Cultivating Meaningful Experiences: The Impact of Psychological Climate on Voluntary Pro-Environmental Behavior and Proactive Customer Service Performance

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1. Introduction

In today's competitive market, hotels must provide exceptional service for guest satisfaction and financial success, alongside environmental responsibility. Employees are pivotal in implementing these practices through discretionary behaviours, such as assisting customers and reducing environmental impact, crucial for the hotel's success (Al-Hawari et al., 2021; Bibi et al., 2022). These behaviours foster positive customer relationships and enhance service quality (Rescalvo-Martin et al., 2024; Wang et al., 2021). Therefore, hotel managers must understand how to improve employees' extra-role service and environmental behaviours simultaneously.

The post-pandemic crisis management and environmental challenges faced by China Macau's upscale hotels highlight the significance of employees' extra-role service and green performance. COVID-19 led to significant disruptions, with a recovery trend observed from 2021 to 2023, yet profitability remains a concern (DSEC, 2024a). Proactive customer service performance (PCSP), involving self-initiated, long-term-oriented service behaviours, is crucial for enhancing guest satisfaction and profitability (Rank et al., 2007; Raub & Liao, 2012; Yan et al., 2023). Additionally, employees' voluntary pro-environmental behaviour (VPEB) is essential for mitigating the environmental impacts of hotel operations, such as encouraging towel reuse and reducing water and energy usage (Arici et al., 2023; J. Zhang et al., 2021), which are crucial for sustainability in hotels (Raza et al., 2021). Hence, this study aims to investigation how to incentivise hotel employees' PCSP and VPEB.

This study draws upon the broaden-and-build theory of positive emotions (Fredrickson, 2013) to explore how psychological climate (PC) affects hotel employees' discretionary behaviours (Sok et al., 2023). PC refers to individual interpretations of the organisational environment, encompassing factors like organisational culture and leadership qualities (Brown & Leigh, 1996). Positive emotions, broadened from favourable PC perceptions, can foster beneficial discretionary behaviours (Uraon & Gupta, 2021). Experienced meaningfulness (EM), defined as the degree to which an

employee finds their job meaningful and worthwhile (Hackman & Oldham, 1975), is used to represent positive emotions in this study. EM mediates the impact of PC on VPEB and PCSP. Furthermore, this study examines the moderating role of employees' interdependent self-construal (InterSC) on the relationship between PC, EM, VPEB, and PCSP. InterSC refers to self-awareness in relation to interpersonal connections (Cross et al., 2011). Employees with high InterSC are more likely to exhibit discretionary behaviours when they perceive a positive PC (C.-M. Wu & Chen, 2019). The study's findings suggested that InterSC moderates the indirect effects of PC on VPEB and PCSP via EM, with stronger effects observed in employees with high InterSC.

Overall, this study has provided theoretical insights and practical implications into how PC influences hotel employees' discretionary behaviours (i.e., VPEB and PCSP) through the moderation of EM and the mediation of InterSC.

2. Literature Review and Hypotheses

Psychological climate (PC) refers to employees' subjective interpretation of their work environment based on daily experiences (Parker et al., 2003). Positive perceptions of the workplace help employees attribute significance to their work and derive meaning from their experiences (Petersen & Youssef-Morgan, 2018). Such perceptions also alleviate negative emotions and foster resilience, enhancing emotional well-being (Zhai et al., 2023). According to the broadening aspect of the broaden-and-build theory, once hotel employees perceive a positive PC, their thought patterns and attention broaden, leading to positive psychological states like job satisfaction (Karanika-Murray et al., 2017) and work engagement (Lee & Ok, 2015). These states contribute to a heightened sense of experienced meaningfulness (EM; Lips-Wiersma et al., 2023; Tan et al., 2021). Hence, the first hypothesis is:

H1: Hotel employees' perceptions of PC positively affect EM.

The building aspect of the broaden-and-build theory suggests that positive emotions enhance ethical judgement by fostering a broader community-oriented perspective (Paramita et al., 2022). Hotel employees who find meaning in their work are likely to engage in organisational citizenship behaviours (OCB; Supanti & Butcher, 2019; Youn & Kim, 2022). In environmentally conscious hotels, this sense of meaningfulness can lead to internalising the hotel's environmental objectives, nurturing green intrinsic motivation (Faraz et al., 2021) and autonomously undertaking environmental initiatives (J. Zhang & Huang, 2019). Positive emotions contribute to the development of personal resources, broadening the array of potential thoughts and actions (Fredrickson & Joiner, 2018). EM empowers employees to cultivate resources like increased environmental knowledge (Farrukh et al., 2022), green job crafting (Luu, 2021), and supportive networks with like-minded colleagues (Khalid et al., 2022), thereby enhancing VPEB. Therefore, the second hypothesis is:

H2: Hotel employees' EM positively affects VPEB.

Positive psychological states lead employees to perceive customer service as integral

to their identities, fostering positive emotions during customer interactions (Sun et al., 2023; Wu et al., 2023). Employees are more likely to engage in PCSP when in optimal emotional states (Ji et al., 2022), as negative emotions can hinder discretionary behaviours like PCSP (Yan et al., 2023). EM encourages resilience and productivity (Zhai et al., 2023), prompting employees to exceed formal job requirements (Fredrickson & Joiner, 2018). Meaningfully engaged employees discover new learning opportunities and understand diverse perspectives during customer interactions (Farid et al., 2023), thereby enhancing PCSP. Hence, the third hypothesis is:

H3: Hotel employees' EM positively affects PCSP.

The broaden-and-build theory of positive emotions posits that positive perceptions of PC broaden positive psychological states to build VPEB and PCSP. Positive perceptions of the hotel's practices contribute to meaningfulness, leading to OCBs (Supanti & Butcher, 2019). Employees in a pro-environmental culture align with the hotel's green values, deepening their sense of meaningful work (Latif et al., 2022). This alignment reduces conflicts of interest, enhancing VPEB (Zafar et al., 2022). Besides, when hotel employees perceive their work environment positively, particularly regarding service culture, the catalysing effect of their sense of meaningfulness becomes more pronounced (Fletcher, 2019), leading to heightened awareness of the hotel's service ethos and sparking a desire for autonomous service provision. Thus, EM connects PC with VPEB and PCSP. Therefore, the fourth hypothesis is:

H4a: Hotel employees' EM mediates the PC and VPEB relationship.

H4b: Hotel employees' EM mediates the PC and PCSP relationship.

Interdependent self-construal (InterSC), a personality trait, involves prioritising social roles and relationships (Cross et al., 2011). Employees with interdependent traits develop strong organisational identification and are motivated to engage in VPEB (Zhao et al., 2023). These employees align their goals with the hotel's, enhancing perceived insider status (Li et al., 2022) in the proactive service delivery. Hence, the fifth and sixth hypotheses are:

H5: InterSC moderates the relationship between PC and EM, such that the relationship is stronger for hotel employees with high InterSC.

H6a: InterSC moderates the mediating influence of EM on the relationship between PC and VPEB, such that the indirect effect is stronger for hotel employees with high InterSC.

H6b: InterSC moderates the mediating influence of EM on the relationship between PC and PCSP, such that the indirect effect is stronger for employees with high InterSC.

3. Methods

Data from MGTO (2024) on 140 Macau tourist accommodations included 18 four-star and 40 five-star hotels, with 73% of the latter and 56% of the former receiving the Macau Green Hotel Award. The study then surveyed 13 green and 5 non-green five-star hotels, plus 4 green and 2 non-green four-star hotels using Wenjuanxing (wjx.cn). To mitigate bias, Podsakoff et al. (2012) methods were employed. A two-wave survey over two weeks gathered initial demographic, PC, and VPEB data from 765 valid responses (72.50% response rate), followed by EM, InterSC, PCSP, and social desirability assessments, alongside supervisor evaluations of PCSP, resulting in a final sample of 603 employees and 201 supervisors (80.39% response rate).

Variables were assessed using a 7-point Likert scale (1 = strongly disagree, 7 = strongly agree), and the questionnaire underwent translation into Chinese following Brislin's (1980) procedure of translation and back-translation. Prior to data collection, the questionnaire was pretested with academics and hospitality professionals. Measures included: PC (Brown & Leigh, 1996; 21 items), EM (Supanti & Butcher, 2019;4 items), VPEB (Raza et al., 2021; 6 items), PCSP (Lau et al., 2017; 4 items), and InterSC (Yang et al., 2020; 6 items). To address social desirability bias, the study used the M-C 1(10) scale by Strahan and Gerbasi (1972). Hotel star ratings and green certification were included as control variables based on previous findings (Rescalvo-Martin et al., 2024; Tran et al., 2024; Peng et al., 2020; Yeşiltaş et al., 2022).

4. Results

The results of the study were analysed using partial least squares structural equation modelling (PLS-SEM) with SmartPLS 4.1.0.0 and moderated mediation effects tested via the PROCESS tool. The data showed no concerns regarding common method variance (Podsakoff et al., 2012) or multicollinearity, as indicated by variance inflation factors (VIF) below 3.3 (Kock, 2017).

Construct validity was confirmed with Cronbach's alpha (α) and composite reliability (CR) values exceeding 0.708, and average variance extracted (AVE) values above 0.5 (Hair Jr et al., 2022). Discriminant validity was demonstrated with Henseler's Heterotrait-Monotrait (HTMT) ratio below 0.85 (Hair Jr et al., 2022). Psychological climate (PC), evaluated as a reflective-formative higher-order construct (HOC), showed no multicollinearity issues among its lower-order constructs (LOCs), with VIF values ranging from 1.730 to 2.078 (Kock, 2017). Bootstrapping confirmed indicator significance, supporting the convergent validity of the HOC with a path coefficient of 0.744 for the global item measure of PC.

Hypothesis testing revealed significant direct effects and control variables. The structural model (Figure 1) indicated that PC was positively associated with experienced meaningfulness (EM; H1; $\beta = 0.593$, $p \leq 0.01$). EM positively influenced voluntary pro-environmental behaviour (VPEB; H2; $\beta = 0.337$, $p \leq 0.01$) and proactive customer service performance (PCSP; H3; $\beta = 0.277$, $p \leq 0.01$). Control variables such as hotel star rating and green certification significantly impacted VPEB and PCSP. R^2 values suggested that PC explained 54.9% of the variance in EM, while EM explained 47.3% of the variance in VPEB and 20.6% in PCSP. The effect sizes (f^2) and predictive accuracy (Q^2) confirmed the model's robustness (Table 1).

Table 1

Results of direct effects and control variables

Path relationships	SE	β	t-Value	CIs (5.0%-95.0%)	Decision	VIF	Q^2	f^2	R^2 (without CV)	R^2 (with CV)
Direct effects										
H1: PC -> EM	0.033	0.593 **	18.230	(0.547, 0.654)	Accepted	1.182	0.538	0.660	0.549	0.549
H2: EM -> VPEB	0.044	0.337 **	7.577	(0.263, 0.410)	Accepted	1.703	-0.305	0.127	0.473	0.369
H3: EM -> PCSP	0.040	0.277 **	6.981	(0.214, 0.344)	Accepted	1.228	0.035	0.079	0.206	0.152
Control variables										
SDB-->VPEB	0.034	0.010*	0.284	(-0.059, 0.050)	NS					
Star rating --> VPEB	0.089	0.520 **	5.846	(0.384, 0.676)	Accepted					
Star rating --> PCSP	0.096	0.578 **	6.044	(0.419, 0.734)	Accepted					
Green certification --> VPEB	0.097	0.730 **	7.547	(0.559, 0.874)	Accepted					

Notes: * p-value > 0.05 (1-tailed); ** p-value < 0.01 (1-tailed).

The mediating role of EM between PC and both VPEB and PCSP was significant. EM mediated the relationship between PC and VPEB (H4a; β=0.200, t-value=6.826, p < 0.001) and between PC and PCSP (H4b; β=0.164, t-value=5.980, p < 0.001), as shown in Table 2.

Table 2

Results of mediation analysis

Path relationships	SE	β	t-Value	CIs (5.0%-95.0%)	Decision
H4a: PC -> EM -> VPEB	0.029	0.200 **	6.826	(0.147, 0.262)	Accepted
H4b: PC -> EM -> PCSP	0.028	0.164 **	5.980	(0.116, 0.222)	Accepted

Notes: ** p-value < 0.01 (2-tailed).

The moderating role of interdependent self-construal (InterSC) was tested using a two-stage latent interaction technique (Table 3). InterSC moderated the direct relationship between PC and EM (H5; β=0.300, t-value=7.262, p < 0.001). Conditional mediation analysis (Table 4) indicated that InterSC strengthened the mediation effects of EM between PC and VPEB (H6a; β=0.146, t-value=4.927, p < 0.001) and between PC and PCSP (H6b; β=0.123, t-value=5.291, p < 0.001).

Table 3

Results of moderation analysis

Path relationships	SE	β	t-Value	CIs (5.0%-95.0%)	Decision
PC -> EM	0.033	0.593 **	18.230	(0.547, 0.654)	-
InterSC -> EM	0.032	0.164 **	5.123	(0.111, 0.216)	
H5: PC*InterSC -> EM	0.041	0.300 **	7.262	(0.222, 0.358)	Accepted

Notes: ** p-value < 0.01 (1-tailed).

Table 4

Results of moderated mediation analysis

Path relationships	SE	β	t-Value	CIs (5.0%-95.0%)	Decision
H6a: PC*InterSC -> EM -> VPEB	0.030	0.146 **	4.927	(0.099, 0.199)	Accepted
InterSC (Moderator)					
Low (-1.002)	0.043	0.145 **	3.373	(0.078, 0.218)	
Medium (0.000)	0.048	0.329 **	6.834	(0.250, 0.410)	-
High (1.002)	0.075	0.513 **	6.825	(0.389, 0.636)	
H6b: PC*InterSC -> EM -> PCSP	0.023	0.123 **	5.291	(0.087, 0.162)	Accepted
InterSC (Moderator)					
Low (-1.002)	0.041	0.122 **	2.986	(0.060, 0.194)	
Medium (0.000)	0.047	0.276 **	5.866	(0.201, 0.356)	-
High (1.002)	0.067	0.430 **	6.397	(0.323, 0.545)	

Notes: ** p-value < 0.01(1-tailed).

Figure 1

Coefficients of the conceptual model.
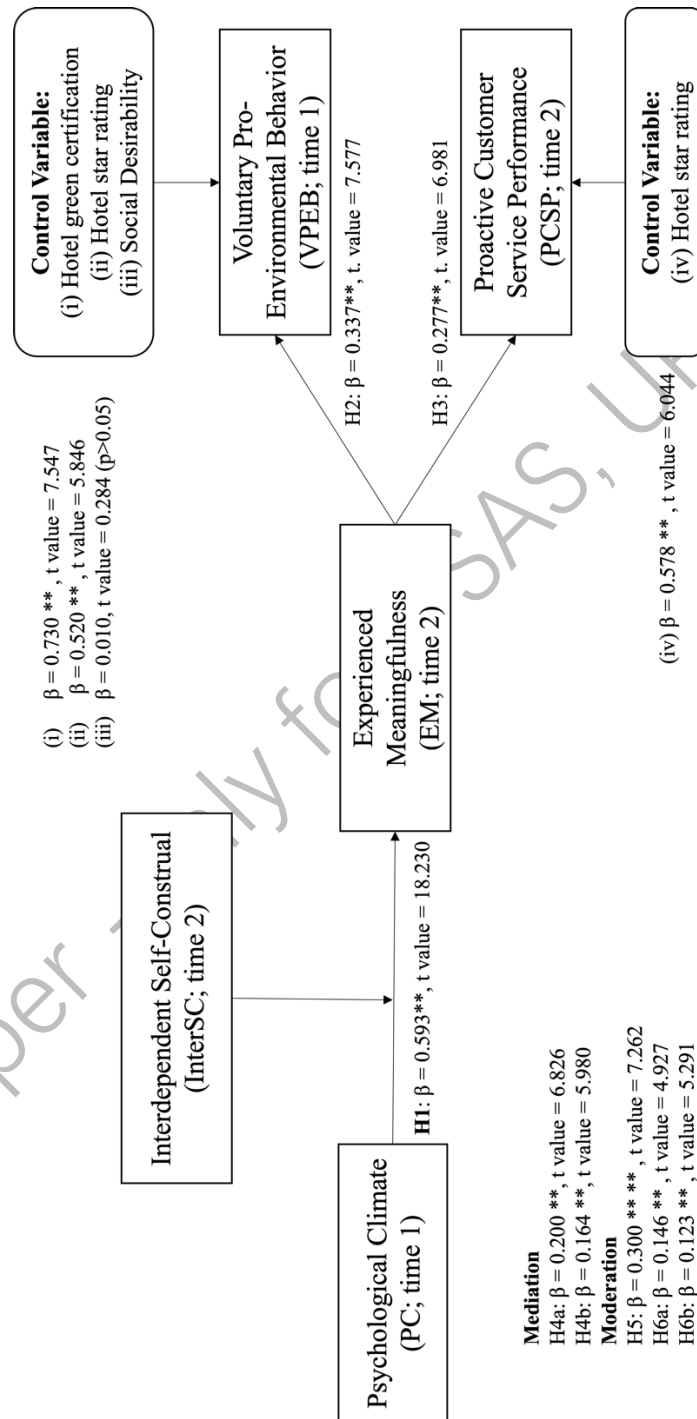
Notes: N = 603; ** p < .01.

5. Discussion

The results of our study have affirmed the proposed conceptual framework, revealing that psychological climate (PC) positively influenced experienced meaningfulness (EM), with this relationship being moderated by interdependent self-construal. EM significantly mediated the indirect effects of PC on VPEB and PCSP, with stronger effects observed among employees with higher interdependent self-construal.

Theoretical Implications

Our findings have offered significant theoretical implications. Firstly, the findings reinforced prior research showing that the PC correlate with beneficial affective and attitudinal outcomes (Gyensare et al., 2017; Karanika-Murray et al., 2017; Karatepe, 2016). Expanding on this literature, we positioned PC as foundational to EM, thus extending research on specific workplace climates like ethical, green, and service climates (Gusmerotti et al., 2023; Mulki & Lassk, 2019; Walumbwa et al., 2019). Secondly, our study confirmed that EM influences discretionary behaviours such as VPEB and PCSP, aligning with previous research linking meaningfulness to positive organisational behaviours (Robertson et al., 2020). Addressing gaps in the literature, we explored how emotional states within daily work contexts shape green behaviours (Gusmerotti et al., 2023) and service performance among hotel employees, thereby expanding understanding of positive emotions' impact on employee performance (Fürstenberg et al., 2021; Han et al., 2021; Wu et al., 2023). Thirdly, our research revealed the mediating mechanism of EM connecting PC to discretionary behaviours (Uraon & Gupta, 2021). Our results suggested that positive perceptions of PC foster VPEB and PCSP. This contributed insights into service and citizenship behaviours, building upon existing research that established the indirect effects of PC on organisational outcomes (Kataria et al., 2013; Sok et al., 2023). Fourthly, we identified boundary conditions that moderate the relationship between PC and discretionary behaviours. Specifically, we introduced interdependent self-construal as a moderator, demonstrating its enhancing effect on the mediation of EM on VPEB and PCSP. This finding underscored how work characteristics interact with interdependent self-

construal (C.-H. Wu et al., 2018). Lastly, by including hotel star ratings and green certifications as control variables, we found that higher ratings and certifications correlate with increased VPEB and PCSP. This supported prior research (Rescalvo-Martin et al., 2024; Tran et al., 2024; Peng et al., 2020; Yeşiltaş et al., 2022) indicating that employees in green-certified and higher-rated hotels exhibited stronger commitments to green practices and service performance.

Practical Implications

For hotel managers, understanding how to enhance employees' VPEB and PCSP through a supportive workplace climate is crucial for sustainability and profitability, especially in upscale hotels. Managers should employ job crafting techniques (Luu, 2021b; Saleem et al., 2023) to enhance job attributes. Additionally, implementing appraisal and compensation systems (J. Zhang et al., 2021) that recognise discretionary green and service contributions can be beneficial. Leadership qualities, particularly managerial supportiveness, are vital in shaping a favourable work environment. Managers can implement employee assistance programs (Zizka et al., 2024) to promote well-being. Recruiting employees with proactive personalities and positive mindsets (Huo et al., 2019) is also essential for enhancing EM and discretionary behaviours. Providing constructive feedback, granting autonomy, and cultivating an organisational culture that promotes resilience and empathy can enhance employees' well-being. Considering individual personality traits and group interdependence in hiring and organisational support (Yang et al., 2020) can further enhance VPEB and PCSP.

6. Limitation and Suggestion

The study's limitations include its cross-sectional design, hindering causal conclusions. Future research should use a between-subject design (F. Zhang et al., 2023). Longitudinal methods and qualitative approaches are recommended for more nuanced insights in employee emotions (Mehta (Karani) et al., 2024). To reduce bias, diverse data sources, including customer feedback, should complement self-reports and supervisor evaluations in PCSP (Schuh et al., 2018). The study's focus on upscale hotels in China Macau limits generalisability; broader hotel categories and geographic locations should be explored (Filimonau et al., 2023). Additionally, examining the moderator like independent self-construal in diverse cultural contexts is suggested (Ren et al., 2021).

Data availability

The data that has been used is confidential.

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