigating employee satisfaction. That conclusion has been found consistently in other hospitality and tourism studies (Chan et al., 2015; Cheng and Yi, 2018). Therefore, we proposed the following hypothesis.

Hypothesis 1. *Employees' occupational stressors negatively affect their job satisfaction.*

2.3. Relationship of occupational stressors to organizational commitment

Organizational commitment comprises a large area of organizational perceptions, incorporating not only job-level perceptions but also explicitly including the organizational characteristics to which individuals attribute their emotional attachment, involvement, and continuance in the organization. Hotel employees' cohesive contacts with customers make them particularly prone to experiencing occupational stress (Wetzels et al., 1999). In accordance with social exchange theory, hotel employees who labor in an unpleasant work environment that is characterized by high occupational stress have a reduced likelihood of becoming involved with and emotionally attached to the hotel of their current work (Tiyce et al., 2013). Two recent hospitality-industry studies (Garg and Dhar, 2014; Yang and Lau, 2019) have confirmed this argument, with the frontline hotel workers claiming emotional and physical stress and burnout because of customer incivility. Such stress can lead to apathy at work and unwillingness to be part of a team or a hotel (Lee and Mathur, 1997). On the basis of all of these findings, we established the following hypothesis.

Hypothesis 2. *Employees' occupational stressors negatively affect their organizational commitment.*

2.4. Relationship of job satisfaction and occupational commitment to turnover intention, subjective well-being, and prosocial behavior

Job performance is defined as employees' performed activities and behaviors that contribute to an organization's goals, including the delivery of tangible services (e.g., hotel check-in and check-out) and intangible services (e.g., guest relations) (Jeong and Lam, 2016). In addition to employee job performance, subjective well-being has also received attention in the extant hospitality literature, through efforts to reveal the cognitive and emotional evaluations of hotel employees' lives (Wang et al., 2020). Life satisfaction is a crucial issue in employees' subjective well-being because of its close relationship with life success (Diener et al., 2002).

Prosocial service behavior refers to employee behaviors that are helpful to other individuals, groups, or organizations. Prosocial behavior in this study refers to individual social-altruism and voluntary behaviors that are intended to benefit another in society (Eisenberg et al., 2015).

Turnover intention can be defined as employees' expression of their intention to quit an organization and to seek another job (Tett and Meyer, 1993). High turnover rate of hotel employees has become a main feature of the hotel industry. Previous studies have indicated that occupational stress leads to negative job satisfaction (Hight and Park, 2019; Yousaf et al., 2019). Moreover, stressed employees exhibit a weak commitment to the workplace (Garg and Dhar, 2014). In a psychological study, Yousef (2000) proposed that employees who are highly committed to their organizations and satisfied with their jobs will exhibit high job performance. This relationship has been tested and validated in recent hospitality and tourism studies (Aydin and Kalemci Tüzün, 2019; Koo et al., 2019). Based on the strong connection between job satisfaction and life satisfaction, some studies (Lee et al., 2016; Yurcu and Akinci, 2017) sought to identify and support the positive association between job satisfaction and subjective well-being in the hospitality industry. In addition, Polo-Vargas et al. (2017) identified an indirect link between organizational commitment and life-satisfaction through employee engagement.

High turnover rate is an emergent challenge for hotel businesses. Previous studies have identified that high levels of perceived

occupational stress are associated with high levels of turnover intention (Koo et al., 2019; Wen et al., 2020). Moreover, negative associations have been identified between job satisfaction and turnover intention and between job commitment and turnover intention (Hsiao et al., 2020; Kim et al., 2017).

More recently, hospitality and tourism scholars have extended their research focus from organizational outcomes to societal outcomes, such as prosocial behavior. Studies have suggested that employees who are relatively more satisfied with their workplace and more committed to it tend to join voluntary activities more frequently (Isen and Baron, 1991) and engage more often than average in social networking (Brisette et al., 2002), although those studies did not explicitly test the relationships between job satisfaction, job commitment, and prosocial behavior. Thus, the following hypotheses are proposed.

Hypotheses 3a–3d. *Employees' job satisfaction positively affects their job performance (Hypothesis 3a), subjective well-being (Hypothesis 3b), and prosocial behavior (Hypothesis 3c), and negatively affects their turnover intention (Hypothesis 3d).*

Hypotheses 4a–4d. *Employees' organizational commitment positively affects their job performance (Hypothesis 4a), subjective well-being (Hypothesis 4b), and prosocial behavior (Hypothesis 4c), and negatively affects their turnover intention (Hypothesis 4d).*

2.5. Comparison of occupational stressors and other consequences according to hotel employees' sociodemographic and job-related variables

Previous studies have suggested that hotel employees' occupational stressors can be influenced by various sociodemographic and job-related variables, such as gender, position level, age, department, and hotel type (Herrero et al., 2012; Wireko-Gyebi and Ametephe, 2016). For example, Herrero et al. (2012) suggested that women initially have higher stress levels than men do. Some studies have found that managerial hotel employees tend to experience greater stress because their job duties include handling complaints from demanding customers (Karakaş and Tezcan, 2019; Lee and Shin, 2005). To accomplish sustainability within hotel human resource management, age is the most dominant variable for young employees, who are more willing to change jobs (Vetráková et al., 2019). In Aydin's (2018) study, hotel employees in different departments showed various levels of occupational stress because their job duties differed, even though they worked in the same hotel. Karatepe and Uludag (2008) compared the roles of job stress, burnout, and job performance among hotel employees between independently owned/family-owned hotels and chain hotels. Their results indicated that employees who were working in independently owned/family-owned hotels demonstrated a higher degree of emotional exhaustion and depersonalization than employees of chain hotels did. Thus, the above-discussed studies prompted the following hypothesis.

Hypothesis 5. *The magnitude of occupational stressors and employee-associated outcomes will differ in accord with hotel employees' sociodemographic and job-related variables.*

2.6. Comparison of occupational stressors and their consequences before and after the onset of the COVID-19 pandemic

The hotel and tourism business is one of the largest and most rapidly growing industries, but it is extremely vulnerable. The negative impacts of health-related risks can be devastating and enduring (Rosselló et al., 2017). The major impact of health-related risks on tourism is a decrease in inbound tourist demand, and that impact extends to the level of a dependence on a health-related disease pandemic area (Yang and Chen, 2009). Although the actual economic losses of health-related diseases in the tourism sectors depend on their relative contributions to the national economy, travel and trade restriction measures can create significant economic losses for an affected area (Huang, 2009; Smith, 2006; Otoo and

Kim, 2018). A health-related disease generates political conflict, such as discrimination against races and nationalities, entry bans, and strict quarantine measures (Curley and Thomas, 2004).

Although previous studies have provided significant contributions to our comprehension of the macro-level outcomes caused by health-related risks, only a few studies have attempted to examine the micro-level employee-associated outcomes caused by health-related disease. Hotel operations may require their employees to take unpaid leave, reduce their working hours, change their employment status, reduce their salary, and forego their overtime compensation (Chaturvedi, 2020, April 09). Hotel employees become extremely anxious when they lose faith in the future of the hotel industry. In addition, endless cost-saving measures can destroy the satisfaction, commitment, and loyalty of employees (Wang et al., 2018; Wong and Li, 2015). Therefore, it is assumed that employee perceptions of occupational stressors will be different before and after the COVID-19 pandemic outbreak, and we proposed the following hypothesis.

Hypotheses 6. *The magnitude of occupational stressors and employee-associated outcomes will be different before and after the COVID-19 pandemic.*

3. Methods

The measurement items for the final survey were developed through a thorough literature review, in-depth interviews, and pilot surveys. The twenty-three items used to measure the attributes of occupational stressors were adopted from previous studies (Hwang et al., 2013, 2014; Tongchaiprasit and Ariyabuddhipongs, 2016). To ensure the content validity of the items that we derived from the literature review and to identify new items that we might have missed, we conducted in-depth interviews with five hotel managers and 10 hotel employees. Eight other items were added to the scale on the basis of the situation of the COVID-19 pandemic. For example, "forceful advanced annual leave," "demand of replacing the job duties for other departments (e.g., buffet restaurant, guest relation)," and "frequent reporting/documentation about the hygiene issues." In addition, a pilot test was conducted with 50 hotel employees through online panel survey to purify the measurement items. A total of 31 items were used to measure the construct of occupational stressors.

The items that we used to manifest job satisfaction (four items) were derived from previous studies (Babin and Boles, 1998; Netemeyer et al., 1996). Four items to indicate organizational commitment were also drawn from a previous study (Kucukusta et al., 2016), whereas three items that manifest turnover intention were extracted from a study conducted by Netemeyer et al. (1996). Four items related to job performance were extracted from previous literature (Griffin et al., 2007). Five items that addressed subjective well-being were extracted from previous literature (Diener and Fujita, 1995; Zhao et al., 2016). Finally, items indicating prosocial behavior (three items) were selected from previous research (Gagné, 2003; Twenge et al., 2007). All of the items were measured using a seven-point Likert scale ranging from strongly disagree (1), neutral (4) to strongly agree (7).

The sample for this study was composed of hotel employees in the United States. A self-administered online panel survey was conducted through online panel companies to select targeted nationwide samples and to consider cost and time effectiveness (Granello and Wheaton, 2004). The main survey was executed from 28 April to 21 May 2020 and comprised three screening questions that requested information on current employment status, working experience in hotels, and awareness of the pandemic outbreak. Respondents were asked to evaluate their perceived occupational stressors and consequences on the basis of pre- and post-COVID-19 pandemic. Ultimately, those procedures resulted in a collection of 800 questionnaires. Responses from employees who had been working for a hotel for less than one year were eliminated from the list of respondents. To trace insincere answers, profiles for the number of

work years, age, work position, and work department were compared for every respondent. As a result, 42 questionnaires were removed because they were believed to contain untrustworthy responses, including having only one number checked throughout the entire questionnaire, the survey having been completed within two minutes, and report of a high employment position despite the respondent's young age. Consequently, a total of 758 respondents were accepted for further data analyses.

4. Results

4.1. Profiles of the respondents

According to the results of the frequency analysis, 63.7% of the respondents were males. Categories of age groups, in group-size order, were 30 s (43.7%), 20 s (28.1%), 40 s (20.4%), and 50 s (7.8%). In terms of educational level, approximately 60.6% of the participants had a university degree. A majority of respondents were working at a supervisory level (39.3%), while 32.8% were at a managerial level. Slightly more than half (55.1%) of the participants worked for independent, privately owned hotels, while 44.3% of the respondents worked for chain-brand hotels. About 71% of them were working in front-of-house departments, whereas 28.1% of them were working in back-of-house departments. In regard to duration of work in the hotel industry, the largest group was that of individuals who had worked in hotels for four to nine years (51.1%), followed by the group who had worked for one year to three years (25.3%), and finally the group who had worked for 10 years or longer (23.6%). The locations of the respondents' work residence were Texas (12.0%), New York (11.5%), California (11.3%), Florida (6.2%), and Pennsylvania (4.4%). The respondents reported that their work hotels' room occupancy rate after the COVID-19 outbreak was 40.4%, compared with a room occupancy rate before COVID-19 of 71.3%. Further detailed profiles are provided in Table 1.

4.2. Exploratory factor analysis of the measurement model (first half of the data set, $n = 379$)

The data collected were randomly split into two data sets for cross-validation (Kline, 2016). An exploratory factor analysis (EFA) with principal-axis factoring and promax rotation was conducted for the first half of the data set ($n = 379$). As Table 2 shows, items with communalities below 0.4 and factor loadings of less than 0.4 were considered for removal (Stevens, 1992). Factors were selected if their eigenvalues were greater than 1.0. The reliability alphas for all of the domains ranged from 0.86 to 0.94. Finally, the 24 items that were generated showed a three-factor solution. The three extracted domains of occupational stressors were labeled "traditional hotel-work stressors," "unstable and more demanding hotel-work-environment stressors," and "unethical hotel-labor-practices-borne stressors." Other constructs generated a single-factor solution.

4.3. Confirmatory factor analysis of the measurement model (second half of the data set, $n = 379$)

A confirmatory factor analysis (CFA) was applied to the second half of the data set ($n = 379$), to confirm the factor structure that had been identified from the EFA. The results of the CFA indicated a satisfactory level of fit for the overall fit indices ($\chi^2(1000) = 1723.63$ ($p < 0.001$), CFI = 0.95, TLI = 0.94, RMSEA = 0.04, GFI = 0.84). The standardized factor loading of each item ranged from 0.64 to 0.82, thus exceeding the threshold value of 0.5. All average variance extracted (AVE) values and construct reliability values were higher than 0.5 and 0.85, respectively, thus supporting convergent validity. In addition, the square roots of the AVE values for each construct were greater than the correlation coefficients for the corresponding inter-constructs, thus demonstrating discriminant validity.

Table 1
Profiles of the respondents ($N = 758$).

Variable	Category	Percentage (%)
Gender	Female	36.0
	Male	63.7
	Others	0.3
Age	20 s	28.1
	30 s	43.7
	40 s	20.4
	50 s or older	7.8
	Entry-level	25.6
Position level	Supervisory-level	39.3
	Managerial-level	32.8
	Executive-level	2.3
	High school or less	4.7
Educational level	Post-secondary school /Associate Degree/ Diploma (etc...)	9.4
	University degree	60.6
	Master degree and above	25.3
Hotel type	Independent privately owned hotel	55.1
	Chained-brand hotel	44.3
	Others	0.6
Working department	Front of house	68.0
	Back of house	31.3
	Others	0.7
Years of experience in hotel industry	Less than 4 years	25.3
	4–9 years	51.1
	Longer than 9 years	23.6
Hotels' room occupancy rate	Before the COVID-19 outbreak	71.3
	After the COVID-19 outbreak	40.4
	Texas	12.0
	New York	11.5
	California	11.3
	Florida	6.2
	Pennsylvania	4.4
	Ohio	2.9
	Washington	2.6
	North Carolina	2.1
Location of working hotel	Arizona	2.0
	Chicago	2.0
	Colorado	2.0
	Illinois	2.0
	New Jersey	2.0
	Massachusetts	1.7
	Michigan	1.7
	Virginia	1.7
	Others	31.9

4.4. Structural equation modeling

In Table 3, the results of our structural equation modeling (SEM) demonstrate a satisfactory level of fit for the overall fit indices ($\chi^2(1034) = 3350.36$ ($p < 0.001$), CFI = 0.91, TLI = 0.90, RMSEA = 0.05, GFI = 0.85). We examined a total of 14 direct relationships in this study, and the results supported 10 of those 14 hypotheses. Hypotheses 1a and 2a were tested by examining the relationship between traditional hotel-work stressors, job satisfaction ($\beta = 0.88$, $t = 9.90$, $p < 0.001$), and organizational commitment ($\beta = 0.85$, $t = 9.80$, $p < 0.001$). The results led us to reject Hypotheses 1a and 2a.

As expected, the influence that unstable and more demanding hotel-work-environment stressors had on job satisfaction and on organizational commitment were significant and negative ($\beta = -0.23$, $t = -2.81$, $p < 0.01$; $\beta = -0.26$, $t = -3.21$, $p < 0.01$, respectively); thus, Hypotheses 1b and 2b were supported. In addition, unethical hotel-labor-practices-borne stressors exerted a significant negative effect on job satisfaction and organizational commitment ($\beta = -0.32$, $t = -3.08$, $p < 0.01$; $\beta = -0.23$, $t = -2.23$, $p < 0.05$), thus supporting Hypotheses 1c and 2c.

The hypothesized influences that job satisfaction had on job performance ($\beta = 0.36$, $t = 8.27$, $p < 0.001$), on subjective well-being ($\beta = 0.46$, $t = 12.53$, $p < 0.001$), and on prosocial behavior ($\beta = -0.22$, $t = 5.90$, $p < 0.001$) also were significant. Thus, Hypotheses 3a, 3b, and 3c were

Table 2
Results of EFA (n = 379).

Domains and Constructs	Community	Factor loading	Mean
Domain 1: Traditional hotel-work stressors (Eigenvalue: 12.14; Variance explained: 50.58%; Cronbach's $\alpha = 0.94$; Grand mean: 3.96)			
Excessive workload	0.70	0.88	4.00
Long working hours	0.68	0.87	3.90
Tight working time	0.62	0.86	4.08
Work demands on private life	0.66	0.83	3.91
Emotional stress from customers	0.53	0.72	3.95
Repetitive work	0.61	0.62	3.84
Too much job variety	0.65	0.61	4.28
Lack of time with family	0.65	0.56	3.84
Demands of a better personal performance	0.65	0.53	3.88
Poor cooperation with other staff/ departments	0.59	0.50	3.91
Lack of involvement in decision making	0.58	0.43	3.96
Domain 2: Unstable and more demanding hotel-work-environment stressors (Eigenvalue: 2.10; Variance explained: 6.99%; Cronbach's $\alpha = 0.90$; Grand mean: 4.48)			
Concerns about lay off	0.68	0.88	4.62
Staff shortage	0.64	0.82	4.38
Concerns about salary cut	0.62	0.77	4.64
Unstable job environment	0.58	0.77	4.56
Emotional stress from current negative news	0.64	0.68	4.42
Insufficient resources for work (e.g., offering masks)	0.58	0.61	4.42
Frequent reporting/documentation about hygiene issues	0.58	0.57	4.37
Demanding hygiene policies or guidelines	0.55	0.53	4.44
Domain 3: Unethical hotel-labor-practices-borne stressors (Eigenvalue: 1.06; Variance explained: 2.85%; Cronbach's $\alpha = 0.87$; Grand mean: 4.09)			
Forced advanced annual leave	0.77	0.96	4.00
Forceful labor policies	0.71	0.81	4.06
Forced unpaid leave	0.56	0.62	4.15
Demand to replace the job duties with other departments (e.g., buffet restaurant, guest relations)	0.66	0.59	4.17
Demand to submit new ideas/proposals for attracting new customers every day.	0.59	0.50	4.08
Job satisfaction (Eigenvalue: 3.09; Variance explained: 77.18%; Cronbach's $\alpha = 0.90$; Grand mean: 4.38)			
I am enthusiastic about my job in this hotel.	0.78	0.89	4.35
I feel a great sense of personal satisfaction with my line of work in this hotel.	0.78	0.88	4.39
I am satisfied with my present line of work in this hotel.	0.78	0.88	4.50
I am happy to have this job in this hotel.	0.75	0.87	4.27
Organizational commitment (Eigenvalue: 3.12; Variance explained: 78.02%; Cronbach's $\alpha = 0.91$; Grand mean: 4.31)			
I feel a strong sense of belonging in this hotel.	0.79	0.89	4.35
I feel like part of the family at this hotel.	0.79	0.89	4.37
I feel emotionally attached to this hotel.	0.78	0.88	4.31
I feel happy to spend the rest of my career in this hotel.	0.76	0.87	4.21
Job performance (Eigenvalue: 3.24; Variance explained: 56.46%, Cronbach's $\alpha = 0.86$; Grand mean: 4.87)			
In this hotel, I have suggested ways to make my work unit more effective.	0.71	0.85	4.86
In this hotel, I have coordinated my work with coworkers.	0.71	0.84	4.76
In this hotel, I have initiated better ways of doing my core tasks.	0.69	0.83	4.81
In this hotel, I have presented a positive image of the organization to other people (e.g., clients).	0.66	0.81	4.89
In this hotel, I have carried out the core parts of my job well.	0.47	0.68	5.02
Subjective well-being (Eigenvalue: 3.62; Variance explained: 65.68%, Cronbach's $\alpha = 0.90$; Grand mean: 4.40)			
The conditions of my life are excellent.	0.71	0.84	4.41
In most ways my life is close to ideal.	0.71	0.84	4.33
I am satisfied with my life.	0.71	0.84	4.45
So far, I have gotten the important things I want in life.	0.60	0.77	4.58

Table 2 (continued)

Domains and Constructs	Community	Factor loading	Mean
If I could live my life again, I would change almost nothing.	0.56	0.75	4.21
Prosocial behavior (Eigenvalue: 2.47; Variance explained: 73.57%, Cronbach's $\alpha = 0.89$; Grand mean: 4.42)			
I like to spend more time on community services and volunteerism.	0.83	0.91	4.43
I like to be involved with community services and volunteerism.	0.74	0.86	4.37
I like to support donations/charity activities for underprivileged people (e.g., donation, fundraising).	0.64	0.80	4.47
Turnover intention (Eigenvalue: 2.34; Variance explained: 67.10%; Cronbach's $\alpha = 0.86$; Grand mean: 4.35)			
In this hotel, I often think about quitting my present job.	0.70	0.84	4.34
In this hotel, I intend to search for a new job within the next 12 months.	0.68	0.82	4.42
In this hotel, I have searched for a new job during the past 12 months.	0.63	0.80	4.29

supported. In addition, the influences that organizational commitment had on job performance ($\beta = 0.20, t = 5.05, p < 0.001$), on subjective well-being ($\beta = 0.37, t = 10.35, p < 0.001$), and on prosocial behavior ($\beta = 0.41, t = 10.68, p < 0.001$) were significant and positive. Therefore, Hypotheses 4a, 4b, and 4c were supported.

However, the influences that job satisfaction and organizational commitment exerted on turnover intention were not significant ($\beta = 0.02, t = 0.41, n.s.$; $\beta = -0.07, t = -1.59, n.s.$, respectively). Hence, hypotheses 3d and 4d were rejected.

4.5. Hotel employees' perceptions of occupational stressors and their consequences, according to sociodemographic and job-related variables

An independent sample *t*-test was conducted to compare the occupational stressors and their consequences according to hotel employees' sociodemographic and job-related variables (Hypothesis 5). Table 4 reveals that the occupational stressors and their consequences registered significant differences between the categories in the pairs used to represent the variables for gender, work position level, age, work department, and hotel type. For instance, females had higher levels of perceived traditional hotel-work stressors ($t(754) = -2.57, p < 0.05$), unstable and more demanding hotel-work-environment stressors ($t(754) = -5.08, p < 0.001$), unethical hotel-labor-practices-borne stressors ($t(754) =$

Table 3
Direct Path for the Structural Model (N = 758).

Hypothesis	Regression paths	Standard coefficient	t-value	Decision
H1a	OS1 → JS	0.88	9.90***	Reject (because of different sign)
H1b	OS2 → JS	-0.23	-2.81**	Accept
H1c	OS3 → JS	-0.32	-3.082**	Accept
H2a	OS1 → OC	0.85	9.80***	Reject (because of different sign)
H2b	OS2 → OC	-0.26	-3.21**	Accept
H2c	OS3 → OC	-0.23	-2.23*	Accept
H3a	JS → JP	0.36	8.27***	Accept
H3b	JS → SWB	0.46	12.53***	Accept
H3c	JS → PSB	0.22	5.90***	Accept
H3d	JS → TI	0.02	0.41	Reject
H4a	OC → JP	0.20	5.05***	Accept
H4b	OC → SWB	0.37	10.35***	Accept
H4c	OC → PSB	0.41	10.68***	Accept
H4d	OC → TI	-0.07	-1.59	Reject

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

Table 4
Paired *t*-tests to Investigate Mean Differences Across Sociodemographic and Job-related Variables After the Onset of COVID-19.

Domains and Constructs	Gender			<i>t</i> -value
	Male (M) (n = 483)	Female (F) (n = 273)	Difference (M–F)	
Traditional hotel-work stressors (Domain 1)	3.86	4.14	-0.28	-2.57*
Unstable and more demanding hotel-work-environment stressors (Domain 2)	4.36	4.87	-0.52	-5.08***
Unethical hotel-labor-practices-borne stressors (Domain 3)	4.02	4.26	-0.24	-2.03*
Job satisfaction	4.34	4.28	0.06	0.58
Organizational commitment	4.28	4.15	0.12	1.03
Job performance	4.80	4.96	-0.15	-1.50
Subjective well-being	4.32	4.33	-0.02	-0.15
Prosocial behavior	4.30	4.45	-0.15	-1.18
Turnover intention	4.11	4.44	-0.33	-2.60**
Domains and Constructs	Position level			<i>t</i> -value
	Entry and supervisory level (E) (n = 492)	Managerial level and above (M) (n = 266)	Difference (E–M)	
Traditional hotel-work stressors (Domain 1)	3.79	4.27	-0.48	-4.43***
Unstable and more demanding hotel-work-environment stressors (Domain 2)	4.50	4.62	-0.12	-1.12
Unethical hotel-labor-practices-borne stressors (Domain 3)	3.94	4.42	-0.48	-4.06***
Job satisfaction	4.12	4.69	-0.57	-5.28***
Organizational commitment	3.97	4.71	-0.75	-6.72***
Job performance	4.81	4.95	-0.14	-1.39
Subjective well-being	4.13	4.65	-0.52	-4.90***
Prosocial behavior	4.21	4.62	-0.40	-3.39***
Turnover intention	4.25	4.19	0.06	0.47
Domains and Constructs	Age			<i>t</i> -value
	20 s and 30 s (A) (n = 544)	40 and older (B) (n = 214)	Difference (A–B)	
Traditional hotel-work stressors (Domain 1)	3.89	4.14	-0.24	-2.11*
Unstable and more demanding hotel-work-environment stressors (Domain 2)	4.47	4.74	-0.27	-2.43*
Unethical hotel-labor-practices-borne stressors (Domain 3)	4.04	4.29	-0.25	-1.96*
Job satisfaction	4.21	4.58	-0.37	-3.06**
Organizational commitment	4.11	4.52	-0.41	-3.25**

Table 4 (continued)

Domains and Constructs	Gender			<i>t</i> -value
	Male (M) (n = 483)	Female (F) (n = 273)	Difference (M–F)	
Job performance	4.78	5.06	-0.28	-2.57*
Subjective well-being	4.21	4.59	-0.39	-3.25**
Prosocial behavior	4.29	4.53	-0.24	-1.85
Turnover intention	4.26	4.15	0.11	0.78
Domains and Constructs	Work department			<i>t</i> -value
	Front-of-house (F) (n = 541)	Back-of-house (B) (n = 212)	Difference (F–B)	
Traditional hotel-work stressors (Domain 1)	3.95	3.98	-0.03	-0.25
Unstable and more demanding hotel-work-environment stressors (Domain 2)	4.58	4.44	0.14	1.23
Unethical hotel-labor-practices-borne stressors (Domain 3)	4.08	4.17	-0.09	-0.70
Job satisfaction	4.25	4.50	-0.25	-2.08*
Organizational commitment	4.18	4.37	-0.18	-1.44
Job performance	4.84	4.92	-0.09	-0.79
Subjective well-being	4.26	4.47	-0.21	-1.72
Prosocial behavior	4.31	4.48	-0.17	-1.32
Turnover intention	4.28	4.09	0.19	1.38
Domains and Constructs	Hotel type			<i>t</i> -value
	Chain hotel (C) (n = 418)	Independent hotel (I) (n = 336)	Difference (C–I)	
Traditional hotel-work stressors (Domain 1)	3.85	4.09	-0.24	-2.26*
Unstable and more demanding hotel-work-environment stressors (Domain 2)	4.55	4.53	0.03	0.28
Unethical hotel-labor-practices-borne stressors (Domain 3)	4.00	4.23	-0.23	-2.06*
Job satisfaction	4.15	4.53	-0.38	-3.53***
Organizational commitment	4.08	4.42	-0.34	-2.97**
Job performance	4.84	4.90	-0.06	-0.63
Subjective well-being	4.25	4.41	-0.16	-1.51
Prosocial behavior	4.21	4.53	-0.32	-2.71**
Turnover intention	4.21	4.24	-0.03	-0.24

****p* < 0.001, ***p* < 0.01, **p* < 0.05.

-2.03, *p* < 0.05), and turnover intention (*t* (754) = -2.60, *p* = 0.01) than males did.

In addition, managerial-level and above employees reported higher perceived traditional hotel-work stressors (*t* (754) = -4.43, *p* < 0.001), unethical hotel-labor-practices-borne stressors (*t* (754) < -4.06, *p* < 0.001), and also greater job satisfaction (*t* (754) = -5.28, *p* < 0.001), organizational commitment (*t* (754) < -6.72, *p* = 0.001), subjective well-being (*t* (754) = -4.90, *p* < 0.001), and prosocial behavior (*t* (754) < -3.39, *p* = 0.001) than the entry-level and supervisory employees

reported. Hotel employees who were 40 years old or older reported higher traditional hotel-work stressors ($t(754) = -2.11, p < 0.05$), unstable and more demanding hotel-work-environment stressors ($t(754) = -2.43, p < 0.05$), and unethical hotel-labor-practices-borne stressors ($t(754) = -1.96, p < 0.05$), and again greater job satisfaction ($t(754) = -3.06, p < 0.01$), organizational commitment ($t(754) = -3.25, p < 0.01$), job performance ($t(754) = -2.57, p < 0.05$), and subjective well-being ($t(754) = -3.25, p < 0.01$), than their younger counterparts did.

Hotel employees who worked in back-of-house departments had slightly higher job satisfaction than the employees who worked in front-of-house departments had ($t(754) = -2.08, p < 0.05$). In addition, hotel employees who worked in independent, privately owned hotels had higher perceived traditional hotel-work stressors ($t(754) = -2.26, p < 0.05$) and unethical hotel-labor-practices-borne stressors ($t(754) = -2.97, p < 0.01$), and again greater job satisfaction ($t(754) = -3.53, p < 0.001$), organizational commitment ($t(754) = -2.97, p < 0.01$), and prosocial behavior ($t(754) = -2.71, p < 0.01$) than their counterparts in chain hotels had.

4.6. Hotel employees' perceptions of occupational stressors and consequences before and after the COVID-19 pandemic outbreak

Hypothesis 6 was tested by examining the difference between hotel employees' occupational stressors and their consequences before and after the COVID-19 pandemic outbreak. A significant difference between the before-outbreak and after-outbreak values was observed at the .001 level for the two new occupational stressors and their consequences. Thus, Hypothesis 6 was supported. Table 5 shows that the traditional-hotel-work stressors, such as excessive workload, long working hours, work demands on private life, repetitive work, lack of time with family, and poor cooperation with other staff/departments, were statistically higher before the onset of the pandemic than after it had taken hold.

In contrast, both the unstable and more demanding hotel-work-environment stressors and the unethical hotel-labor-practices-borne stressors were statistically lower before the onset of COVID-19 than they were after the pandemic had taken root. In addition, hotel employees' attitudes and behaviors were statistically different before the onset of the pandemic than they were after it. Table 5 shows that job satisfaction, organizational commitment, job performance, subjective well-being, and prosocial behavior had each significantly decreased after the pandemic took hold, whereas turnover intention was significantly higher after COVID-19 had become quite prevalent. The detailed information is visually showcased in Fig. 1.

Table 5
Paired *t*-tests to Identify Mean Differences between Pre-COVID-19 and Post-COVID-19 Outbreak Occupational Stressors and Their Consequences ($N = 758$).

Domains and Constructs	Before and After the Onset of COVID-19			<i>t</i> -value
	Before (B)	After (A)	Difference (B-A)	
Traditional hotel-work stressors (Domain 1)	4.46	3.96	0.50	7.36***
Unstable and more demanding hotel-work-environment stressors (Domain 2)	3.89	4.54	-0.65	-8.51***
Unethical hotel-labor-practices-borne stressors (Domain 3)	3.84	4.11	-0.27	-3.24**
Job satisfaction	5.21	4.32	0.89	12.67***
Organizational commitment	5.03	4.23	0.80	10.33***
Job performance	5.23	4.86	0.37	5.67***
Subjective well-being	5.05	4.32	0.73	10.23***
Prosocial behavior	4.87	4.36	0.51	6.41***
Turnover intention	3.98	4.23	-0.25	-2.682**

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

5. Discussion

The results of this study indicate that hotel employees who had high perceived levels of traditional hotel work stressors still experienced positive job satisfaction and organizational commitment. This result differs from our expectation, which was based on a number of previous studies that had shown that employees' occupational stress was likely to reduce their job satisfaction and organizational commitment (Chan et al., 2015; Tiyce et al., 2013; Yousaf et al., 2019). However, those earlier studies did not consider an unpredicted economic recession, which likely affected our results. As a result of the coronavirus pandemic, the underemployment rate has surged and hotel employees' incomes have been substantially curtailed by a reduction in staff welfare. It may be that in our study, the hotel employees were willing to ignore the traditional hotel-work stressors during a global economic crisis because those stressors were compensated for by the employees' ability to still earn income for their livelihood in the midst of a time of slashed employment. Perhaps even more importantly, it may be that having such stresses signified an effort by the hotel to stand shoulder to shoulder with its employees to ride out the current difficult times, and consequently such employer support generated job satisfaction and organizational commitment.

This study also identified two new domains of hotel occupational stressors (unstable and more demanding hotel-work-environment stressors, and unethical hotel-labor-practices-borne stressors) that occurred after the COVID-19 pandemic had created an extreme state of anxiety and had lowered job satisfaction and organizational commitment. These results are confirmed by previous studies that demonstrated the negative effect of occupational stress on employees' attitude (Cheng and Yi, 2018; Kim et al., 2015; Yang and Lau, 2019).

Second, the effects that job satisfaction and organizational commitment exert on employee behavior have already been demonstrated (Aydın and Kalemci Tüzün, 2019; Brissette et al., 2002; Yousef, 2000; Yurcu and Akinci, 2017) and shown to reflect the original idea of the social exchange theory, which states that job satisfaction and organizational commitment are positively associated with hotel employees' constructive behaviors (Garba et al., 2018). Nevertheless, the findings of this study are inconsistent with previous studies in which job satisfaction and organizational commitment were negatively associated with turnover intention (Hsiao et al., 2020; Kim et al., 2017; Koo et al., 2019; Wen et al., 2020). Some hotel employees might feel that quitting their job is not an ideal option because during times of imminent economic risk it is extremely difficult to find a new job with the same remuneration package. Therefore, the hotel employees in our study who reported a low level of job satisfaction and organizational commitment did not necessarily have a higher turnover intention.

Third, hotel employees' sociodemographic and job-related variables played a significant role in the respondents' perceived occupational stressors and their consequences pre- and post-COVID-19 outbreak. In our study, the above-age-40 managerial-level employees showed a higher job satisfaction and organizational commitment than the entry and supervisory employees did, even though they also had a higher level of perceived occupational stress. Two feasible explanations exist. First, older-age managerial employees are more likely to enjoy their job and consider their current employment to be a long-term career through which they can achieve self-accomplishment, such as enhanced opportunities for career development (Lu et al., 2016). Second, older-age managerial employees are more experienced than their younger counterparts are in managing stressful situations, which could explain their higher satisfaction and job commitment even in a situation of higher occupational stressors. In addition, this study's respondents who were working in independent, privately owned hotels exhibited stronger job satisfaction, commitment, and prosocial behavior than their chain-employed counterparts did, which is inconsistent with the findings of a previous study (Karatepe and Uludag, 2008). The most plausible explanation for that difference according to hotel type is that chain hotels have to follow strict

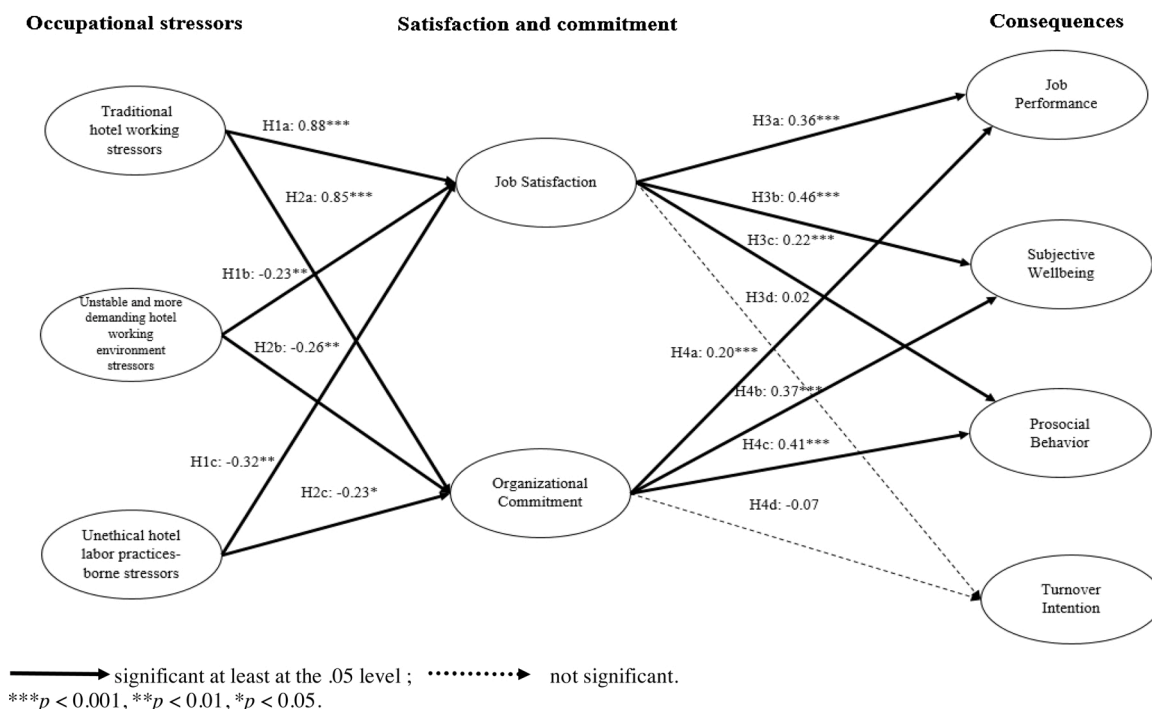


Fig. 1. Direct Paths of the Structural Model (N = 758).

standards and guidelines issued from their international corporate offices, whereas the employees who work in independent, privately-owned hotels enjoy flexible policies, and that situation can easily create the sense of employees sharing life's ups and downs with the hotel business owners.

Fourth, it is important to note that the traditional hotel-work stressors decreased significantly after the onset of COVID-19, meaning that after the outbreak of the pandemic, hotel employees reacted less sensitively to the traditional hotel-work stressors. The most plausible explanation for that change is that the hotel business was critically affected by stringent restrictions on tourist movements, and also by several social distancing measures, such as shelter-in-place orders, travel restrictions, bans on large social gatherings, and closed entertainment venues (Courtemanche et al., 2020). For example, permanent hotel employees were compelled to accept unpaid leave, while temporary hotel employees were forced to cut back on their working hours (Edgecliffe-Johnson, 2020, March 18). Unstable job security and paranoia about their work environment, such as the prospect of immediate joblessness, reduced pay, or a change of work department, undoubtedly helped current staff appreciate their jobs despite also perceiving traditional hotel-work-environment stressors.

6. Academic and practical implications

This study's findings have important academic implications. First, this research was novel in revealing new occupational stressors and their effects on hotel employees after the COVID-19 pandemic outbreak. In addition, this was the first empirical study in the hotel industry that compared hotel employees' occupational stressors and their consequences before and after the onset of the COVID-19 pandemic, and that investigated the relationships between those stressors and their consequences and the employees' sociodemographic and job-related variables.

Second, this study suggests a new factor/domain structure for occupational stressors. Previous studies indicated a six-dimensional framework of occupational stressors that pertain to conflicts with home life, difficult tasks and unsatisfactory pay, conflicts arising from job responsibility, unfair treatment, a lack of support, and the organizational culture (Hwang et al., 2013, 2014). However, in the current

study we loaded those items onto one single factor that we labeled traditional hotel-work stressors. We then identified two new domains of occupational stressors: unstable and more demanding hotel-work-environment stressors, and unethical hotel-labor-practices-borne stressors.

Third, this study revealed that the traditional hotel-work stressor domain positively affected job satisfaction and organizational commitment as a reflection of the special situation in which most employees are fearful. However, our findings supported the notion that stressors can be positive factors for determining an enhancement of job performance and motivation to work hard (McGowan et al., 2006).

This study also has several meaningful practical implications. First, it showed how clearly essential it is to identify employee stressors. In our findings, unstable and more-demanding hotel-work-environment stressors received the highest score of occupational stressors after the onset of the COVID-19 pandemic. Therefore, hotel management should identify and consider diverse remedies for alleviating such occupational stress. For example, hotel management must communicate with its employees about the hotel's situation, abide by their own promises, and simplify the documentation process through an electronic checking system.

Second, unethical hotel-labor-practices-borne stressors had the second-highest post-COVID-19 outbreak stressor score, thus highlighting the importance of organizational norms and fulfillment of hotel employees' expectations. Even though cost-saving measures may be inevitable, hotel management must consider the hotel employees' psychological perceptions and reactions to situations of insecure employment. For example, before taking unfavorable actions, hotel management needs to approach its internal customers using effective communication messaging that thoroughly explains the hotel's emergent financial situation and prospects and that solicits their understanding.

Third, the respondents ranked traditional hotel-work stressors below the other two stressor domains. This finding accompanies the fact that after the onset of the COVID-19 global health risk, the traditional hotel-work stressors were positively associated with both job satisfaction and organizational commitment. A logical explanation would be that hotel employees were grateful to have a job and therefore accepted the conventional stresses, such as long working hours, excessive workload, and

repetitive work. Thus, hotel management should make serious efforts to help employees weather the unprecedented situation through job sharing, changes in work shifts, changes in work departments, training, and competency development.

Fourth, job satisfaction and organizational commitment did not explain the low turnover intention following the onset of the COVID-19 pandemic. That may be explained by the fact that hotel employees are more fearful of job security than they are motivated by job dissatisfaction or weak organizational commitment. Furthermore, job satisfaction and organizational commitment are still important predictors of employees' behavior, such as job performance, subjective well-being, and prosocial behavior. Therefore, hotel management must develop and quickly provide relevant stress-management programs, such as mentoring, reading of humanity books, consultations, team building, stress-release workshops, and outings.

Finally, the perceived occupational stressors and their consequences varied across the employees' sociodemographic and job-related variables. This finding is important because hotel management will need to offer a variety of stress-relief programs that address the features associated with the most influential variables. For example, in the comparison of the stress levels before and after the onset of the pandemic, females, seniors, and managerial staff all showed more-elevated levels of stress than their counterparts did. Therefore, management will need to care for the most-affected groups, and in particular, for senior employees who are concerned about retirement and family obligations.

7. Conclusions and suggestions for future study

The COVID-19 pandemic has caused severe financial deterioration in the hotel industry, and the ecosystem of hotel human resources has been greatly affected. Even more important is the fact that the structure of occupational stressors has changed. After the onset of the COVID-19 pandemic, we identified the existence of three domains of occupational stressors: traditional hotel-work stressors, unstable and more demanding hotel-work-environment stressors, and unethical hotel-labor-practices-borne stressors. Traditional hotel-work stressors turned out to be a positive predictor of job satisfaction and organizational commitment, whereas the other two stressors were negatively associated with job satisfaction and commitment. In addition, job satisfaction and organizational commitment positively affected job performance, subjective well-being, and prosocial behavior. On the other hand, job satisfaction and organizational commitment were no longer predictors of turnover intention. In addition, occupational stressors and their consequences were found to exert significantly different influences pre-COVID-19 versus post-COVID-19 outbreak, in association with the employees' sociodemographic and job-related variables. This finding provides important practical implications to hotel management for how to handle the changing ecosystem of hotel human resources.

This study is involved with some limitations. First, it depends on hotel employees' self-report that is reliant on memory. Now that they must evaluate their perceived occupational stressors before and after the COVID-19 pandemic, memory decay can incur accurate response. However, the limitation can be mitigated because it was a gap of about two months between the spread of the pandemic in the United States and the survey time. Meanwhile, conducting a longitudinal analysis is suggested to validate the results of this study. Second, the data were collected only in the U.S., where the largest number of confirmed cases of COVID-19 were reported. A future study will need to use data from other countries in a comparison of the effects of the pandemic on hotel job security. Furthermore, a future study will need to conduct in-depth interviews with employees to identify latent psychological factors that could be influential, because our questionnaire was limited to include individually peculiar items. Finally, because this study dealt with a current situation of unstable employment conditions, future research should continue to identify substantial long-term plans and systems for employment and job security.

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