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# Effect of psychosocial safety climate and organizational justice on affective commitment: A study in the Algarve hotel sector during the COVID-19 pandemic

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## ABSTRACT

Through the lens of the Job Demands-Resources (JD-R) model, this study aimed to analyze how psychosocial safety climate and organizational justice were related to: (a) work engagement through positive psychological capital (PsyCap); and (b) affective commitment through work engagement, in a sample of 217 hospitality workers of the Algarve (Portugal). Using structural equation modeling (SEM), it was observed that PsyCap partially mediated the relationship between organizational justice and work engagement, and that work

engagement partially mediated the association between psychosocial safety climate and organizational justice, and affective commitment. The theoretical and practical implications of these results are discussed.

## KEYWORDS

COVID-19; hotel employees; job demands-resources; positive psychological capital; work engagement



## Introduction

The World Health Organization (WHO) considered the novel coronavirus (COVID-19) as a pandemic on March-2020 (Zheng, Luo, & Ritchie, 2021). To contain its spread, countries around the world have adopted restrictive measures (e.g., lockdown, remote work, traveling limitations), which aimed to reduce the contact between individuals (Hu, Yan, Casey, & Wu, 2021; Salas-Nicás, Moncada, Llorens, & Navarro, 2021). In addition to the health effects of COVID-19, the pandemic has also had impact at social and economic levels (Khalid, Okafor, & Burzynska, 2021). The measures adopted at a work level (e.g., remote work) led to a deterioration of psychosocial working conditions (Salas-Nicás et al., 2021). However, there are occupations (e.g., in hospitality) where remote work is impossible, which led to an increased risk of exposure to this disease (Hu et al., 2021).

Tourism was severely affected by COVID-19, namely due to the traveling restrictions imposed (Zheng et al., 2021). For several years, this sector was considered resilient, having helped numerous countries in the recovery that followed the 2008 economic downturn (Lario, 2021). Also, tourism has been effective in recovering from negative events, whether of natural, health, or violence origin (Khan, Bibi, Lyu, Latif, & Lorenzo, 2021; Sigala, 2020). Notwithstanding its resilience, COVID-19 is currently one of the greatest challenges of contemporary tourism (Sigala, 2020). For example, there was a decrease of more than 75% in tourist arrivals, which translated into a loss of more than 1 trillion US\$, and several cuts were performed at an organizational level (e.g., temporary leaves) (Jung, Jung, & Yoon, 2021; Sigala, 2020). Robina-Ramírez, Medina-Merodio, Moreno-Luna, Jiménez-Naranjo, and Sánchez-Oro (2021) synthesized the current state of tourism worldwide as a residual activity; until recently, there was a situation of overtourism.

Within tourism, there were areas, e.g., in hospitality, where workers remained at their workplaces increasing their risk of infection (Salas-Nicás et al., 2021). For example, hospitality workers are in direct contact with tourists and the possibility of cross contamination is high, e.g., through cutlery and surfaces (Hu et al., 2021; Zhang, Xie, Wang, Morrison, & Coca-Stefaniak, 2020). The empirical evidence has demonstrated that safety measures due to the pandemic have focused more on customers (Lario, 2021; Zhang et al., 2020). However, some authors (e.g., Kim, Kim, Kim, & Lee, 2021) have underlined that hospitality establishments should value the safety and health of their workers. Most of research performed has been dedicated to food safety issues, thus it is necessary to deepen the knowledge about the mechanisms that promote the safety and health of hospitality workers (Wong, Kim, Kim, & Han, 2021).

The Job Demands-Resources (JD-R; Demerouti, Bakker, de Jonge, Janssen, & Schaufeli, 2001) model is the

main theoretical framework to study occupational well-being. Initially, this model was composed by two variables, job demands and job resources. Over time, it was observed that these variables were not the only responsible for the processes of the JD-R, having been proposed the existence of personal resources, which mediate the association between job resources and work engagement (Xanthopoulou, Bakker, Demerouti, & Schaufeli, 2007). Research using the JD-R has grown substantially (e.g., Meirun et al., 2020; Meyer, Zill, Dilba, Gerlach, & Schumann, 2021; Radic, Arjona-Fuentes, Ariza-Montes, Han, & Law, 2020) and became useful to understand the mechanisms related to well-being. Concepts like organizational justice, psychosocial safety climate, positive psychological capital (PsyCap), work engagement, and affective commitment assume great relevance in contexts of psychosocial vulnerability, such as the pandemic (Correia & Almeida, 2020; Dimino, Horan, & Stephenson, 2020; Seddighi, Dollard, & Salmani, 2022), and are also integrated in the JD-R (Schaufeli & Taris, 2014).

In hospitality, the empirical evidence on psychosocial safety climate is still embryonic. However, Teo, Bentley, and Nguyen (2020) observed that this concept is positively associated with work engagement and affective commitment. Also, a positive relationship between psychosocial safety climate and PsyCap was observed (Brunetto, Saheli, Dick, & Nelson, 2022; Siami, Martin, Gorji, & Grimmer, 2022). Regarding organizational justice, the empirical evidence on the relationship with organizational commitment is strong (e.g., Kim, Milliman, & Lucas, 2021; Luo, Marnburg, & Law, 2017; Teresa, Yasmina, & Sangwon, 2020). Nevertheless, studies linking justice with work engagement and PsyCap are limited. There are no studies, that we are aware of, that integrate the abovementioned concepts in a single theoretical model and using a sample of hospitality employees, underlining the novelty of this study. Moreover, this research becomes relevant due to the importance of these concepts in the pandemic context.

The purpose of this study, which was based on the motivational process of the JD-R—a process that fosters occupational well-being and desired work-related outcomes—was to empirically test the direct and indirect mechanisms between psychosocial safety climate and organizational justice, and affective commitment. Thus, this study intended to achieve the following objectives:

1. To assess how psychosocial safety climate (job resource) is related to work engagement through PsyCap (personal resource).
2. To analyze how organizational justice (job resource) is associated with work engagement through PsyCap.
3. To evaluate how psychosocial safety climate is related to affective commitment (desired work-related outcome) through work engagement.
4. To determine how organizational justice is associated to affective commitment through work engagement.

The main Portuguese tourist destination, the Algarve, a region that possesses the highest value in the overnight

stays' indicator in the country and which has its main source of economic development in tourism, was chosen to perform this research (Andraz, Norte, & Gonçalves, 2015). Most of the studies conducted in this destination have focused on the experiences of tourists and residents (e.g., Agapito, Pinto, & Mendes, 2017; Vargas-Sánchez, Valle, Mendes, & Silva, 2015) neglecting the role of tourism employees, especially those who work in hospitality establishments.

## Literature review and research hypotheses

### Overview of the job demands-resources (JD-R) model

The JD-R allows to understand which workers feel motivated at work and which feel drained by it (Bakker & Demerouti, 2014). Several theoretical frameworks are at the origin of this model (e.g., Two-Factor Theory, Job Characteristics Model, Demand-Control Model, and Effort-Reward Imbalance), however they had significant limitations (Bakker & Demerouti, 2014). The JD-R filled these gaps and became fundamental for understanding well-being, predicting several work-related outcomes (Schaufeli & Taris, 2014). Although its initial focus was on the identification of burnout's antecedents, nowadays it is responsible for the comprehension of the work experience and its impact on individuals' health (Bakker, Demerouti, & Sanz-Vergel, 2014). This model argued that there are two variables, job demands and job resources, which can be used in all work environments and occupations (Bakker & Demerouti, 2017). Job demands refer to the work aspects that cause ill-being; while job resources refer to the work characteristics that foster psychological growth and goal achievement (Bakker & Demerouti, 2017). Job demands and resources are responsible for the development of two simultaneous processes, health impairment (i.e., burnout) and motivational (i.e., work engagement), respectively (Bakker & Demerouti, 2017; Schaufeli, 2017). The present study followed the motivational process of the JD-R, i.e., a process triggered by job resources and that leads to occupational well-being.

This model has suffered some changes, one of the main was the integration of personal resources, until then the JD-R ignored the importance of individual characteristics to understand the work experience (Bakker & Demerouti, 2014). These resources refer to an assessment of the environment and the ability to act proactively to control it (Bakker & Demerouti, 2017). Also, personal resources share some similarities with job resources, e.g., they are related to psychological growth and goal achievement, and are positively associated with work engagement (Xanthopoulou et al., 2007).

### Direct association between psychosocial safety climate and organizational justice, PsyCap, and work engagement

Psychosocial safety climate emerged due to the increased risks associated with workers' safety and psychological health (Hall, Dollard, & Coward, 2010). According to Dollard, Dormann, Tuckey, and Escartín (2017), this concept concerns the processes and practices created by organizations aimed at reducing safety and psychological health risks. Dollard, Tuckey, and Dormann (2012) framed psychosocial safety climate

within the JD-R, and Schaufeli and Taris (2014) defined it as a job resource. In hospitality, there is still scarce support for the relationship between psychosocial safety climate and PsyCap. Nevertheless, this association is corroborated by the premises of the JD-R and research performed in other occupations. Xanthopoulou et al. (2007) demonstrated that job resources foster personal resources. Brunetto et al. (2022) observed, in a sample of street level bureaucrats, that psychosocial safety climate was positively associated with PsyCap. The same results were obtained by Siami et al. (2022) in a sample of services employees. This relationship is also explained by the Conservation of Resources (COR) theory, job resources act as a catalyst for the development of personal resources (Hobfoll, 2011). Thus, a synergistic action is created between job and personal resources. As such, the following research hypothesis is proposed:

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*Hypothesis 1a. Psychosocial safety climate is positively associated with PsyCap.*

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Organizational justice is important to understand employees' reactions to organizations' decisions (Fortin, 2008). This concept is better understood through the combination of four dimensions that aim to observe if: there is fairness in outcome distribution (distributive justice); the procedures that govern distribution follow consistent and clear criteria (procedural justice); senior management adopts a conduct of respect toward employees (interpersonal justice); and possible doubts regarding the provided outcomes and adopted procedures are clarified (informational justice) (Fortin, 2008). Within the JD-R, a fairness perception facilitates the achievement of work goals and psychological growth (Schaufeli & Taris, 2014). Hur, Rhee, and Ahn (2016) registered that organizational justice, namely distributive and procedural, was positively associated with PsyCap. As such, when employees feel fairly treated by their organizations, they will achieve a positive psychological state characterized by self-efficacy, resilience, hope, and optimism. Totawar and Nambudiri (2014) obtained the same results in a sample of 440 workers. On a theoretical level, the Broaden-and-Build theory (Fredrickson, 2001) also explained this relationship—positive emotions, e.g., feeling fairly treated by an employer, increase cognitive resources that translate into higher psychological resources (i.e., PsyCap). Thus, the following hypothesis was defined:

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*Hypothesis 1b. Organizational justice is positively associated with PsyCap.*

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Job resources establish a direct association with engagement (Bakker & Demerouti, 2014; Radic et al., 2020). When employees perceive that their organizations value safety and psychological health, as well as there are fairness perceptions, the available resources will increase. Thus, they will feel more engaged at work. In hospitality, a positive relationship between psychosocial safety climate and work engagement has already been observed (Teo et al., 2020). Nevertheless, the association between organizational justice and work engagement needs further analysis, since the obtained results have been contradictory (Lupsa, Baciu, & Virga, 2019).

Therefore, the following hypotheses were developed:

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*Hypothesis 2a. Psychosocial safety climate is positively associated with work engagement.*

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*Hypothesis 2b. Organizational justice is positively associated with work engagement.*

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An engaged hospitality worker puts more energy, dedication, and concentration into work-related tasks, which will benefit hotel functioning. According to the JD-R, work engagement is predicted by job and personal resources (Bakker & Demerouti, 2017). Regarding personal resources, the work of Xanthopoulou et al. (2007) was pioneer, arguing that personal resources, specifically self-efficacy and optimism, predicted work engagement. The abovementioned personal resources are two of the four components of PsyCap (Luthans, Youssef-Morgan, & Avolio, 2015). Past literature reviews and meta-analyses (e.g., Avey, Reichard, Luthans, & Mhatre, 2011; Newman, Ucbasaran, Zhu, & Hirst, 2014) have demonstrated that PsyCap fosters engagement. Evidence from hospitality also corroborates this relationship. Karatepe and Karadas (2015), in a sample of Romanian frontline employees, observed that PsyCap was positively related to work engagement. The same was registered by Tsaour, Hsu, and Lin (2019) in a sample of service-based hospitality workers. As such, we advance that:

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*Hypothesis 3. PsyCap is positively associated with work engagement.*

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### **Mediating role of PsyCap**

As stated above, job resources establish a direct association with work engagement. However, an alternative path explains this relationship, through personal resources (Bakker & Demerouti, 2014). Personal resources mediate the association between job resources and work engagement (Bakker & Demerouti, 2017). These resources emerged in the JD-R as an attempt to emphasize the role of human behavior in achieving occupational well-being. Xanthopoulou et al. (2007) demonstrated that personal resources partially mediate the relationship between job resources and work engagement. This mediating effect is corroborated by the COR theory, the availability of job resources contributes to higher personal resources (e.g., PsyCap), which will translate into increased energy, dedication, and concentration (Bakker & Demerouti, 2017; Hobfoll, 2011).

In hospitality, the relationship between job resources, personal resources, and work engagement has been previously demonstrated. Tsaour et al. (2019) observed that PsyCap mediated the association between workplace fun and work engagement. Nevertheless, there is a gap regarding the job resources tested in this

sector, e.g., the empirical evidence is limited regarding the role of psychosocial safety climate and organizational justice. In a study with flight attendants, Hur et al. (2016) registered that distributive and procedural justice were related to PsyCap and turnover intention. As for psychosocial safety climate, studies have linked this concept with PsyCap (e.g., Brunetto et al., 2022) and work engagement (Geisler, Berthelsen, & Muhonen, 2019; Law, Dollard, Tuckey, & Dormann, 2011). However, as far as we are aware of, few studies have used psychosocial safety climate as a job resource and related it with PsyCap and engagement. Notwithstanding, the evidence suggests that psychosocial safety climate and organizational justice act synergistically with PsyCap to foster work engagement. Therefore, the following hypotheses were proposed:

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*Hypothesis 4a. PsyCap partially mediates the association between psychosocial safety climate and work engagement.*

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*Hypothesis 4b. PsyCap partially mediates the association between organizational justice and work engagement.*

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### **Direct association between psychosocial safety climate and organizational justice, and affective commitment**

The main premise of psychosocial safety climate is that, due to the deterioration of psychosocial working conditions, organizations must value workers' safety and psychological health. If there is a positive perception of psychosocial safety climate, workers will reciprocate, e.g., they will present desired work-related outcomes (Geisler et al., 2019). One of the main work-related outcomes is organizational commitment, which is composed by three dimensions, affective, normative, and continuance (Meyer & Allen, 1991). The main commitment dimension is affective commitment, the psychological link developed with the organization leading to an identification with its mission, vision, and goals (Meyer, Stanley, Herscovitch, & Topolnytsky, 2002). Research has shown that psychosocial safety climate is positively associated with organizational commitment (e.g., Berthelsen, Muhonen, Bergstrom, Westerlund, & Dollard, 2020; Geisler et al., 2019), but there are few studies that have tested the relationship between this construct and affective commitment. Organizational justice is also related to organizational commitment. When workers feel fairly treated by their organizations, this will shape their commitment positively (Totawar & Nambudiri, 2014). Studies performed have focused on specific justice dimensions (e.g., Kim, Milliman, et al., 2021; Luo et al., 2017), therefore it is necessary to understand how a global justice perception influences the identification of employees with their organizations. Thus, the following hypotheses were created:

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*Hypothesis 5a. Psychosocial safety climate is positively associated with affective commitment.*

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*Hypothesis 5b. Organizational justice is positively associated with affective commitment.*

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### **Mediating role of work engagement**

Work engagement is integrated into the motivational process of the JD-R (Bakker & Demerouti, 2017). The synthesis of Bailey, Madden, Alfes, and Fletcher (2017) demonstrated that engagement is related to specific types of commitment, such as affective commitment.

In addition to understanding the work-related outcomes of work engagement, it is also necessary to address its mediating role. According to Bakker and Demerouti (2017), there is theoretical support for the mediating role of this concept on the association between job resources and work-related outcomes. This aspect was also underlined by Schaufeli and Taris (2014). As such, when job resources are high, the pool of available resources will lead to a motivational-like process, i.e., engagement, which, in turn, will promote desired outcomes, e.g., affective commitment (Hobfoll, 2011). Lupsa et al. (2019) observed that engagement mediated the relationship between organizational justice and health. In the case of psychosocial safety climate, this effect has not been yet demonstrated, although there is evidence that this concept is related to work engagement (e.g., Law et al., 2011) and organizational commitment (e.g., Geisler et al., 2019). Therefore, it can be argued that:

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*Hypothesis 6. Work engagement is positively associated with affective commitment.*

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*Hypothesis 7a. Work engagement partially mediates the association between psychosocial safety climate and affective commitment.*

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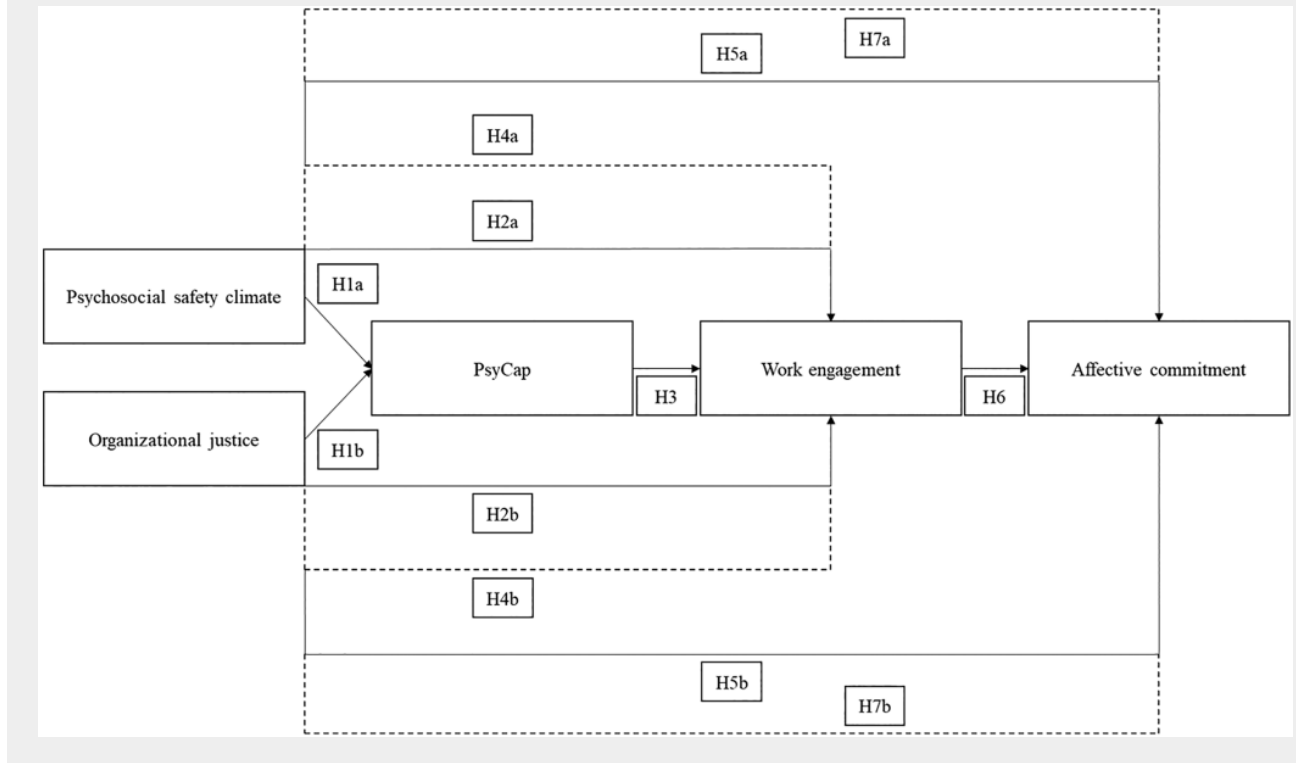
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*Hypothesis 7b. Work engagement partially mediates the association between organizational justice and affective commitment.*

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Figure 1 presents the theoretical model and research hypotheses.

Figure 1. Theoretical model and research hypotheses. In solid lines are the hypotheses that tested direct effects. In dashed lines are the research hypotheses that tested mediation effects. +



The pandemic brought new challenges to hospitality. The literature (e.g., Lario, 2021; Zhang et al., 2020) has shown that the concerns of these establishments have focused on customers. However, due to their direct contact with customers, workers are at a higher risk of infection (Hu et al., 2021; Zhang et al., 2020). This study intended to overcome this limitation by introducing psychosocial safety climate, a concept related with the safety and psychological health of employees (Dollard et al., 2017). On the other hand, due to the transformations in hotels' business model, it is also important to assess whether workers are feeling fairly treated by their organizations, an aspect that, at the present time, has not received the necessary attention (Hu et al., 2021; Wong et al., 2021). Both psychosocial safety climate and organizational justice influence employees' link to their organizations (e.g., Kim, Millman, et al., 2021). Hence, it is vital to address the mechanisms that intervene in this relationship.

## Methodology

### Sampling and procedure

A non-probabilistic sampling technique was followed. The researchers contacted, via e-mail, a total of 636 workers from the hotel sector of the Algarve to participate in the research. The information about the participants was obtained through a database developed by the research team based on past research on the promotion of occupational well-being in hotel workers from the Algarve. The construction of the database was based on anonymity and confidentiality standards, i.e., authorization was requested from individuals to include them. Those who agreed were integrated into the database that was used as the basis for recruiting participants for this study. In the e-mail the general objective of the study was explained, as well as was indicated that all ethical criteria were respected. An inclusion criterion was defined, at the time of the response to the research protocol participants should be employed at a hotel of the Algarve, Portugal. Employees who agreed to participate were asked to forward the link of the protocol to their contacts who respected the inclusion criterion. Before completing the protocol, respondents had to read and agree with a set of information. Participants were informed that: confidentiality and anonymity standards were respected; the data collected would only be used for research purposes; there were no rewards associated with participation; and they could withdraw their participation at any time. This research followed a cross-sectional design. Data collection occurred between March 25<sup>th</sup>-2020, and June 16<sup>th</sup>-2020. An electronic platform was used to collect the data, an option selected due to the pandemic that affected Portugal, which prevented face-to-face data collection.

## Measures

Psychosocial safety climate was assessed by the Psychosocial Safety Climate-12 (PSC-12; Hall et al., 2010), which is composed by 12 items (e.g., In my workplace senior management acts quickly to correct problems/issues that affect employees' psychological health) with a five-point Likert scale (*1-Strongly disagree; 5-Strongly agree*). This concept is a multidimensional latent trait comprising four dimensions, management commitment (e.g., Senior management acts decisively when a concern of an employees' psychological status is raised), management priority (e.g., Psychological well-being of staff is a priority for this organization), organizational communication (e.g., There is good communication here about psychological safety issues which affect me), and organization participation (e.g., Participation and consultation in psychological health and safety occurs with employees', unions and health and safety representatives in my workplace), with three items each. Hall et al. (2010) achieved reliability values higher than .75.

Organizational justice was evaluated by the Organizational Justice Questionnaire (Rego, 2000), which possesses 17 items (e.g., In general, the rewards I receive are fair) with a six-point answer scale (*1-This statement is completely false; 6-This statement is completely true*). This construct is a multidimensional latent trait composed by the dimensions distributive (five items; e.g., My salary is fair), procedural (four items; e.g., My organization as a mechanism allowing the employees to appeal against the decisions that affect them), interpersonal (four items; e.g., My supervisor shows genuine concern to be fair with me), and informational justice (four items; e.g., My supervisor gives me feedback about my work, allowing me to improve my job). Rego and Pina e Cunha (2009) reported Cronbach's alpha values higher than .75.

PsyCap was analyzed by the Compound PsyCap Scale (CPC-12; Lorenz, Beer, Pütz, & Heinitz, 2016),

which presents 12 items (e.g., If I should find myself in a jam, I could think of many ways to get out of it) with a six-point answer scale (*1-Totally disagree; 6-Totally agree*). This concept is a multidimensional latent trait composed by the dimensions self-efficacy (e.g., I am confident that I could deal efficiently with unexpected events), resilience (e.g., Sometimes I make myself do things whether I want to or not), hope (e.g., Right now, I see myself as being pretty successful), and optimism (e.g., I am looking forward to the life ahead of me) with four items each. Lorenz et al. (2016) registered Cronbach's alpha values higher than .70.

Work engagement was assessed by the short form of the Utrecht Work Engagement Scale ( UWES; Schaufeli & Bakker, 2003; Sinval, Pasian, Queirós, & Marôco, 2018 ), which is composed of nine items (e.g., At my work, I feel bursting with energy) with a seven-point Likert scale (*0-Never; 6-Always/Every day*). This construct is a multidimensional latent trait presenting three dimensions, vigor (e.g., At my job, I feel strong and vigorous), dedication (e.g., I am enthusiastic about my job), and absorption (e.g., I feel happy when I am working intensely), with three items each. In its adaptation and validation study for Portuguese workers (Sinval et al., 2018), reliability values higher than .90 were achieved.

Affective commitment was evaluated by the Organizational Commitment Questionnaire (Rego & Souto, 2004), which is based on the three-factor model of Meyer and Allen (1991). This commitment dimension possesses five items (e.g., I feel like "part of the family" at my organization) with a seven-point Likert scale (*1-This statement does not apply to me at all; 7-This statement totally applies to me*). Rego and Pina e Cunha (2008) obtained Cronbach's alpha values of .85.

The sociodemographic questionnaire comprised questions about the sex, age, marital status, educational background, contract status, job tenure, and classification of the hotel establishment.

## Data analysis procedures

Initially, descriptive, correlational, and reliability analyses were performed. These procedures were conducted with the Statistical Package for the Social Sciences (SPSS) version 20.

Regarding structural equation modeling (SEM), the first step in the analysis was the standardization of the variables' values, a strategy followed since the selected measures presented different answering scales. Subsequently, the multivariate normal distribution was tested. In the literature there is no consensus on the skewness ( $|sk|$ ) and kurtosis ( $|ku|$ ) values that respect this assumption. Nevertheless, for the maximum likelihood estimation method values of skewness and kurtosis lower than two ( $|sk| \leq 2$ ) and seven ( $|ku| \leq 7$ ), respectively, indicate that there are no significant departures from normality (Curran, West, & Finch, 1996).

Common-method bias (CMB) was estimated since this study followed a cross-sectional design (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). The statistical remedy chosen was the Harman's single-factor test following the recommendations of Roni (2014). As such, an exploratory factor analysis forced on one factor was performed. A total variance explained below 50% indicates that CMB is not prejudicing the data.

Overall model fit was tested through the indices suggested by Hu and Bentler (1999), Ullman (2006), and Iacobucci (2010) for the maximum likelihood estimation method. However, before presenting the results for these indices, the Chi-squared goodness-of-fit test ( $\chi^2$ ) value was reported, it is expected that a *p-value* higher than .05 is achieved. This test is sensitive to the sample size, e.g., in studies with several participants statistically significant values ( $p < .05$ ) may occur (Anderson & Gerbing, 1982). To eliminate this gap other indices were selected, Root Mean Square Error of Approximation (RMSEA), Standardized Root Mean Square Residual (SRMR), Comparative Fit Index (CFI), Tucker-Lewis Index (TLI), and Normed Chi-squared ( $\chi^2/df$ ). Values of RMSEA between .05-.10 point to an acceptable fit and values below .05 indicate a very good fit (Hu & Bentler, 1999; Marôco, 2021). A 90% confidence interval for this index was also calculated (90%CI RMSEA). The SRMR index achieves an acceptable fit between .05-.08 and a good fit for values below .05 (Hu & Bentler, 1999; Marôco, 2021). Regarding CFI and TLI, values between .90-.95 are classified as good and higher than .95 as very good (Hu & Bentler, 1999; Marôco, 2021). Lastly, the  $\chi^2/df$  reaches an acceptable fit for values below five and a good fit for values below two (Marôco, 2021).

Measurement model fit was evaluated through validity and reliability indicators (Anderson & Gerbing, 1982). Validity was assessed in the threefold way, factor, convergent, and discriminant. Factor validity is achieved when the standardized factor loadings of indicators present values equal or higher than .50 (Marôco, 2021). Convergent validity was calculated through the Average Variance Extracted (AVE), values higher than .50 are desired (Bagozzi & Yi, 1988; Sharma, 1996). Lastly, discriminant validity was tested through the Fornell and Larcker (1981) criterion, i.e., comparison between the AVE values and the squared correlation coefficients. Reliability was measured by two coefficients, Cronbach's alpha and Composite Reliability (CR), values higher than .70 are desired (Hair, Black, Babin, & Anderson, 2014).

The structural model was assessed in terms of sign and statistical significance. Initially, the direct effects were tested. Subsequently, the indirect effects were computed through a bootstrap simulation following the assumptions of Marôco (2021).


## Results

### Participants' characteristics


A sample of 217 workers, out of a total of 636, of the Algarve hospitality sector was collected. Most of the participants were females (60.4%), had approximately 37 years old ( $M = 36.71$ ;  $SD = 10.83$ ), were single (52.1%), had secondary education (44.7%), worked with a fixed term or open-ended contracts (44.7%), had a job tenure of approximately six and a half years ( $M = 6.59$ ;  $SD = 6.73$ ), and worked on five-star hotels (41.9%) (see Table 1).

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table, please view the 'PDF' tab.

**Table 1. Participants' characterization (N = 217).** 

Characteristic	%
Sex	
Female	60.4
Male	39.6
Age	<i>M</i> = 36.71 years old ( <i>SD</i> = 10.83; Min.=21; Max.=66)
Marital status	
Single	52.1
Married or in a non-marital partnership	38.2
Divorced	8.3
Widowed	1.4
Educational background	
Basic education	9.7
Secondary education	44.7
Degree	30
Master's	6.5
PhD	.9
Post-graduation	4.1
Other	4.1
Contractual situation	
Fixed term	44.7
Open-ended	44.7
Self-employed	3.7
Other	6.9
Job tenure	<i>M</i> = 6.59 years ( <i>SD</i> = 6.73; Min.=10 months; Max.=30 years)
Hotel classification (number of stars)	
One	3.7
Two	2.3
Three	13.8
Four	38.2
Five	41.9

*Note.* *M*=mean value; *SD*=standard-deviation value; Min.=minimum value; Max.=maximum value; %=percentage. 

## Descriptive and correlational analyses

In [Table 2](#) are the results for the descriptive and correlational analyses.

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**Table 2. Descriptive and correlational analyses ( $N = 217$ ).**

	<i>M</i>	<i>SD</i>	1.	2.	3.	4.	5.
1. Psychosocial safety climate	40.59	12.02	(.96)				
2. Organizational justice	4.06	1.17	.752	(.96)			
3. PsyCap	4.84	.63	.365	.365	(.83)		
4. Work engagement	4.63	1.24	.583	.664	.391	(.97)	
5. Affective commitment	5.31	1.53	.665	.764	.358	.778	(.94)

*Note.* *M*=mean value; *SD*=standard-deviation value. All the correlations were statistically for  $p < .01$ . In parenthesis are the reliability values using the Cronbach’s alpha coefficient.

## Common-method bias and overall model fit

The results of the exploratory factor analysis indicated that the single factor explained 48.07% of the total variance. Thus, it can be concluded that the proposed model was not affected by the CMB.

The Chi-squared goodness-of-fit test achieved a statistically significant value,  $\chi^2(469)=881.086, p < .01$ . This situation can be explained by the sample size. In [Table 3](#) are the results for the selected fit indices.

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**Table 3. Fit indices for the proposed model.**

Fit index	Observed value	Comment
RMSEA <sup>a</sup> 90%CI RMSEAb	.064 [.057-.070]	Acceptable

SRMR <sup>c</sup>	.062	Acceptable
CFId	.94	Good
TLI <sup>e</sup>	.934	Good
$\chi^2/df$	1.879	Good
No table footnotes are available		

### Measurement model fit

Some indicators were removed from the initial model, as they were compromising its' quality. The dimensions organizational communication (psychosocial safety climate), resilience (PsyCap), and absorption (work engagement) were eliminated. The standardized factor loadings for the remaining items were above .50, which suggested the existence of factor validity. Also, there was evidence of convergent validity since all AVE values were above .50. Cronbach's alpha and CR values were higher than the threshold of .70 (see Table 4).

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**Table 4. Factor validity, convergent validity, and reliability results. +**

Constructs and indicators	Std. factor loadings*	Alpha and CR	AVE
Management commitment (Psychosocial safety climate)		.913;.895	.740
Item 1-In my workplace senior management acts quickly to correct problems/issues that affect employees' psychological health.	.851		
Item 2-Senior management acts decisively when a concern of an employees' psychological status is raised.	.849		
Item 3-Senior management show support for stress prevention through involvement and commitment.	.881		
Management priority (Psychosocial safety climate)		.918;.922	.797
Item 4-Psychological well-being of staff is a priority for this organization.	.904		



Item 5-Senior management clearly considers the psychological health of employees to be of great importance.	.923		
Item 6-Senior management considers employee psychological health to be as important as productivity.	.849		
Organization participation (Psychosocial safety climate)		.902;.902	.754
Item 10-Participation and consultation in psychological health and safety occurs with employees' unions and health and safety representatives in my workplace.	.787		
Item 11-Employees are encouraged to become involved in psychological safety and health matters.	.910		
Item 12-In my organization, the prevention of stress involves all levels of the organization.	.903		
Distributive justice (Organizational justice)		.920;.921	.796
Item 5-My salary is fair.	.918		
Item 9-Taking into account the other salaries paid in this organization, I feel that my salary is fair.	.884		
Item 16-Taking into account my efforts, I feel that I am fairly rewarded.	.874		
Procedural justice (Organizational justice)		.783;.794	.658
Item 2-My organization has a mechanism allowing the employees to appeal against the decisions that affect them.	.828		
Item 14-Employees can disagree or appeal against the decisions made by their supervisors.	.794		
Interpersonal justice (Organizational justice)		.889;.892	.806
Item 3-My superior shows a genuine concern to be fair with me.	.854		
Item 11-My superior treats me with respect and consideration.	.939		
Informational justice (Organizational justice)		.897;.881	.788
Item 4-My supervisor gives me feedback about my work, allowing me to improve my job.	.900		
Item 8-When my supervisor decides about my work, he/she gives me explanations that make sense to me.	.875		
Hope (PsyCap)		.759;.765	.621
Item 1-If I should find myself in a jam, I could think of many ways to get out of it.	.719		
Item 3-I can think of many ways to reach my current goals.	.851		
Optimism (PsyCap)		.713;.737	.592
Item 4-I am looking forward to the life ahead of me.	.621		
Item 5-The future holds a lot of good in store for me.	.893		
Self-efficacy (PsyCap)		.720;.758	.622
Item 10-I am confident that I could deal efficiently with unexpected events.	.943		
Item 12-I can remain calm when facing difficulties because I can rely on my coping abilities.	.596		

Vigor (Work engagement)		.972;.972	.945
Item 1-At my work, I feel bursting with energy.	.969		
Item 2-At my job, I feel strong and vigorous.	.975		
Dedication (Work engagement)		.949;.949	.903
Item 3-I am enthusiastic about my job.	.950		
Item 4-My job inspires me.	.950		
Affective commitment		.935;.931	.772
Item 2-I have a strong affection for this organization.	.922		
Item 3-I care about the future of my organization.	.834		
Item 4-I am proud to tell others that I am part of this organization.	.917		
Item 5-I feel like "part of the family" at my organization.	.838		
<p><i>Note.</i> Std. factor loadings = standardized factor loadings; Alpha = Cronbach's alpha; CR = Composite Reliability; AVE = Average Variance Extracted. *<math>p &lt; .05</math>.</p>			

Lastly, there was evidence of discriminant validity, given that all AVE values were higher than the squared correlation values (see Table 5).

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**Table 5. Discriminant validity assessment.**

Constructs	1.	2.	3.	4.	5.
1. Psychosocial safety climate	<b>.764</b>				
2. Organizational justice	.473	<b>.766</b>			
3. Psycap	.116	.135	<b>.611</b>		
4. Work engagement	.346	.441	.144	<b>.924</b>	
5. Affective commitment	.416	.536	.125	.579	<b>.772</b>
<p><i>Note.</i> Bolded are the AVE values. The remaining values are the squared correlations.</p>					

## Structural model fit and research hypotheses

Globally, nine research hypotheses were confirmed and three were rejected (see Table 6).

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**Table 6. Research hypotheses results.** 

Hypotheses	Effects			Comment
	Direct	Indirect	Total	
H1a: Psychosocial safety climate → PsyCap	.230		.230	Rejected
H1b: Organizational justice → PsyCap	.245*		.245*	Accepted
H2a: Psychosocial safety climate → Work engagement	.294**		.327***	Accepted
H2b: Organizational justice → Work engagement	.426**		.461***	Accepted
H3: PsyCap → Work engagement	.140		.140	Rejected
H4a: Psychosocial safety climate → PsyCap → Work engagement	.294**	.032	.327***	Rejected
H4b: Organizational justice → PsyCap → Work engagement	.426**	.034*	.461***	Accepted
H5a: Psychosocial safety climate → Affective commitment	.160*		.338***	Accepted
H5b: Organizational justice → Affective commitment	.278**		.528***	Accepted
H6: Work engagement → Affective commitment	.543***		.543***	Accepted
H7a: Psychosocial safety climate → Work engagement → Affective commitment	.160*	.177**	.338***	Accepted
H7b: Organizational justice → Work engagement → Affective commitment	.278**	.250**	.528***	Accepted

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



### Direct relationships

*Hypothesis 1a. Psychosocial safety climate is positively associated with PsyCap.*

*Hypothesis 1b. Organizational justice is positively associated with PsyCap.*

The obtained results indicated that psychosocial safety climate and PsyCap did not establish a statistically significant result. Therefore the hypothesis was not supported. A possible explanation is that psychosocial safety climate perceptions were not strong enough to foster employees’ PsyCap. On the other hand, organizational justice established a positive association with PsyCap, meaning that a fairness perception contributes to the increase of employees’ positive psychological resources.

*Hypothesis 2a. Psychosocial safety climate is positively associated with work engagement.*

*Hypothesis 2b. Organizational justice is positively associated with work engagement.*

Both hypotheses were supported, meaning that employees that perceive concerns about their safety and psychological health, as well as develop a fairness perception, will be engaged at work.

*Hypothesis 3. PsyCap is positively associated with work engagement.*

The obtained result did not support this association. This situation may have occurred because the workplace experience did not promote employees' PsyCap, thus they were not engaged into work-related tasks.

*Hypothesis 5a. Psychosocial safety climate is positively associated with affective commitment.*

*Hypothesis 5b. Organizational justice is associated with affective commitment.*

These hypotheses were supported. Thus, when employees possess positive perceptions of psychosocial safety climate and organizational justice, they will develop a psychological link with their organization.

*Hypothesis 6. Work engagement is positively associated with affective commitment.*

This hypothesis was supported, meaning that engaged employees establish an identification with their organization's mission, vision, and goals.

### **Mediation relationships**

*Hypothesis 4a. PsyCap partially mediates the association between psychosocial safety climate and work engagement.*

*Hypothesis 4b. PsyCap partially mediates the association between organizational justice and work engagement.*

PsyCap did not mediate the association between psychosocial safety climate and work engagement, meaning that the synergistic action between job and personal resources did not lead to higher engagement levels. Therefore 4a was not supported. However on the other hand, the combination of a fairness perception and of positive psychological resources led to engagement in work-related tasks and 4 b was supported. .

*Hypothesis 7a. Work engagement partially mediates the association between psychosocial safety climate and affective commitment.*

*Hypothesis 7b. Work engagement partially mediates the association between organizational justice and affective commitment.*

These hypotheses were supported, as such when job resources combine with work engagement, they will lead to desired work-related outcomes.

## Discussion

The COVID-19 pandemic brought several challenges to the tourism sector, particularly regarding the functioning of hotel establishments. Hotel workers continued to perform their tasks, increasing their risk of exposure to the disease, especially as most measures to reduce the spread of COVID-19 focused on hotel customers. Thus, it was important to understand how hotel employees' perceptions regarding their safety, psychological health, and organizational justice were related to the development of desired work-related outcomes, in this case affective commitment, considering the mediating roles of PsyCap and work engagement.

The obtained results allow to affirm that hospitality employees that feel fairly treated by their employers will present higher PsyCap. When this occurs, they will: perceive themselves as more effective; be able to achieve work goals; and make positive attributions about the present and future (Hur et al., 2016; Totawar & Nambudiri, 2014). The direct association between psychosocial safety climate and work engagement presents scarce evidence in hospitality (e.g., Teo et al., 2020), however studies performed in other occupations have validated it (Geisler et al., 2019; Yulita, Idris, & Dollard, 2022). Thus, when employees perceive that their organization is concerned about their safety and psychological health, they will feel more engaged into work-related tasks. The same was observed regarding the relationship between organizational justice and engagement, fairness perceptions will lead to work engagement, as demonstrated by Lupsa et al. (2019). Direct associations between psychosocial safety climate, organizational justice, and work engagement were also observed. Therefore, when employees develop positive perceptions about their hotel's safety, psychological health, and fairness practices, as well as they are engaged, a psychological link with the employer will emerge (Berthelsen et al., 2020).

PsyCap mediated the relationship between organizational justice and work engagement. As such, to foster work engagement, there must be a synergistic action between fairness perceptions and employees' positive psychological resources. Only through the combination of this pool of resources, it will be possible for this motivational-like process to emerge (Hobfoll, 2011; Tsaur et al., 2019). The mediating effect of work engagement on the association between job resources and work-related outcomes is supported by the JD-R (Bakker & Demerouti, 2017; Schaufeli & Taris, 2014). However, evidence of the role of work engagement on the relationship between psychosocial safety climate and organizational justice, and affective commitment is still scarce. Studies have demonstrated that work engagement mediated the association between organizational justice and health (e.g., Lupsa et al., 2019). Regarding psychosocial safety climate, this effect was not registered in past research, only studies that related this construct with engagement (e.g., Law et al., 2011) and organizational commitment (e.g., Geisler et al., 2019). With the results obtained, it was possible to contribute to the advance of knowledge in hospitality research by verifying that employees who feel that there is a concern about their safety, psychological health, and fairness perceptions will feel more engaged, which will

result in an identification with the hotel's mission, vision, and goals.

The unconfirmed research hypotheses deserve some reflection. The mean value registered for psychosocial safety climate indicated that there is a medium risk regarding safety and psychological health (Bailey, Dollard, & Richards, 2015). Thus, the perception developed may not have been strong enough to foster workers' PsyCap. Also, there was no statistically significant relationship between PsyCap and work engagement. Given that hospitality work is marked by insecurity and seasonality, it is possible that individuals do not have the necessary stimulus to promote PsyCap. Thus, the effect of this concept on work engagement was residual. If there was no statistically significant link between psychosocial safety climate and PsyCap and between PsyCap and work engagement, it was expected that there would be no mediation effect, according to Baron and Kenny (1986). In this situation, the effect observed was solely due to the direct association between psychosocial safety climate and work engagement.

## Conclusions

This study aimed to address four objectives. The first objective was to assess the mediating role of PsyCap on the relationship between psychosocial safety climate and work engagement, it was found that PsyCap did not mediate this relationship. The second objective was to analyze the mediating role of PsyCap on the relationship between organizational justice and work engagement, in this case, it was observed that PsyCap partially mediated this association. The third objective was to examine the mediating role of work engagement on the relationship between psychosocial safety climate and affective commitment, it was registered that work engagement partially mediated this association. Lastly, the fourth objective was to evaluate the mediating role of work engagement on the relationship between organizational justice and affective commitment, it was observed that work engagement partially mediated this association. As such, it can be concluded that, of the four objectives initially proposed, three were achieved.

## Theoretical implications

The integration of psychosocial safety climate in hospitality research is crucial, especially in the current context. This study emphasized the value of this concept for hotel employees, as they maintained direct contact with tourists and colleagues during COVID-19 (Hu et al., 2021). Considering the benchmark of Bailey et al. (2015), it was found that the collected sample presented a medium risk for psychosocial safety climate. Also, this study framed this construct as a job resource. Previous research (e.g., Idris, Dollard, & Winefield, 2011) operationalized psychosocial safety climate as a predecessor of job demands and job resources. However, Schaufeli and Taris (2014) argued that climate- and safety-related variables can be considered as job resources. When considering this concept as a job resource, it was observed that it promoted work engagement and affective commitment.

Moreover, this study clarified that relationship between organizational justice and work engagement since the

research performed has been contradictory. This study followed the same path of recent research (e.g., Lupsa et al., 2019), organizational justice is positively associated with work engagement, and engagement mediates the relationship between justice and desired work-related outcomes. Also, this study considered organizational justice globally, unlike others that have selected specific dimensions (e.g., Kim, Milliman, et al., 2021).

## Practical implications

The COVID-19 pandemic had detrimental effects on several activity sectors, namely in tourism and, particularly, in hospitality (Salas-Nicás et al., 2021; Sigala, 2020). Through the obtained results, it is possible to propose a set of recommendations for the general managers and human resources directors of hospitality establishments.

Managing psychosocial safety climate is essential to guarantee that employees have high positive psychological resources and are engaged in their work (Law et al., 2011). For this to occur, it is necessary that the practices and policies adopted are oriented toward the safety and psychological health of workers. At a pandemic level, work processes must be redesigned to increase safety and psychological health. For example, hotels can adopt a work-sharing strategy, where the same role is divided by two or more individuals, e.g., one frontline employee performs his/her tasks during the morning and early afternoon shift and another frontline employee performs the same tasks but during the late afternoon and night shift. Alternatively, the work week may be divided equally between two individuals that perform the same tasks. This situation prevents unnecessary contacts between workers, which reduces the risk of infection. There must be a coordination between management and workers' representatives on these matters, e.g., by the existence of bottom-up communication channels (i.e., from employees to management) that allow employees to effectively inform management about potential risks for safety and health. This aspect will promote work engagement and PsyCap, as workers will: (a) feel part of the decision-making processes, which will increase voice behaviors; (b) experience greater autonomy, as they will have greater control of their work and develop a sense of responsibility for their actions; and (c) will perceive the existence of organizational support (Dollard et al., 2012; Slemp, Field, & Cho, 2020). These communication channels can also be used by management (i.e., bottom-down communication), e.g., to communicate the existence of an outbreak among the hotel workers and/or customers. This two-way communication strategy will be useful to prevent situations that may present risks from safety and health or to intervene in risk situations to mitigate their detrimental effects.

Positive psychological resources can be fostered through intervention programs, such as the Psychological Capital Intervention (PCI; Luthans et al., 2015). This program presupposes a concerted intervention in all PsyCap's dimensions. Thus, workers will: learn how to define their goals, which must be realistic; identify what resources are needed for goal achievement; develop strategies that allow them to solve work-related problems; and use their experience to understand what mechanisms were used to face adversity (Luthans & Youssef-Morgan, 2017). According to Luthans et al. (2015), PCI is a micro-intervention that can occur online or face-to-face, has a length between two to three hours, and allows an increase of approximately 2% in PsyCap. Through the PCI it is possible to: (a) increase desired job attitudes and behaviors (e.g., affective

commitment, job satisfaction, and work engagement), as well as job performance (Da, He, & Zhang, 2020; b) decrease undesired job attitudes and behaviors (e.g., absenteeism, turnover, turnover intentions, and depression) (Da et al., 2020); and (c) increase organization's bottom-line, Luthans, Avey, Avolio, Norman, and Combs (2006) demonstrated that organization's that implement PCI will have a high return on investment.

## Limitations and future research

This study possesses some limitations. The use of a cross-sectional design prevented the observation of cause-effect relationships. Furthermore, this design also increases the probability of CMB, although this aspect was controlled. On the other hand, the elimination of the resilience dimension from PsyCap must be acknowledged. This situation has been reported in past studies (e.g., Viseu, Pinto, Borralha, & Jesus, 2020) since it presented psychometric properties below the desirable. Absorption was also removed from the model, a fact that can be justified since this is the least predominant dimension of engagement (Bakker et al., 2014).

Future studies should adopt a longitudinal design, which allows the inference of causality and decreases the probability of CMB (Schaller, Patil, & Malhotra, 2015). Furthermore, an attempt should be made to increase the sample size, as this may be one of the reasons for not having observed a statistically significant association between PsyCap and work engagement and between psychosocial safety climate and PsyCap. These relationships find support in previous works (e.g., Avey et al., 2011; Brunetto et al., 2022).

## References

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Agapito, D., Pinto, P., & Mendes, J. (2017). Tourists' memories, sensory impressions and loyalty: In loco and post-visit study in Southwest Portugal. *Tourism Management*, 58, 108–118.

doi:10.1016/j.tourman.2016.10.015



Anderson, J., & Gerbing, D. (1982). Some methods for respecifying measurement models to obtain unidimensional construct measurement. *Journal of Marketing Research*, 19(4), 453–460.

doi:10.2307/3151719



Andraz, J., Norte, N., & Gonçalves, H. (2015). Effects of tourism on regional asymmetries: Empirical evidence for Portugal. *Tourism Management*, 50, 257–267. doi:10.1016/j.tourman.2015.03.004




Avey, J., Reichard, R., Luthans, F., & Mhatre, K. (2011). Meta-analysis of the impact of positive psychological capital on employee attitudes, behaviors, and performance. *Human Resource Development Quarterly*, 22(2), 127–152. doi:10.1002/hrdq








- Bagozzi, R., & Yi, Y. (1988). On the evaluation of structural equation models. *Journal of the Academy of Marketing Science*, 16(1), 74–94. doi:10.1007/BF02723327 
- Bailey, T., Dollard, M., & Richards, P. (2015). A national standard for psychosocial safety climate (PSC): PSC 41 as the benchmark for low risk of job strain and depressive symptoms. *Journal of Occupational Health Psychology*, 20(1), 15–26. doi:10.1037//a0038166 
- Bailey, C., Madden, A., Alfes, K., & Fletcher, L. (2017). The meaning, antecedents and outcomes of employee engagement: A narrative synthesis. *International Journal of Management Reviews*, 19(1), 31–53. doi:10.1111/ijmr.12077 
- Bakker, A., & Demerouti, E. (2014). Job demands-resources theory. In P. Chen & C. Cooper (Eds.), *Work and well-being: Well-being: A complete reference guide* (Vol. III, pp. 37–64). John Wiley & Sons Inc. doi:10.1002/9781118539415.wbwell019 [AQ2](#) 
- Bakker, A., & Demerouti, E. (2017). Job Demands-Resources theory: Taking stock and looking forward. *Journal of Occupational Health Psychology*, 22(3), 273–285. doi:10.1037/ocp0000056 
- Bakker, A., Demerouti, E., & Sanz-Vergel, A. (2014). Burnout and work engagement: The JD-R approach. *Annual Review of Organizational Psychology and Organizational Behavior*, 1(1), 389–411. doi:10.1146/annurev-orgpsych-031413-091235 
- Baron, M., & Kenny, D. (1986). The moderator-mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173–1182. doi:10.1037/0022-3514.51.6.1173 
- Berthelsen, H., Muhonen, T., Bergstrom, G., Westerlund, H., & Dollard, M. (2020). Benchmarks for evidence-based risk assessment with the Swedish version of the 4-item psychosocial safety climate scale. *International Journal of Environmental Research and Public Health*, 17(22), 8675. doi:10.3390/ijerph17228675 
- Brunetto, Y., Saheli, N., Dick, T., & Nelson, S. (2022). Psychosocial safety climate, psychological capital, healthcare SLBs' wellbeing and innovative behaviour during the COVID-19 pandemic. *Public Performance & Management Review*, 45(4), 751–772. doi:10.1080/15309576.2021.1918189 
- Correia, I., & Almeida, A. (2020). Organizational justice, professional identification, empathy, and meaningful work during COVID-19 pandemic: Are they burnout protectors in physicians and nurses? *Frontiers in Psychology*, 11, 566139. doi:10.3389/fpsyg.2020.566139 
- Curran, P., West, S., & Finch, J. (1996). The robustness of test statistics to nonnormality and specification error in confirmatory factor analysis. *Psychological Methods*, 1(1), 16–29. doi:10.1037/1082-989X.1.1.16 
- Da, S., He, Y., & Zhang, X. (2020). Effectiveness of psychological capital intervention and its influence 

- on work-related attitudes: Daily online self-learning method and randomized controlled trial design. *International Journal of Environmental Research and Public Health*, 17(23), 8754. ()., doi:10.3390/ijerph17238754 
- Demerouti, E., Bakker, A., de Jonge, J., Janssen, P., & Schaufeli, W. (2001). Burnout and engagement at work as a function of demands and control. *Scandinavian Journal of Work, Environment & Health*, 27(4), 279–286. doi:10.5271/sjweh.615 
- Dimino, K., Horan, K., & Stephenson, C. (2020). Leading our frontline HEROES through times of crisis with a sense of hope, efficacy, resilience, and optimism. *Nurse Leader*, 18(6), 592–596. doi:10.1016/j.mnl.2020.05.011 
- Dollard, M., Dormann, C., Tuckey, M., & Escartín, J. (2017). Psychosocial safety climate (PSC) and enacted PSC for workplace bullying and psychological health problem reduction. *European Journal of Work and Organizational Psychology*, 26(6), 844–857. doi:10.1080/1359432X.2017.1380626 
- Dollard, M., Tuckey, M., & Dormann, C. (2012). Psychosocial safety climate moderates job demand-resource in predicting workgroup distress. *Accident; Analysis and Prevention*, 45, 694–704. doi:10.1016/j.aap.2011.09.042 
- Fornell, C., & Larcker, D. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39–50. doi:10.2307/3151312 
- Fortin, M. (2008). Perspectives on organizational justice: Concept clarification, social context integration, time and links with morality. *International Journal of Management Reviews*, 10(2), 93–126. doi:10.1111/j.1468-2370.2008.00231.x 
- Fredrickson, B. (2001). The role of positive emotions in positive psychology: The broaden-and-build theory of positive emotions. *The American Psychologist*, 56(3), 218–226. doi:10.1037/0003-066X.56.3.218 
- Geisler, M., Berthelsen, H., & Muhonen, T. (2019). Retaining social workers: The role of quality of work and psychosocial safety climate for work engagement, job satisfaction, and organizational commitment. *Human Service Organizations: Management, Leadership & Governance*, 43(1), 1–15. doi:10.1080/23303131.2019.1569574 
- Hair, J., Black, W., Babin, B., & Anderson, R. (2014). *Multivariate data analysis* (7th ed.). Pearson Education. [AQ3](#) 
- Hall, G., Dollard, M., & Coward, J. (2010). Psychosocial safety climate: Development of the PSC-12. *International Journal of Stress Management*, 17(4), 353–383. doi:10.1037/a0021320 
- Hobfoll, S. (2011). Conservation of resources theory: Its implication for stress, health, and resilience. In S.


Folkman (Ed.), *Oxford library of psychology: The Oxford handbook of stress, health, and coping* (pp. 127–147). Oxford University Press. [AQ4](#) 


Hu, L., & Bentler, P. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling: A Multidisciplinary Journal*, 6(1), 1–55. doi:10.1080/10705519909540118 


Hur, W., Rhee, S., & Ahn, K. (2016). Positive psychological capital and emotional labor in Korea: The job demands-resources approach. *The International Journal of Human Resource Management*, 27(5), 477–500. doi:10.1080/09585192.2015.1020445 


Hu, X., Yan, H., Casey, T., & Wu, C. (2021). Creating a safe haven during the crisis: How organizations can achieve deep compliance with COVID-19 safety measures in the hospitality industry. *International Journal of Hospitality Management*, 92, 102662. doi:10.1016/j.ijhm.2020.102662 


Iacobucci, D. (2010). Structural equations modeling: Fit indices, sample size, and advanced topics. *Journal of Consumer Psychology*, 20(1), 90–98. doi:10.1016/j.jcps.2009.09.003 


Idris, M., Dollard, M., & Winefield, A. (2011). Integrating psychosocial safety climate in the JD-R model: A study amongst Malaysian workers. *SA Journal of Industrial Psychology*, 37(2), 1–11. doi:10.4102/sajip.v37i2.851 

Jung, H., Jung, Y., & Yoon, H. (2021). COVID-19: The effects of job insecurity on the job engagement and turnover intent of deluxe employees and the moderating role of generational characteristics. *International Journal of Hospitality Management*, 92, 102703. doi:10.1016/j.ijhm.2020.102703 

Karatepe, O., & Karadas, G. (2015). Do psychological capital and work engagement foster employees' satisfaction? A study in the hotel industry. *International Journal of Contemporary Hospitality Management*, 27(6), 1254–1278. doi:10.1108/IJCHM-01-2014-0028 


Khalid, U., Okafor, L., & Burzynska, K. (2021). Does the size of the tourism sector influence the economic policy response to the COVID-19 pandemic? *Current Issues in Tourism*, 24(19), 2801–2820. doi:10.1080/13683500.2021.1874311 


Khan, A., Bibi, S., Lyu, J., Latif, A., & Lorenzo, A. (2021). COVID-19 and sectoral employment trends: Assessing resilience in the US leisure and hospitality industry. *Current Issues in Tourism*, 24(7), 952–969. doi:10.1080/13683500.2020.1850653 


Kim, S., Kim, P., & Lee, G. (2021). Predicting hospitality employees' safety performance behaviors in the COVID-19 pandemic. *International Journal of Hospitality Management*, 93, 102797. doi:10.1016/j.ijhm.2020.102797 


Kim, J., Milliman, J., & Lucas, A. (2021). Effects of CSR on affective organizational commitment via


- organizational justice and organization-based self-esteem. *International Journal of Hospitality Management*, 92, 102691. doi:10.1016/j.ijhm.2020.102691 
- Lario, P. (2021). Apuntes para la gestión del turismo en España tras la crisis sanitaria la COVID-19. *PASOS: Revista de Turismo y Patrimonio Cultural*, 19(1), 189–194. doi:10.25145/j.pasos.2021.19.012 
- Law, R., Dollard, M., Tuckey, M., & Dormann, C. (2011). Psychosocial safety climate as lead indicator of workplace bullying and harassment, job resources, psychological health and employee engagement. *Accident; Analysis and Prevention*, 43(5), 1782–1793. doi:10.1016/j.aap.2011.04.010 
- Lorenz, T., Beer, C., Pütz, J., & Heinitz, K. (2016). Measuring psychological capital: Construction and validation of the Compound Pscap Scale (CPC-12). *PloS One*, 11(4), e0152892. doi:10.1371/journal.pone.0152892 
- Luo, Z., Marnburg, E., & Law, R. (2017). Linking leadership and justice to organizational commitment: The mediating role of collective identity in the hotel industry. *International Journal of Contemporary Hospitality Management*, 29(4), 1167–1184. doi:10.1108/IJCHM-08-2015-0423 
- Lupsa, D., Baciú, L., & Virga, D. (2019). Psychological capital, organizational justice and health: The mediating role of work engagement. *Personnel Review*, 49(1), 87–103. doi:10.1108/PR-08-2018-0292 
- Luthans, F., Avey, J., Avolio, B., Norman, S., & Combs, G. (2006). Psychological capital development: Toward a micro-intervention. *Journal of Organizational Behavior*, 27(3), 387–393. doi:10.1002/job.373 
- Luthans, F., & Youssef-Morgan, C. (2017). Psychological capital: An evidence-based approach. *Annual Review of Organizational Psychology and Organizational Behavior*, 4(1), 339–366. doi:10.1146/annurev-orgpsych-032516-113324 
- Luthans, F., Youssef-Morgan, C., & Avolio, B. (2015). *Psychological capital and beyond*. Oxford University Press. [AQ5](#) 
- Marôco, J. (2021). *Análise de equações estruturais: Fundamentos teóricos, software & aplicações [Structural equation analysis: Theoretical framework, software & applications]* (3.a ed.). ReportNumber, Lda. [AQ6](#) 
- Meirun, T., Bano, S., Javaid, M., Arshad, M., Shah, M., Rehman, U., ... Ilyas, M. (2020). Nuances of COVID-19 and psychosocial work environment on nurses' wellbeing: The mediating role of stress and eustress lieu to JD-R theory. *Frontiers in Psychology*, 11, 570236. doi:10.3389/fpsyg.2020.570236 
- Meyer, J., & Allen, N. (1991). A three-component conceptualization of organizational commitment. *Human Resource Management Review*, 1(1), 61–89. doi:10.1016/1053-4822(91)90011-Z 
- Meyer, J., Stanley, D., Herscovitch, L., & Topolnytsky, L. (2002). Affective, continuance, and normative


commitment to the organization: A meta-analysis of antecedents, correlates, and consequences. *Journal of Vocational Behavior*, *61*(1), 20–52. doi:10.1006/jvbe.2001.1842 


Meyer, B., Zill, A., Dilba, D., Gerlach, R., & Schumann, S. (2021). Employee psychological well-being during the COVID-19 pandemic in Germany: A longitudinal study of demands, resources, and exhaustion. *International Journal of Psychology : Journal Internationale de Psychologie*, *56*(4), 532–550. doi:10.1002/ijop.12743 


Newman, A., Ucbasaran, D., Zhu, F., & Hirst, G. (2014). Psychological capital: A review and synthesis. *Journal of Organizational Behavior*, *35*(S1), S120–S138. doi:10.1002/job.1916 


Podsakoff, P., MacKenzie, S., Lee, J., & Podsakoff, N. (2003). Common method biases in behavioral research: A critical review of the literature and recommended remedies. *The Journal of Applied Psychology*, *88*(5), 879–903. doi:10.1037/0021-9010.88.5.879 


Radic, A., Arjona-Fuentes, J., Ariza-Montes, A., Han, H., & Law, R. (2020). Job demands-job resources (JD-R) model, work engagement, and well-being of cruise ship employees. *International Journal of Hospitality Management*, *88*, 102518. doi:10.1016/j.ijhm.2020.102518 


Rego, A. (2000). Justiça organizacional: Desenvolvimento e validação de um instrumento de medida [Organizational justice: Development and validation of a measure]. *Psicologia*, *14*(2), 285–307. 


Rego, A., & Pina e Cunha, M. (2008). Workplace spirituality and organizational commitment: An empirical study. *Journal of Organizational Change Management*, *21*(1), 53–75. doi:10.1108/09534810810847039 


Rego, A., & Pina e Cunha, M. (2009). Organisational justice and citizenship behaviors: A study in the Portuguese cultural context. *Applied Psychology*, *59*(3), 404–430. doi:10.1111/j.1464-0597.2009.00405.x3 


Rego, A., & Souto, S. (2004). Comprometimento organizacional em organizações autênticas [Organizational commitment in authentic organizations]. *Revista de Administração de Empresas*, *44*(3), 30–43. doi:10.1590/S0034-75902004000300004 

Robina-Ramírez, R., Medina-Merodio, J., Moreno-Luna, L., Jiménez-Naranjo, H., & Sánchez-Oro, M. (2021). Safety and health measures for COVID-19 transition period in hotel industry in Spain. *International Journal of Environmental Research and Public Health*, *18*(2), 718. doi:10.3390/ijerph18020718 


Roni, S. (2014). *Introduction to SPSS*. SOAR Centre Graduate Research School Edith Cowan University. [AQ7](#) 


Salas-Nicás, S., Moncada, S., Llorens, C., & Navarro, A. (2021). Working conditions and health in Spain during the COVID-19 pandemic: Minding the gap. *Safety Science*, *134*, 105064. doi:10.1016/j.ssci.2020.105064 

Schaller, T., Patil, A., & Malhotra, N. (2015). Alternative techniques for assessing common method variance: An analysis of the theory of planned behavior. *Research. Organizational Research Methods*, 18(2), 177–206. doi:10.1177/1094428114554398 


Schaufeli, W. (2017). Applying the job demands-resources model: A “how to” guide to measuring and tackling work engagement and burnout. *Organizational Dynamics*, 46(2), 120–132. doi:10.1016/j.orgdyn.2017.04.008 


Schaufeli, W., & Bakker, A. (2003). *Utrecht Work Engagement Scale: Preliminary manual*. Occupational Health Psychology Unit, Utrecht University. [AQ8](#) 


Schaufeli, W., & Taris, T. (2014). A critical review of the Job Demands-Resources Model: Implications for improving work and health. In G. Bauer & O. Hammig (Eds.), *Bridging occupational, organizational, and public health: A transdisciplinary approach* (pp. 43–68). Springer. doi:10.1007/978-94-007-5640-3\_4 [AQ9](#) 


Seddighi, H., Dollard, M., & Salmani, I. (2022). Psychosocial safety climate of employees during the COVID-19 pandemic in Iran: A policy analysis. *Disaster Medicine and Public Health Preparedness*, 16(2), 438–444. doi:10.1017/dmp.2020.370 


Sharma, S. (1996). *Applied multivariate techniques*. John Wiley and Sons Inc. [AQ10](#) 

Siami, S., Martin, A., Gorji, M., & Grimmer, M. (2022). How discretionary behaviors promote customer engagement: The role of psychosocial safety climate and psychological capital. *Journal of Management & Organization*, 28(2), 379–397. doi:10.1017/jmo.2020.29 





Sigala, M. (2020). Tourism and COVID-19: Impacts and implications for advancing and resetting industry and research. *Journal of Business Research*, 117, 312–321. doi:10.1016/j.jbusres.2020.06.015 

Sinval, J., Pasian, S., Queirós, C., & Marôco, J. (2018). Brazil-Portugal transcultural adaptation of the UWES-9: Internal consistency, dimensionality, and measurement invariance. *Frontiers in Psychology*, 9, 353. doi:10.3389/fpsyg.2018.00353 

Slemp, G., Field, J., & Cho, A. (2020). A meta-analysis of autonomous and controlled forms of teacher motivation. *Journal of Vocational Behavior*, 121, 103459. doi:10.1016/j.jvb.2020.103459 

Teo, S., Bentley, T., & Nguyen, D. (2020). Psychosocial work environment, work engagement, and employee commitment: A moderated mediation model. *International Journal of Hospitality Management*, 88, 102415. doi:10.1016/j.ijhm.2019.102415 

Teresa, A., Yasmina, A., & Sangwon, P. (2020). The sequential relationship of hotel employees perceived justice, commitment, and organizational citizenship behavior in a high unemployment context. *Tourism*

- Management Perspectives*, 35, 100676. doi:10.1016/j.tmp.100676 
- Totawar, A., & Nambudiri, R. (2014). How does organizational justice influence job satisfaction and organizational commitment? Explaining with psychological capital. *Vikalpa: The Journal for Decision Makers*, 39(2), 83–98. doi:10.1177/0256090920140209 
- Tsaur, S., Hsu, F., & Lin, H. (2019). Workplace fun and work engagement in tourism and hospitality: The role of psychological capital. *International Journal of Hospitality Management*, 81, 131–140. doi:10.1016/j.ijhm.2019.03.016 
- Ullman, J. (2006). Structural equation modeling: Reviewing the basics and moving forward. *Journal of Personality Assessment*, 87(1), 35–50. doi:10.1207/s15327752jpa8701\_03 
- Vargas-Sánchez, A., Valle, P., Mendes, J., & Silva, J. (2015). Residents' attitude and level of destination development: An international comparison. *Tourism Management*, 48, 199–210. doi:10.1016/j.tourman.2014.11.005 
- Viseu, J., Pinto, P., Borralha, S., & Jesus, S. N. (2020). Role of individual and organizational variables as predictors of job satisfaction among hotel employees. *Tourism and Hospitality Research*, 20(4), 466–480. doi:10.1177/1467358420924065 
- Wong, A., Kim, S., Kim, J., & Han, H. (2021). How the COVID-19 pandemic affected hotel employee stress: Employee perceptions of occupational stressors and their consequences. *International Journal of Hospitality Management*, 93, 102798. doi:10.1016/j.ijhm.2020.102798 
- Xanthopoulou, D., Bakker, A., Demerouti, E., & Schaufeli, W. (2007). The role of personal resources in the Job Demands-Resources model. *International Journal of Stress Management*, 14(2), 121–141. doi:10.1037/1072-5245.14.2.121 
- Yulita, Y., Idris, M., & Dollard, M. (2022). Effect of psychosocial safety climate on psychological distress via job resources, work engagement and workaholism: A multilevel longitudinal study. *International Journal of Occupational Safety and Ergonomics*, 28(2), 691–708. doi:10.1080/10803548.2020.1822054 
- Zhang, J., Xie, C., Wang, J., Morrison, A., & Coca-Stefaniak, J. (2020). Responding to a major global crisis: The effects of hotel safety leadership on employee safety behavior during COVID-19. *International Journal of Contemporary Hospitality Management*, 32(11), 3365–3389. doi:10.1108/IJCHM-04-2020-0335 
- Zheng, D., Luo, Q., & Ritchie, B. (2021). Afraid to travel after COVID-19? Self-protection, coping and resilience against pandemic “travel fear. *Tourism Management*, 83, 104261. doi:10.1016/j.tourman.2020.104261 
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