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How does career future time perspective moderate in the relationship between infection anxiety with the COVID-19 and service behavior among hotel employees?

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ABSTRACT

The COVID-19 pandemic has had far-reaching impacts on the hospitality industry and its employees. The purpose of this study was to explore the effects of infection anxiety with COVID-19 (IAWC) on employee motivation and work behaviors. This study proposes and examines a model predicting that IAWC has indirect effects on service and helping behaviors via intrinsic motivation. Furthermore, we expect that career future time perspective mitigates the harmful effects of IAWC on service and helping behaviors. We tested our moderated mediation model using data collected from multiple time points and multiple resources (i.e., hotel employees and their corresponding supervisors). The results show that IAWC indirectly influences service and helping behaviors via intrinsic motivation. In addition, career future time perspective moderated the effects of IAWC, such that the indirect effects of IAWC were weakened when employees' career future time perspective was high. This study extends our understanding of the impacts of IAWC on hospitality employees and the buffering effects of career future time perspective. The theoretical and practical implications of this study are discussed.

1. Introduction

The COVID-19 pandemic has had far-reaching effects on the global economy and people's lives. Given the contact-heavy nature of service businesses, the hospitality and tourism industry has faced an extremely challenging situation due to the COVID-19 pandemic (Alonso et al., 2020; Huang, Makridis, Baker, Medeiros, & Guo, 2020; Shapoval et al., 2021; Uğur & Akbyık, 2020). In China, the hospitality industry has experienced difficulties with a tremendous loss of sales and rising unemployment rate because of social distancing, home quarantine, and few tourists (CHA, 2020). Although most hospitality organizations in China have reopened and are being gradually revived by offering safe accommodation and various discounted activities, frontline employees are suffering from psychological problems (e.g., anxiety, fear, and restlessness) brought on by the COVID-19 pandemic (Xiao, Zhang, Kong, Li, & Yang, 2020). Employees have experienced much anxiety during the COVID-19 pandemic, such as worrying about infection, which may severely affect their work behavior and well-being (Karatepe, Saydam, & Okumus, 2021; Trougakos, Chawla, & McCarthy, 2020). Therefore, it is of great significance for hospitality organizations to seek solutions for the management of employees' mental health in the context of the global pandemic (Jung, Jung, & Yoon, 2021). Despite its necessity, there is still a limited understanding of psychological issues, particularly infection anxiety, and how to alleviate the harmful effects of these issues.

To advance the existing hospitality literature, this study sought to empirically investigate the impact of frontline employees' infection anxiety with COVID-19 (IAWC) on their work behaviors, including in-role service and extra-role helping behaviors, which are important factors for hospitality organizations to improve their service quality and maintain a competitive edge. Based on the behavioral inhibition system (BIS; Elliot, 2006) and self-determination theory (Ryan & Deci, 2000), we developed a conceptual model to offer a better understanding of why IAWC impairs frontline employees' positive work behaviors, specifically their service and helping behaviors. We hypothesized that employees' BIS may be activated when they experience higher levels of IAWC, which is likely to negatively affect their intrinsic motivation toward job tasks (Elliot, 2006; Hirsh & Kang, 2016). Furthermore, impaired intrinsic motivation may lead to a decrease in service and helping behaviors according to the core tenet of self-determination theory (Grant, 2008; Ryan & Deci, 2000). Intrinsic motivation is investigated as a
mediator for two reasons. First, intrinsic motivation represents the motivational perspective and may provide an insightful theoretical explanation for linking IAWC to work behavior outcomes (Gagné & Deci, 2005; Isen & Reeve, 2005). Prior studies have indicated that emotion plays a key role in shaping motivation at work and motivation further determines employees’ work behaviors (Gagné & Deci, 2005; Isen & Reeve, 2005; Lord & Kanfer, 2002). Therefore, intrinsic motivation may be an important mediating mechanism for the association between emotion (e.g., IAWC) and work behaviors (e.g., service and helping behaviors). Second, investigating the mediating role of intrinsic motivation is of significant research value within the context of the hospitality industry since intrinsic motivation is especially essential for frontline service jobs (Karatepe & Aleshinloye, 2009; Karatepe & Tizabi, 2011). Employees in the service industry often face with challenging or demanding working conditions such as overworking, satisfying various customer needs, and experiencing role stress or work-family conflict (Ariza-Montes, Arjona-Fuentes, Han, & Law, 2018). Frontline employees who have higher intrinsic motivation are more likely to handle challenging work, persist when facing obstacles, and display extra-role customer service (Hai & Park, 2021; Karatepe, 2015; Karatepe & Aleshinloye, 2009).

A critical issue that requires hospitality researchers and practitioners to seek solutions is how to mitigate the potential negative consequences of IAWC. The lack of exploration of how to buffer the harmful effects triggered by IAWC may limit our understanding of practical coping strategies regarding COVID-19-related anxiety. Given that emotion regulation ability and optimism about one’s future are beneficial for individuals to get through difficult times (Jovanević & Milevi, 2020; Mao, He, Morrison, & Andres Coca-Stefaniak, 2020; Trougakos et al., 2020), we propose that career future time perspective (CFTP) — a positive career attitude that focuses on a future career, expects various opportunities, and links current activities to future success (Park, Han, & Ryu, 2019) — is likely to mitigate the impacts of IAWC on frontline employees’ motivation and work behavior. Based on socioemotional selectivity theory (Carstensen, Isaacowitz, & Charles, 1999), employees with an expansive future time perspective are inclined to regulate their emotions in a positive way and adopt various coping strategies to handle situations for goal achievement (Ho & Yeung, 2016; Park et al., 2019; Park, Doan, Zhu, & Kim, 2021), which may help them cope with negative emotions triggered by the pandemic. Focusing on one’s future career beyond COVID-19 may buffer the detrimental effects of IAWC on service and helping behaviors via intrinsic motivation. Therefore, this study proposes that CFTP is highly relevant in moderating the indirect effects of IAWC on work behaviors via intrinsic motivation.

The present study contributes to the literature in several ways. First, it is one of the first to empirically investigate a framework that elucidates the effects of IAWC on frontline employees’ intrinsic motivation and work behaviors. It may be significant in that this study investigates hospitality organizations, which have been much affected by the COVID-19 pandemic (Duro, Perez-Laborda, Turriott-Prats, & Fernández, 2021; Jung et al., 2021; Sonmez, Apostolopoulos, Lemke, & Hsieh, 2020). Second, we examine the indirect effects of IAWC on frontline employees’ service and helping behaviors via intrinsic motivation. Insights gained through the mediating mechanism provide a major step forward in our understanding of how COVID-19-related anxiety damages work behaviors. Lastly, we seek to fill the literature gap by testing CFTP as the moderator that buffers the negative impacts of employees’ IAWC. Since negative emotions such as anxiety triggered by a challenging situation or stressful events are becoming increasingly unavoidable in the hospitality industry due to COVID-19, identifying whether CFTP can help maintain intrinsic motivation and further promote positive work behaviors in the presence of IAWC may provide hospitality organizations with important implications to effectively minimize the destructive effects of IAWC.

2. Literature review and hypothesis development

2.1. IAWC

Emotions induced by the work environment are important drivers of employees’ work behavior (Sakurai & Jex, 2012; Spector & Fox, 2002). For example, service employees who experience positive emotions such as gratitude tend to engage in more extra-role behavior, whereas those who feel negative emotions such as anxiety are more likely to reduce their service behavior and even engage in harmful behavior toward coworkers and customers (Kim & Qu, 2020; Wang, Guchait, & Pasamehmetoglu, 2020). Service employees’ emotions are also likely to be influenced by a variety of stressful work events (e.g., interpersonal mistreatment, difficult guest issues, and unreasonable task assignments), and these emotions may affect subsequent work behavior (Babalola et al., 2019; Kim & Qu, 2019; Zhu, Lyu, & Ye, 2019). Within the context of the COVID-19 pandemic, frontline hospitality employees are particularly likely to experience COVID-19-related anxiety (i.e., IAWC) because they may perceive a high risk of infection resulting from frequent interactions with various customers (Karatepe, 2015; Yu, Park, & Hyun, 2021). IAWC involves feelings such as tension and nervousness. The construct of IAWC is aligned to Lazarus and Folkman’s (1987) framework of emotion—that is, an emotional state is induced by threatening or stressful events (e.g., the global pandemic) and engenders higher levels of anxiety (Afifi, Shahnazi, & Harrison, 2018; Trougakos et al., 2020). Previous studies have shown that the feeling of anxiety is negatively associated with service and helping behaviors (Caldewood, Bennett, Gabriel, Trougakos, & Dahling, 2018; Clercq, Haq, & Azeem, 2018; Wang et al., 2020).

Although the literature has indicated the huge impact of the COVID-19 pandemic (Hu, Teichert, Deng, Liu, & Zhou, 2021; Jones & Comfort, 2020; Sharma, Thomas, & Paul, 2021; Zhang, Xie, & Morrison, 2021), we still have limited insights into frontline employees’ mental health problems such as infection anxiety and their consequences during the COVID-19 pandemic. According to the review of the hospitality and

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**Fig. 1.** The proposed moderated-mediation model.
tourism literature on employees during the COVID-19 pandemic (see Table 1), extant research has focused on the influences of COVID-19 on employees’ work attitudes (e.g., job satisfaction; Bajrami et al., 2021) and behaviors (e.g., safety behavior; Kim, Kim, & Lee, 2021; Zhang, Xie, Wang, Morrison, & Coca-Stefaniak, 2020). Few studies have investigated frontline employees’ mental health problems caused by the pandemic (Chen & Eyoun, 2021; Karatepe et al., 2021). Considering that frontline employees have frequent contact with various customers (e.g., check-in and check-out, solving customer problems, customer baggage management) and are at a higher risk of being infected with COVID-19 during service delivery (Yan et al., 2021; Yu et al., 2021), hospitality organizations should pay more attention to their employees’ mental health as the pandemic continues. Therefore, it is highly valuable for researchers to examine the relationship between frontline employees’ COVID-19-related anxiety and work behaviors.

### 2.2. CFTP

Time perspective describes individuals’ ability to revisit the past through their memories and perceive the future using imagination, which plays a key role in the selection and pursuit of goals and has important implications for emotion and motivation (Keough, Zimbardo, & Boyd, 1999). According to the time perspective categorization of Zimbardo and Boyd (2015), future time perspective refers to the perception of the amount of time left in life and the mental representation of the future. Individuals with an expansive future time perspective tend to use problem-focused strategies when confronted with problems, while those with a limited future time perspective are prone to use emotion-focused strategies to maximize their emotional experiences (Carstensen et al., 1999; Zimbardo & Boyd, 2015). However, the existing conception of future time perspective may be hard to capture overall future time perspectives since individuals have different future time perspectives on their jobs, careers, and family lives. To address this issue, Park et al. (2019) indicated that future time perspective could be understood from a domain-differentiated perspective and suggested a domain-specific conception of future time perspective, namely, CFTP.

CFTP is defined as the degree to which individuals value their future careers, expect the opportunity for career success, and believe that their current activities are associated with their future careers (Park et al., 2019; Park, Dongwon, Kim, & Hai, 2021). CFTP plays an important role in employees’ career development, as it is positively associated with career decision-making self-efficacy and career exploratory behavior (Park et al., 2019). Based on socioemotional selectivity theory (Carstensen et al., 1999), employees with higher levels of CFTP tend to place a high value on their future careers, expect a number of opportunities for success, and believe that activities in the present are closely associated with future careers (Park et al., 2019). Compared with employees with lower levels of CFTP, employees with higher levels of CFTP are prone to engage in long-term goals (Korff, Biemann, & Voelpel, 2016; Park et al., 2019). In the context of the hospitality industry, Park, Dongwon et al. (2021) demonstrated that hotel employees’ CFTP mitigated the detrimental effect of daily negative affect on daily innovative service behavior. High levels of CFTP may be especially essential for frontline employees to cope with their current negative affective experiences (e.g., IAWC) and maintain motivation for present job tasks.

### 2.3. Service and helping behaviors

Hospitality and tourism organizations have recognized that service quality is essential for the success of service businesses and that the quality of service is highly dependent on frontline employees’ behavior (Ling, Lin, & Wu, 2016; Tsaur, Wang, Yen, & Liu, 2014). Previous studies have indicated that both the in-role behavior (e.g., service behavior) and the extra-role behavior (e.g., helping behavior) of frontline employees can help organizations raise service quality (Cheng &

### Table 1

| Source        | Theme                                                                 | Method              | Findings                                                                 |
|---------------|----------------------------------------------------------------------|---------------------|-------------------------------------------------------------------------|
| Chen (2020)   | Investigating whether boredom at home during the COVID-19 pandemic    | Longitudinal study  | Experience of home boredom had a time-lagged effect on thriving at home and career self-management through online leisure crafting; growth need strength enhanced the positive effect of home boredom on online leisure crafting. |
| Filimonau, Deroqui, and Matute (2020) | Exploring how hotel organizations can retain senior managers under the context of the COVID-19 pandemic | Cross-sectional study | Organizational resilience and corporate social responsibility practices reinforced managers’ perceived job security, which in turn determined organizational commitment; Organizational response to COVID-19 influenced perceived job security and promoted organizational commitment. |
| Mao et al. (2020) | Investigating how can tourism companies facilitate employee psychological capital in tourism during the COVID-19 crisis | Cross-sectional study | Corporate social responsibility (CSR) positively influenced employee psychological capital via satisfaction with corporate COVID-19 responses; employee loss orientation strengthened the impact of CSR on psychological capital. |
| Zhang et al. (2021) | Examining the impact of safety leadership on employee safety behavior during COVID-19 | Cross-sectional study | Safety leadership positively influenced employee safety behavior; belief restoration mediated the effect of safety leadership on safety behavior; perceived risk negatively moderated the indirect effect of safety leadership on safety behavior via belief restoration. |
| Agarwal (2021) | Exploring the human resource management practices employed by employees centered human resource management practices strongly | Qualitative thematic analysis | (continued on next page) |
Table 1 (continued)

| Source | Theme | Method | Findings |
|--------|-------|--------|----------|
| Bajrami et al. (2021) | Testing the effects of job insecurity, employees' health complaints occurred during isolation, risk-taking behavior at workplace and changes in the organization on job attitudes and turnover intentions | Cross-sectional study | Hotel insecurity and changes in the organization negatively influenced job motivation, job satisfaction, and turnover intentions; risk-taking behavior negatively affected job satisfaction; age and marital status significantly influenced job motivation and turnover intentions. |
| Chen and Eyoun (2021) | Exploring the effects of employees' fear of COVID-19 on job insecurity and emotional exhaustion, and the moderating role of mindfulness and perceived organizational support | Cross-sectional study | Fear of COVID-19 had a positive indirect effect on emotional exhaustion through job insecurity; mindfulness mitigated the positive effect of fear of COVID-19 on job insecurity; perceived organizational support enhanced the positive effect of job insecurity on emotional exhaustion. |
| Guzzo, Wang, Madera, and Abbott (2021) | Investigating how managers' messages during the COVID-19 pandemic can influence employees' organizational trust | Experimental study | A manager's communication that followed the Centers for Disease Control and Prevention's (CDC) social norms positively influenced employee gratitude, while communication that ignored CDC social norms negatively influenced fear and anger; Gratefulness and fear had influences on organizational trust. |
| He, Mao, Morrison, and Coca-Stefaniak (2020) | Illustrating the impact of socially-responsible human resource management (SRHRM) on employee fears of external threats during the COVID-19 outbreak | Cross-sectional study | SRHRM negatively influenced employee fears of external threats via organizational trust; COVID-19 event strength moderated the effect of SRHRM on employee fears. |

Table 1 (continued)

| Source | Theme | Method | Findings |
|--------|-------|--------|----------|
| Hu, Yan, Casey, and Wu (2021) | Exploring how organizations in hospitality can promote employees' deep compliance with health and safety regulations and procedures | Instrumental case-study | Employees' deep compliance with safety procedures included a four-stage psychological process, and this process was underpinned by organizational crisis strategies and management safety practices. |
| Jung et al. (2021) | Investigating the role of job insecurity caused by COVID-19 in influencing employees' job engagement and turnover intent, as well as the moderating effect of generational characteristic | Cross-sectional study | Job insecurity negatively influenced job engagement and indirectly affected turnover intent via job engagement; job insecurity had a stronger impact on job engagement in Generation Y than Generation X. Safety climate was positively related to safety motivation, facilitating safety behaviors via prevention focus work; communication transparency moderated the relationship between safety climate and safety motivation; safety-related stigma moderated the relationship between safety motivation and safety performance behaviors. |
| Kim et al. (2021) | Illustrating how and when organizational safety climate influences employees' safety performance behaviors | Cross-sectional study | Safety climate was positively related to safety motivation, adaptability, and communication transparency, which facilitated safety behaviors. Safety climate was positively related to employees' career adaptability; work social support moderated the relationship between career adaptability and turnover intentions. |
| Lee, Xu, and Yang (2021) | Examining the impact of proactive personality on career adaptability and the moderating effect of social support on the relationship between career adaptability and turnover intentions during COVID-19 | Cross-sectional study | Proactive personality was positively related to employees' career adaptability; work social support moderated the relationship between career adaptability and turnover intentions. |
| Sharma et al. (2021) | Understanding the impact of COVID-19 on the tourism industry and seeking for reviving the global tourism industry post-COVID-19 | Systematic review | Government response, local belongingness, technology innovation, and employee and consumer confidence are four prominent factors for building resilience in the tourism industry. COVID-19-induced layoff increased (continued on next page) |
helping behavior, which is regarded as the extra-role behavior of employees, is defined as an employee's voluntary behavior that aids his or her coworkers in dealing with organizationally relevant tasks or problems (George & Jones, 1997; Zhao & Guo, 2019). For hospitality employees, helping behaviors include providing extra effort to help coworkers who are under excessive workloads, solving coworkers' problems regarding different guest issues, and sharing resources and knowledge with coworkers (Zhao & Guo, 2019). Within the hospitality and tourism industry, researchers have indicated that helping behavior is a crucial human resource factor, as it supports the completion of servicing goals and raises the effectiveness of the organization (Supanti & Butcher, 2019; Zou, Tian, & Liu, 2015).

2.4. The mediating effects of intrinsic motivation

To address the research question of why frontline employees’ IAWC affects service and helping behaviors, this study theoretically adopts the basic motivational system (Elliot, 2006; Elliot & Thrash, 2010) as well as self-determination theory (Ryan & Deci, 2000) and focuses on the mediating role of intrinsic motivation. Intrinsic motivation refers to an individual’s desire to expend effort on a job task based on inherent satisfaction and enjoyment (Grant, 2008; Ryan & Deci, 2000), which may represent a critical theoretical lens to understand why IAWC influences employees’ service and helping behaviors. IAWC is likely to impair frontline employees’ intrinsic motivation, which in turn results in reduced service and helping behaviors. Specifically, we rely on the BIS to explain why IAWC influences intrinsic motivation. We then illustrate the association between intrinsic motivation and behavioral outcomes on the basis of self-determination theory.

First, to understand the negative relationship between IAWC and intrinsic motivation, we draw on the BIS, which is a fundamental framework for explaining human motivation and has been applied to the investigation of personality, emotion, and workplace outcomes (Elliot, 2006; Johnson, Smith, Wallace, Hill, & Baron, 2015; Lanaj, Chang, & Johnson, 2012). The BIS involves avoidance motivation, which drives the direction of an individual's behavior away from undesirable stimuli or negative events (Elliot, 2006; Elliot & Thrash, 2010). According to the literature on the BIS, negative emotions are closely associated with the BIS and avoidance motivation within the organizational context (Barclay & Kiefer, 2014; Hirsh & Kang, 2016). Previous studies have shown that the BIS is likely to be activated and individuals are motivated to use an avoidance-oriented strategy when they feel high negative emotions such as anxiety (Chai & Grandey, 2019; Ma-Kellams & Wu, 2020). Accordingly, frontline employees experiencing high IAWC may expend less effort on a job task and suppress intrinsic motivation, as their BIS tends to be activated. Furthermore, IAWC is likely to dampen intrinsic motivation because the presence of IAWC may reduce frontline employees’ attention and energy, job satisfaction, and motivation to engage in job tasks (Clercq et al., 2018; Sakurai & Jex, 2012; Wang et al., 2020). Therefore, based on the BIS and previous evidence, IAWC is expected to hinder frontline employees’ intrinsic motivation.

Further, frontline employees’ intrinsic motivation impaired by IAWC can be associated with service behavior based on self-determination theory (Ryan & Deci, 2000). Self-determination theory (Ryan & Deci, 2000) provides a useful framework to understand how intrinsic motivation fuels employees’ work behaviors such as service and helping behaviors. First, under self-determination theory, employees are inclined to fully invest themselves into job tasks when they find the work interesting and enjoyable (Grant & Berry, 2011; Shin & Grant, 2019). Second, intrinsically motivated employees are likely to expend higher levels of effort or intensity in their tasks based on self-determination theory (Ryan & Deci, 2000). Third, when employees find job tasks enjoyable, they tend to work on such tasks for longer periods of time (Cerasoli, Nicklin, & Ford, 2014; Ryan & Deci, 2000). Accordingly, when frontline employees are intrinsically motivated to work, they are more likely to focus their attention on serving customers and expend effort to deliver service quality (Dysvik & Kuvaas, 2011; Xiong & King, 2015). Several previous studies have demonstrated the beneficial effect of intrinsic motivation on job performance, providing empirical evidence for basic self-determination theory propositions (Cerasoli et al., 2014; Shin & Grant, 2019). For example, Karatepe and Aleshinloye (2009) found that hotel employees’ intrinsic motivation helps them cope with emotional dissonance and thus enables them to exhibit high performance at work. Chen & Kao (2014) showed that intrinsic motivation mediates the relationship between a proactive personality and service behavior using data from flight attendants.

In sum, the experience of IAWC may activate frontline employees’ BIS and impair their intrinsic motivation, which in turn reduces their effort on tasks and decreases service behavior. As intrinsic motivation is reduced by IAWC, frontline employees’ service behavior may also decline. Therefore, we propose the following hypothesis:

**Hypothesis 1.** IAWC indirectly affects service behavior via intrinsic motivation.

Given that intrinsic motivation and helping behavior are closely associated, IAWC may indirectly decrease frontline employees’ helping behavior via intrinsic motivation. According to self-determination theory (Ryan & Deci, 2000), intrinsic motivation encourages employees to be energetic, productive, and persistent at work (Park, Zhu, Doan, & Kim, 2021; Shin & Grant, 2019; Zhu, Gardner, & Chen, 2018). As
suggested by Karatepe and Aleshinloye (2009), hotel employees with high intrinsic motivation may have relatively high cognitive flexibility and problem-solving skills as well as be more able to deal with threatening and demanding situations at work. Consequently, intrinsically motivated employees are more likely to cope with stressful tasks or difficult guest issues effectively (Karatepe, 2015; Karatepe & Tizabi, 2011), which may prevent energy depletion and enable them to have more energy to help others at work. By contrast, frontline employees with low intrinsic motivation are less likely to exhibit extra-role helping behavior, as they become more passive and less focused at work and are likely to invest less effort at work on the basis of self-determination theory (Grant, 2008; Ryan & Deci, 2000). Prior studies have empirically shown that intrinsic motivation plays a key role in facilitating employees' helping behaviors (Hai & Park, 2021; Lee & Kim, 2017; Welsh, Baer, & Sessions, 2020).

Given this rationale and the association between IAWC and intrinsic motivation, we expect that IAWC negatively and indirectly affects helping behavior through reduced intrinsic motivation. Specifically, frontline employees who experience higher levels of IAWC may suppress their intrinsic motivation to carry out job tasks, ultimately leading them to reduce effort at work and engage in less helping behavior. Following this logic, we hypothesize that intrinsic motivation acts as a mediating mechanism on the relationship between IAWC and helping behavior.

**Hypothesis 2.** IAWC indirectly affects helping behavior via intrinsic motivation.

### 2.5. The moderated mediation effects of CFTP

Considering that IAWC may have a detrimental effect on frontline employees' intrinsic motivation and further hinder their service and helping behaviors, it is crucial to seek buffers to alleviate the harmful effect of COVID-19-related anxiety. The indirect effect of IAWC on service and helping behaviors through intrinsic motivation may vary based on individual differences in CFTP, such that employees with higher levels of CFTP are less likely to be influenced by the presence of IAWC.

According to socioemotional selectivity theory (Carstensen et al., 1999) and the literature on time perspective, individuals with higher levels of CFTP tend to perceive their future career optimistically and intrinsically motivated, and increase approach-oriented behavior for future goals (Foulk, Lanaj, & Krishnan, 2019; Zou et al., 2015). We thus propose that higher levels of CFTP alleviate the harmful impact of COVID-19-related anxiety by helping frontline employees focus on future achievement and proactively handle present challenging situations. Higher CFTP may buffer the negative effect of IAWC on frontline employees' helping behavior through intrinsic motivation. We thus propose the following hypothesis:

**Hypothesis 4.** CFTP moderates the indirect effect of IAWC on helping behavior via intrinsic motivation, such that the indirect effect is higher when CFTP is lower.

### 3. Methodology

#### 3.1. Sample and procedure

We conducted time-lagged and multi-source data collection from hotel employees in China. During the first-stage survey, the participants completed the measures regarding IAWC, CFTP, and demographic information such as age, gender, and organizational tenure. One week later (the second-stage survey), the participants reported their intrinsic motivation. During the third-stage survey, which was conducted one month after the second-stage survey, the participants invited their immediate supervisors to rate their service and helping behaviors in the past month. The surveys took place from mid-May to mid-June 2020.

The researchers invited 257 hotel employees who had attended the researchers' other project in 2019. A total of 205 employees from 32 hotels volunteered to participate in the study. Prior to data collection, the researchers presented the purpose of this research to the participants and highlighted the importance of providing honest responses. The researchers also assured them of data confidentiality and anonymity. Data were collected through an online survey (www.wjx.cn). The participants received a link to each survey from WECHAT, which is an online social network system widely used in China. Most of the participants completed the surveys on their smartphones.

This study was conducted two months after the outbreak of the COVID-19 pandemic (May 2020) and collected data on employee behavior from the participants' immediate supervisors. Since the mediator (i.e., intrinsic motivation) measured the participants' current experiences and attitudes, the participants reported their intrinsic motivation one week after the measurement of the predictor (i.e., IAWC). We used a relatively short time interval between the measurements of the predictor and mediator because a confounding effect may occur if the time interval lengths (MacKinnon, Krull, & Lockwood, 2000). Further, the measurements of the outcomes (i.e., service and helping behaviors) were conducted one month after the second-stage survey, and the supervisors were instructed to evaluate employee behavior in the past month during the COVID-19 pandemic. The time...
interval of one month may minimize the possibility that the supervisors evaluate employee behavior based on that before the COVID-19 pandemic. If the supervisors assess employee behavior according to that prior to the COVID-19 pandemic, the causality among the predictor (i.e., IAWC), mediator (i.e., intrinsic motivation), and outcomes (i.e., service and helping behaviors) would be damaged. The time interval of one month may therefore help strengthen the causal relationships among the study variables.

During the first-stage data collection, 205 employees completed the survey and 184 completed the survey during the second-stage data collection. The corresponding supervisors of the 184 employees who had completed both surveys responded to the third-stage survey. In total, we analyzed dyadic data from 162 employees and their supervisors. The final sample consisted of 101 women (62.3%) and 61 men (37.7%). The average age of the participants was 40.12 years (SD = 10.88). Their educational level was high school and below (61.7%), two-year college (23.5%), undergraduate degree (14.2%), and graduate degree (0.6%). The average tenure at their present hotel was 6.60 years (SD = 4.66).

3.2. Measures

All the scales were translated from English into Chinese following the back-translation procedure recommended by Brislin (1986).

3.2.1. IAWC

IAWC was measured on a 7-point Likert scale ranging from 1 (not at all) to 7 (to a very great extent) using seven items adapted from Reda (2011). The instructions were inserted as follows: Please think of the potential for infection with COVID-19 in your workplace. Please keep this in mind and respond to the questions below. A sample item is “I feel restless as if I have to be on the move.” Cronbach’s alpha for the scale in this study was 96.

3.2.2. CFTP

The CFTP was assessed with nine items developed by Park et al. (2019). Questions were rated on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). An example item is “I have many opportunities related to my career in the future.” Cronbach’s alpha for the scale in this study was 0.90.

3.2.3. Intrinsic motivation

Intrinsic motivation was measured using four items adapted from Yoon, Sung, Choi, Lee, and Kim (2015). Responses were provided on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). A sample item is “I work or engage in task activities in this company because I think that the activity is interesting.” Cronbach’s alpha for the scale in this study was 94.

3.2.4. Service behavior rated by the supervisor

Service behavior was assessed using three items adapted from Tsaur et al. (2014). The following instructions were provided to the supervisors: “Considering performance and behavior in the workplace in the past month, please respond to each item.” The participants corresponding supervisors responded on a 7-point Likert scale ranging from 1 (completely unsatisfactory) to 7 (extremely good). An example item is “This employee fulfills responsibilities to customers as specified in the job description.” Cronbach’s alpha for the scale in this study was 0.78.

3.2.5. Helping behavior rated by the supervisor

Helping behavior was measured using four items adapted from Supanti and Butcher (2019). The following instructions were provided to the supervisors: “Considering performance and behavior in the workplace in the past month, please respond to each item.” The supervisors responded on a 7-point Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). A sample item is “This employee often helps others at the hotel who have a heavy work load.” Cronbach’s alpha for the scale in this study was 0.81.

3.2.6. Control variables

Consistent with previous studies (Ling et al., 2016; Zhao & Guo, 2019; Zou et al., 2015), employees’ age, gender, education, and organizational tenure were controlled for in this study because employee demographics may influence work behaviors. As indicated by researchers (Ng & Feldman, 2008; Salminen & Glad, 1992), age and gender are closely associated with performance and helping behavior. Education reflects task domain knowledge or expertise, and highly educated employees are more likely to consider others’ opinions, solve problems effectively, and consequently raise their performance (Chae & Choi, 2019; Hwang, Kim, & Hyun, 2013). Organizational tenure was also controlled for since service employees with a longer organizational tenure tend to report lower intrinsic motivation and engage in less citizenship behavior (Van Nguyen, Lu, Hill, & Conduit, 2019).

3.3. Data analysis

The results were analyzed with AMOS 17.0 and the PROCESS macro in SPSS 20.0. Prior to hypothesis testing, we conducted confirmatory factor analysis with AMOS 17.0 to examine the measurement model (Bagoszi & Yi, 1988). To examine the mediating effects, we conducted structural equation modeling (AMOS 17.0) with the maximum likelihood method. We conducted bootstrapping with 2000 iterations to verify the indirect effect (Preacher & Hayes, 2008). If the 95% confidence intervals do not include zero, then the mediating effect is confirmed at the level of α = 0.05. To confirm the moderating role of CFTP in the relationship between IAWC and intrinsic motivation, we first performed hierarchical regression analysis. Prior to the analysis, we mean-centered the predictor (i.e., IAWC) and moderator (i.e., CFTP) to alleviate multicollinearity effects (Jaccard, Turrisi, & Wang, 1990). To test the conditional effect of IAWC on service and helping behaviors via intrinsic motivation, we employed moderated mediation analyses with the PROCESS macro in SPSS 20.0 (Hayes, 2012). CFTP was included as the moderator in the mediation relations. We used 2000 bootstrapped samples and 95% confidence intervals to confirm the significance of the moderated mediation effects.

4. Results

4.1. Measurement reliability and validity analysis

Table 2 shows the descriptive statistics and correlations between the study variables. The results of the confirmatory factor analysis suggest that the proposed five-factor model, including IAWC, CFTP, intrinsic motivation, service behavior, and helping behavior, has an adequate fit to the data ($\chi^2 = 404.410, df = 179, \gamma^2/df = 2.259; CFI = 0.914, TLI = 0.899, RMSEA = 0.088, SRMR = 0.056$). Although the value of RMSEA in this study was slightly above the recommended cutoff of 0.08, Hu and Bentler (1998) stated that values of RMSEA in the range from 0.08 to 0.10 represent mediocre fit, and values higher than 0.10 indicate poor fit. Moreover, other fit indices (e.g., CFI, TLI, and SRMR) met the threshold values for acceptability of the model fit to the data (Hu & Bentler, 1998). The proposed five-factor model is better than the alternative models, including a four-factor model ($\chi^2 = 567.878, df = 183, \gamma^2/df = 3.103; CFI = 0.853, TLI = 0.832, RMSEA = 0.114, SRMR = 0.086$), a three-factor model ($\chi^2 = 1132.196, df = 186, \gamma^2/df = 6.087; CFI = 0.639, TLI = 0.593, RMSEA = 0.178, SRMR = 0.159$), a two-factor model ($\chi^2 = 1329.325, df = 188, \gamma^2/df = 7.271; CFI = 0.565, TLI = 0.514, RMSEA = 0.194, SRMR = 0.182$), and a one-factor model ($\chi^2 = 1566.44, df = 189, \gamma^2/df = 8.288; CFI = 0.475, TLI = 0.416, RMSEA = 0.088, SRMR = 0.201$). These results support the distinctiveness of the measures in this study.

Convergent validity was examined through average variance extracted (AVE) and composite reliability. As presented in Table 3, the...
AVE values for the constructs ranged from 0.51 to 0.80, meeting the recommended 0.50 threshold, and the convergent validity values for all the constructs exceeded the threshold of .70, providing evidence of convergent validity (Bagozzi & Yi, 1988). To further investigate the discriminant validity of the constructs, we compared the AVE values of each construct with the corresponding squared correlations between the constructs (Hair, Anderson, Tatham, & Black, 1998). The AVE values were larger than the squared correlations between the constructs, which indicates discriminant validity.

4.2. Mediating effects of intrinsic motivation

We proposed that IAWC indirectly influences service behavior via intrinsic motivation in Hypothesis 1 and that it indirectly influences helping behavior via intrinsic motivation in Hypothesis 2. To test our hypotheses, we conducted structural equation modeling with the maximum likelihood method using AMOS 17.0. To minimize Type I error rates and promote power, we employed bootstrapping with 2000 iterations to examine the mediating effects, as recommended by Preacher and Hayes (2008). As presented in Table 4, the goodness of fit for the structural model was acceptable ($\chi^2 = 292.266$, $df = 128$, $\chi^2/df = 2.283$; CFI = 0.933, TLI = 0.920, RMSEA = 0.089, SRMR = 0.045).

The indirect effect of IAWC on service behavior via intrinsic motivation was statistically significant, since the 95% confidence interval did not include zero in the range from the lower to upper bounds (point estimate = −0.04; confidence interval [−0.077, −0.005]). Thus, Hypothesis 1 was supported. The results showed that the indirect effect of IAWC on helping behavior via intrinsic motivation was statistically significant (point estimate = −0.03; confidence interval [−0.073, −0.003]). Therefore, Hypothesis 2 was supported. To ensure the robustness of the obtained results, we conducted supplementary analyses to test whether the significance of the findings changes without the control variables (e.g., age, gender, education, and organizational tenure). The results supported Hypotheses 1 and 2, suggesting that the significance of our findings did not vary without the control variables.

4.3. Moderated mediation tests of CFTP

In Hypotheses 3 and 4, we respectively proposed that CFTP moderates the indirect effect of IAWC on service and helping behaviors via intrinsic motivation. First, we performed hierarchical regression analysis to confirm the moderating role of CFTP in the relationship between IAWC and intrinsic motivation. As shown in Table 5, the interaction between IAWC and CFTP was significantly and positively associated with intrinsic motivation ($\beta = 0.16$, $p < .05$, Model 3), showing the moderating effect of CFTP. We plotted the interaction effect using Cohen, Cohen, West, and Aiken's (2003) procedure to confirm the direction of the interaction. The interaction graph (see Fig. 2) shows that IAWC had a stronger relationship with intrinsic motivation when CFTP was low (−1 SD) rather than high (+1 SD). For lower CFTP, the negative impact of IAWC on intrinsic motivation was stronger and significant ($B = -0.32, SE = 0.14, t = -2.22, p < .05$), while for higher CFTP, the negative effect of IAWC on intrinsic motivation was not significant ($B = -0.10, SE = 0.07, t = -1.46, p > .05$). (See Table 6.)

We then conducted the moderated mediation analyses with the PROCESS macro and bootstrapped with 2000 iterations to confirm the conditional effect of IAWC on service and helping behaviors via intrinsic motivation. presents the results for Hypotheses 3 and 4. The conditional indirect effect of IAWC on service behavior through intrinsic motivation was stronger and significant when CFTP was low (−1 SD) (point estimate = −0.07; confidence interval [−0.156, −0.014]), but insignificant when CFTP was high (+1 SD) (point estimate = −0.02; confidence interval [−0.061, 0.007]). Therefore, Hypothesis 3 was supported. The conditional indirect effect of IAWC on helping behavior via intrinsic motivation was stronger and significant when CFTP was low (−1 SD) (point estimate = −0.06; confidence interval [−0.147, −0.007]) and insignificant when CFTP was high (+1 SD) (point estimate = −0.02; confidence interval [−0.058, 0.006]). Thus, Hypothesis 4 was also supported. Additionally, we conducted further analyses to examine the significance of the findings without the control variables. Again, the results provided support for Hypotheses 3 and 4, which indicated the robustness of our results.

5. Discussion

Recognizing the significance of frontline employees' IAWC, the primary goal of this study was to uncover the impact of IAWC on frontline hotel employees' service and helping behaviors. This study investigated the mediation process of intrinsic motivation and the boundary condition of CFTP. Two major findings emerged from the current study. First, IAWC was found to have a negative influence on service and helping behaviors through intrinsic motivation. Second, CFTP moderated the indirect effects of IAWC on frontline employees' service and helping behaviors, such that the indirect effects of IAWC were weaker when employees possessed a higher level of CFTP.

The results were consistent with the basic motivational system of the BIS (Elliot, 2006), indicating that IAWC is negatively related to intrinsic motivation. Intrinsic motivation was further linked to decreased service and helping behaviors, supporting self-determination theory (Ryan & Deci, 2000) and previous evidence (Chen & Kao, 2014; Karatepe, 2015). These findings support Hypotheses 1 and 2, demonstrating that IAWC exerted detrimental effects on service and helping behaviors by lowering intrinsic motivation. Furthermore, our hypotheses that CFTP moderates the indirect effects of IAWC on service behavior (Hypothesis 3) and helping behavior (Hypothesis 4) through intrinsic motivation were supported by the results. Based on socioemotional selectivity theory, employees with higher levels of CFTP are more likely to look to the future optimistically and actively engage in positive activities for goal attainment (Carstensen et al., 1999; Carstensen et al., 2003; Park et al., 2019), which may allow employees to manage the presence of IAWC and suppress the activation of their BIS. Ultimately, these employees are more able to engage in service behaviors to meet their job requirements and devote effort to helping behaviors for future career success.

5.1. Theoretical implications

This study has several important theoretical implications. First, hospitality employees have been heavily affected by the COVID-19

Table 2

| Variable                                | Mean | SD  | 1   | 2   | 3   | 4   | 5   |
|-----------------------------------------|------|-----|-----|-----|-----|-----|-----|
| 1. Infection anxiety with COVID-19      | 2.70 | 1.33| 0.96|     |     |     |     |
| 2. Career future time perspective      | 4.88 | 1.00| 0.10| 0.90|     |     |     |
| 3. Intrinsic motivation                | 5.63 | 0.86| −0.17*| 0.09| 0.94|     |     |
| 4. Service behavior                    | 5.32 | 0.90| −0.20*| 0.10| 0.27**| 0.78|     |
| 5. Helping behavior                    | 5.55 | 0.85| −0.16*| −0.01| 0.22**| 0.46**| 0.81|

Note: *p < .05, **p < .01; Cronbach’s alpha in the diagonal in bold.

"..."
Confirmer Factor Analysis Results.

| Table 3  |
|----------|
| Scale items | Standardized Cronbach's AVE CR |
| Infection anxiety with COVID-19 | 0.96 0.79 0.96 |
| Considering the potential for infection with COVID-19 in the workplace; I get a sort of frightened feeling as if something awful is about to happen. | 0.85 0.85 |
| I think that people need to | 0.85 |
| I usually work or engage in task activities in this hotel because | 0.87 |
| I feel restless as if I have to be on the move. | 0.91 |
| Worrying thoughts go through my mind. | 0.90 |
| I need to join developmental activities for my career in the future. | 0.62 |
| Intrinsic motivation | 0.94 0.80 0.94 |
| I usually work or engage in task activities in this hotel because I think that the activity is pleasant. | 0.91 |
| I feel good when doing the activity. | 0.89 |
| Service behavior | 0.78 0.59 0.81 |
| This employee performs all those tasks for customers that are required by him/her. | 0.56 |
| This employee helps customers with those things which are required by him/her. | 0.88 |
| This employee fulfills responsibilities to customers as specified in the job description. | 0.83 |
| Helping behavior | 0.66 0.81 0.56 0.84 |

**Table 3 (continued)**

| Scale items | Standardized Cronbach's AVE CR |
| This employee helps hotel colleagues who have been absent. | 0.85 |
| This employee often helps others at the hotel who have heavy work load. | 0.79 |
| This employee helps orient new staff, even though it is not required. | 0.69 |
| Note: Model fit statistics: $\chi^2 = 404.410$, df = 179, $\chi^2$/df = 2.259; CFI = 0.914, TLI = 0.899, RMSEA = 0.088, SRMR = 0.056; AVE = Average variance extracted; CR = Composite reliability; All factor loadings are significant at $p < .01$. |
| Infection anxiety with COVID-19; IM = Intrinsic motivation; SB = Service behavior; HB = Helping behavior. |

**Table 4**

| Direct effect | Indirect effect |
|--------------|----------------|
| IAWC $\rightarrow$ IM | 0.12* SE 0.05 IAWC $\rightarrow$ IM $\rightarrow$ SB | $-0.04$ $-0.077$ $-0.005$ |
| IM $\rightarrow$ SB | 0.12 0.09 |
| IM $\rightarrow$ HB | 0.22* 0.09 |
| Career future time perspective (CFTP) | 0.14 0.17* |
| Tenure | 0.10 0.15 |
| Gender | 0.01 0.03 |
| Education | 0.01 0.03 |
| Age | 0.14 0.18 |
| Note 1 Boldic numbers denote significance at the level of alpha = 0.05; *p < .05., **p < .01; IAWC = Infection anxiety with COVID-19; IM = Intrinsic motivation; SB = Service behavior; HB = Helping behavior. |
| Note 2 Goodness of fit for the structural model: $\chi^2 = 292.266$, df = 128, $\chi^2$/df = 2.283; CFI = 0.933, TLI = 0.920, RMSEA = 0.089, SRMR = 0.045. |

**Table 5**

| Regression Results for Testing Moderation for Intrinsic Motivation. |
|-----------------|-----------------|-----------------|
| Step 1 | Model 1 | Model 2 | Model 3 |
| Age | 0.14 | 0.18 | 0.17 |
| Gender | 0.01 | 0.03 | 0.02 |
| Tenure | 0.10 | 0.15 | 0.16 |
| Education | 0.01 | 0.10 | 0.10 |
| Step 2 | Infection anxiety with COVID-19 (IAWC) | $-0.20^*$ | $-0.25^{**}$ |
| Career future time perspective (CFTP) | 0.14 | 0.17$^*$ |
| Step 3 | IM X CFTP | 0.04 | 0.09 |
| R$^2$ | 0.04 | 0.09 | 0.09 |
| F value | 1.66 | 2.59$^*$ | 2.80$^{**}$ |
| Note: *p < .05.; **p < .01. |

pandemic (Baum, Mooney, Robinson, & Solnet, 2020; Huang et al., 2020), but there is a lack of empirical evidence on how the pandemic has influenced their work and service quality. This study filled the research gap and extended the hospitality literature on the COVID-19 pandemic by empirically exploring the impacts of IAWC on frontline hospitality employees' motivation and service and helping behaviors. Based on basic motivational systems such as the BIS (Elliot, 2006) and self-determination theory (Ryan & Deci, 2000), our research model may be one of the first to verify that COVID-19-related anxiety may damage intrinsic motivation, further leading to reduced service and helping behaviors, which are essential for service quality. Second, several
previous studies have linked intrinsic motivation to employee service and helping behaviors (Chen & Kao, 2014; Karatepe, 2015). The current study expanded the literature on intrinsic motivation by highlighting its role in the connection between IAWC and work behaviors. These findings may provide a deeper understanding of the underlying process through which COVID-19-related anxiety impairs service and helping behaviors.

Next, our study offers initial evidence that CFTP moderates the indirect effects of IAWC on both service and helping behaviors via intrinsic motivation. Specifically, the negative impacts were reduced when CFTP was higher. This study thus extends the existing literature by identifying how frontline employees’ time perspective shapes their motivation and engage in positive work behaviors to promote goal attainment, even with high levels of IAWC. By investigating CFTP as a moderator in mitigating the negative effects of IAWC on work behaviors, the current study enriches our understanding of the functions of CFTP and highlights its crucial role in facing threatening situations.

5.2. Practical implications

The COVID-19 pandemic has posed unprecedented challenges for the survival and success of hospitality organizations (Mélián-Alzola, Fernández-Monroy, & Hidalgo-Peñate, 2020; Qiu, Jiang, Liu, Chen, & Yuan, 2021; Yu et al., 2021), which should urgently seek a variety of strategies to cope with the challenges emerging from the outbreak of the pandemic. The results of this study offer meaningful practical implications for hospitality management to reduce the impacts of the COVID-19 pandemic and enhance the recovery in the foreseeable future. First, our findings indicate that IAWC has a detrimental impact on employees' work effectiveness and service quality. To maintain frontline employees' motivation and facilitate positive work behaviors, hospitality organizations should seek specific ways to relieve employees' COVID-19-related anxiety. For example, hospitality managers can build safe and secure working environments by implementing a variety of safety measures and rules in relation to epidemic prevention, including checking the body temperature of all employees and guests, washing and disinfecting potentially contaminated utensils and work surfaces every day, installing air purification systems, and providing personal protective equipment (e.g., masks, face coverings, and gloves) for employees to wear in the workplace (Hu, Teichert, et al., 2021; Lai & Wong, 2020). Innovative technology such as self-check-in kiosks and contactless payment systems can be used to minimize direct and indirect contact between employees and customers (Chen & Eyoun, 2021). Additionally, organizations should train frontline employees on how to use preventive measures to minimize the risk of infection (e.g., paying attention to personal hygiene, washing hands with hand sanitizers, and covering nose and mouth with tissue paper when coughing or sneezing). If employees show symptoms of COVID-19, they should be required to take sick leave or have further health checks; guests who show these symptoms should be stopped from entering the hotel. Organizations can also make efforts to provide a powerful support system to alleviate employees' anxiety, such as offering additional paid holidays, ensuring job security, and allocating more resources to protect employees' health. Safe working environments and management practices in responding to COVID-19 may not only protect employees from infection, but also help relieve employees' IAWC and improve service quality, which ultimately enables hospitality organizations to overcome the difficulties and maintain productivity in the post-pandemic era.

Second, this study found that higher levels of CFTP mitigate the
detrimental effects of IAWC on service and helping behaviors through intrinsic motivation. Our findings are especially important for the hospitality industry given that frontline employees inevitably experience negative emotions induced by threatening circumstances and their ability to cope with these challenging experiences is vital for hospitality organizations’ success (Wang et al., 2020). To promote employees’ ability to handle stressful experiences and maintain motivation, hospitality organizations can attempt to extend employees’ CFTP through training programs. As indicated by Park, Rie, Kim, and Park (2020), a future time perspective-based career intervention designed to promote individuals’ perceptions of career-related opportunities, value, and connectedness is effective in facilitating CFTP. Career intervention may help employees change their thinking about future careers and opportunities, adopt positive coping strategies, and value the importance of current career-related activities, consequently leading to a higher level of CFTP. Moreover, hospitality organizations can develop and implement a human resources management (HRM) system to enhance employees’ positive perceptions of their future careers and opportunities. HRM systems such as motivation-enhancing HRM practices (e.g., internal promotion, incentive compensation, and performance appraisal) have been demonstrated to extend employees’ future expectations and lead to broader CFTP (Korff et al., 2016). Additionally, organizations should select and hire frontline employees with greater CFTP, as they are more likely to effectively handle stressful experiences and engage in positive work behaviors.

5.3. Limitations and future directions

The limitations of the present study provide several insights for future studies. First, we separated our variables at different time points and collected data from multiple sources, which may minimize concerns about common method bias (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). However, we should be cautious in drawing causal conclusions based on our research design. A more rigorous longitudinal or experimental design would be helpful to establish the causal relationships among the research variables. Second, the research was conducted in China, which may limit the generalizability of our conceptual model. Given that the COVID-19 pandemic has significantly influenced the hospitality and tourism industry globally (Alonso et al., 2020; Song, Yeon, & Lee, 2020), it is valuable to investigate the current research variables in different cultural contexts. Finally, this study included CFTP as a moderator to buffer the negative impacts of IAWC and demonstrated the importance of CFTP for frontline employees to deal with stressful circumstances. It would be meaningful for future hospitality and tourism research to investigate the role of CFTP in predicting employees’ work attitudes and behaviors, which may help extend the theoretical and practical implications of CFTP within the hospitality and tourism industry.

Credit author statement

In-Jo Park: Idea Generation, Conceptualization, Methodology, Software, Supervision, Validation, Revising the first draft and responding to reviewers’ comments, and Editing. Shenyang Hai: Writing the first draft and Responding to reviewers’ comments.

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