






Social support and human resource primacy in shift work and worker resilience



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Dates:

Received: 31 Oct. 2024
 Accepted: 11 Feb. 2025
 Published: 14 May 2025

How to cite this article:

Oktavio, A., Nugroho, A.,
 Basera, V., Kaihatu, T.S., &
 Adityaji, R. (2025). Social
 support and human resource
 primacy in shift work and
 worker resilience. *SA Journal
 of Human Resource
 Management/SA Tydskrif vir
 Menslikehulpbronbestuur*,
 23(0), a2877. [https://doi.org/
 10.4102/sajhrm.v23i0.2877](https://doi.org/10.4102/sajhrm.v23i0.2877)

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Orientation: This study investigates how shift work influences resilience among hospitality workers, with a specific emphasis on the roles of Perceived Social Support (PSS) and Human Resource Primacy (HRP) in enhancing positive challenge appraisal. Shift work is common in hospitality, demanding a better understanding of resilience-building mechanisms.

Research purpose: This study examines how shift work affects employees' perception of challenge appraisal, which fosters resilience, and determines how PSS and HRP moderate the relationship between shift work and challenge appraisal.

Motivation for the study: Given the demanding nature of shift work in hospitality, identifying factors that support resilience can improve employee well-being and productivity, addressing an important gap in resilience research within the hospitality industry.

Research approach/design and method: This study employed a quantitative approach by surveying 280 hospitality employees in Indonesia who work in shifts. Partial Least Squares Structural Equation Modelling (PLS-SEM) was applied to analyse the moderating effects of PSS and HRP on the relationship between shift work, challenge appraisal and resilience.

Main findings: Shift work positively impacts challenge appraisal, which subsequently enhances resilience. Moreover, high levels of PSS and supportive human resource (HR) policies moderate the positive effect of shift work on challenge appraisal.

Practical/managerial implications: Findings suggest that fostering a supportive work environment through social and HR support can help hospitality workers view shift work as a growth opportunity, promoting resilience.

Contribution/value-add: This research contributes to the literature by integrating social support and HR practices into the understanding of resilience in hospitality, highlighting organisational strategies that facilitate employees' adaptability and resilience under shift work conditions.

Keywords: challenge appraisal; human resource primacy; perceived social support; resilience; shift work.

Introduction

In the hospitality industry, shift work is a common feature because of the need for 24/7 service, especially in hotels, restaurants and tourism-related businesses (Baum, 2015; Ma et al., 2021). Employees in this industry often work irregular hours, including weekends, night shifts and holidays, which can destabilise their work-life balance and overall well-being (Dawson et al., 2017; Ingram et al., 2023). These non-traditional working hours, while essential for maintaining continuous customer service, are associated with increased fatigue, stress and health issues (Arlinghaus et al., 2019; Davis, 2021; Silva et al., 2020). As a result, resilience as an ability to recover from challenges and maintain a positive outlook becomes a crucial trait for hospitality workers (Ford & Im, 2023; Karatepe & Karadas, 2015; Tuan, 2021).

Furthermore, resilience is a person's capacity to recover from challenges and preserve functionality even in the face of stressful situations (Chang, 2021; Vella & Pai, 2019). In the hospitality industry, where workers face long hours, demanding customer interactions and irregular schedules, resilience is key to maintaining performance and job satisfaction (Hall et al., 2023). Studies indicate that employees with resilience are more effective at handling stress, remaining motivated and providing high-quality service, which are critical in maintaining customer satisfaction in hospitality settings (Chang, 2021; Kim et al., 2019; Senbeto & Hon, 2021).

Recent studies indicate that resilience challenges among hospitality workers in Indonesia are particularly pronounced because of increasing job demands, high employee turnover and psychological stress associated with long working hours (Dara et al., 2025; Tondang & Ginting, 2022). Employees in the Indonesian hospitality sector report experiencing exhaustion, job insecurity and excessive workloads, making resilience a crucial factor for sustaining job performance and well-being (Gustiawan et al., 2023). However, while the negative impacts of shift work have been well documented (Silva et al., 2020), the mechanisms that help employees develop resilience remain underexplored. Understanding how hospitality workers frame shift work as either a challenge or a threat can provide critical insights into effective workplace interventions that enhance employee well-being and job retention.

However, the degree to which hospitality workers can build and maintain resilience often depends on how they perceive and appraise their work demands. Challenge appraisal, as proposed by Lazarus and Folkman (1984), is the cognitive evaluation of stressors as challenges, which can lead to growth. When employees perceive shift work as a challenge, they are more inclined to adopt flexible coping strategies, boosting their resilience and enabling them to succeed in demanding environments (Dweck, 2006; Dweck & Yeager, 2019).

While there is extensive literature on the negative impacts of shift work on employee health and performance in the hospitality sector, much of this research has focused on stress and burnout (Bhadke et al., 2022; Saksvik et al., 2011; Silva et al., 2020). There is a limited understanding of the positive cognitive processes that could help hospitality workers thrive despite the demands of shift work (Li et al., 2020; Olafsen & Frølund, 2018). The specific role of challenge appraisal in fostering resilience has received minimal attention in the hospitality industry context (Hall et al., 2023). Therefore, this study introduces a new perspective by examining how shift work in the hospitality industry enhances resilience through the mechanism of challenge appraisal. Rather than solely focusing on the negative outcomes of shift work, the study explores how hospitality workers can view these demands as challenges, which may foster personal growth and resilience.

Furthermore, this study also explores the moderating roles of Perceived Social Support (PSS) and Human Resource Primacy (HRP), proposing that employees with greater social support and enhanced effective human resource (HR) policies are better equipped to appraise their work demands as challenges (Bakker & Demerouti, 2017; Gillman et al., 2023). This approach fills a gap in the current literature by offering insights into how organisational and social support mechanisms can enhance resilience in hospitality workers. Additionally, limited research has examined the influence of PSS from supervisors and colleagues, as well as HRP, which pertains to the quality and focus of HR policies, on the relationship between shift work and challenge appraisal in the hospitality sector.

Research purpose and objectives

By combining the Transactional Model of Stress (Lazarus & Folkman, 1984) with concepts from social support (Cohen & Wills, 1985), this research offers a detailed framework for interpreting the effects of shift work on resilience within the hospitality sector. The inclusion of PSS and HRP as moderators offers a more nuanced understanding of the conditions under which hospitality workers are likely to appraise shift work positively. This model contributes to hospitality management literature by highlighting the importance of social backing and HR practices in fostering resilience among shift workers.

Considering the ever-changing nature of the hospitality sector, this study seeks to investigate how these elements – challenge appraisal, PSS and HRP – interact to influence resilience among hospitality workers. Specifically, this study investigates whether shift work can lead to higher levels of challenge appraisal and whether this appraisal contributes to greater resilience. This study further investigates the moderating roles of PSS and HRP in enhancing the positive impact of shift work on challenge appraisal. This study suggests that employees receiving stronger support are more inclined to have a positive outlook on shift work, thereby building greater resilience.

Literature review

The Transactional Model of Stress, created by Lazarus and Folkman (1984), serves as a theoretical foundation for understanding how individuals interpret and react to stressful circumstances. This model suggests that stress arises not directly from external factors but rather from the way individuals assess and interpret those factors. Appraisal is the process by which individuals evaluate whether a situation poses a threat or an opportunity for growth (Lazarus & Folkman, 1984). When individuals view a work demand as a challenge, they are more inclined to perceive it as a chance for growth and learning, resulting in positive outcomes such as enhanced resilience and motivation (Schneider, 2000; Searle & Auton, 2015). This concept is particularly relevant in the hospitality industry, where shift work can be appraised as either a stressor or a challenge depending on an individual's cognitive and emotional resources.

Shift work is an inherent part of the hospitality industry because of the need for round-the-clock service in hotels, restaurants and tourism-related businesses (Baum, 2015; Ma et al., 2021). While shift work ensures continuous operations, it is associated with various negative consequences, such as sleep disturbances, increased stress, fatigue and diminished well-being (Dawson et al., 2017; Ingram et al., 2023). Studies have shown that the irregular work hours typical of hospitality shift work can lead to negative psychological and physical outcomes, which ultimately affect employee performance (Arlinghaus et al., 2019; Ma et al., 2021). However, not all workers experience the same levels of negative outcomes; factors such as how employees perceive

and appraise their work environment play a significant role in shaping their experience of shift work (Li et al., 2020; Olafsen & Frølund, 2018).

Challenge appraisal has been shown to facilitate adaptive coping strategies that enhance an employee's ability to manage work demands (Dweck & Yeager, 2019; Li et al., 2020). Employees who appraise shift work as a challenge are more inclined to adopt behaviours that improve their resilience, allowing them to better handle the stress of irregular work hours (Cash, 2016). Thus, this study proposes that:

H1: Shift work positively influences challenge appraisal.

Resilience is the capacity of an individual to bounce back from difficulties, sustain well-being and keep performing efficiently in high-pressure situations (Näswall et al., 2019). In the hospitality industry, resilient employees are more capable of handling the stress associated with long hours, unpredictable schedules and customer expectations (Kim et al., 2019). Challenge appraisal is closely connected to resilience, as individuals who view their work as a chance for development are more inclined to adopt adaptive coping strategies, thereby strengthening their resilience (Kuntz et al., 2016). In contrast, those who appraise work as a threat are more likely to experience burnout, fatigue and reduced performance.

Studies in the hospitality sector have found that resilient employees exhibit greater job satisfaction and improved well-being and are more likely to stay with their employers (Ingram et al., 2023). Considering the pivotal role of challenge appraisal in influencing how employees react to work demands, this study hypothesises that:

H2: Challenge appraisal positively influences resilience.

Perceived social support denotes a person's perception that they are supported by their social network, including colleagues, supervisors, friends and family members (Eisenberger et al., 2020). The theory of PSS, initially conceptualised by Cohen and Wills (1985), suggests that social support is crucial in mitigating the negative impacts of stress. The support can be emotional, instrumental or informational, and its perceived availability significantly influences an individual's ability to cope with work-related challenges (Jolly et al., 2021). In other words, even the belief that social support is available can reduce stress and foster a positive outlook on one's work environment.

According to Cohen and Wills (1985), social support functions in two ways: (1) as a direct positive influence on well-being and (2) as a buffer that reduces the negative effects of stressors. In the hospitality industry, where employees frequently face high-pressure situations because of customer demands, long hours and shift work, PSS is a crucial resource. Employees who feel significant support from their colleagues and supervisors are more likely to view their work demands as challenges instead of threats (Gillman et al., 2023), enhancing their ability to cope and maintain resilience (Schwarzer & Knoll, 2007).

The buffering hypothesis of PSS is particularly relevant in high-stress environments such as hospitality. When employees face high demands, PSS provides a psychological safety net, reassuring them that they have emotional and practical support available to cope with their work challenges (Andersen et al., 2021). In turn, this reduces the likelihood that shift work will be appraised as overwhelming or unmanageable. Instead, with adequate social support, employees are more likely to view their work as a growth opportunity, resulting in beneficial outcomes like resilience and improved job performance (Gillman et al., 2023; Schwarzer & Knoll, 2007). Therefore, this study proposes that:

H3: PSS moderates the connection between shift work and challenge appraisal, with the positive effect of shift work on challenge appraisal being more pronounced for employees with high levels of PSS.

Human resource primacy refers to the perceived importance and effectiveness of an organisation's HR policies in supporting employee well-being (Nielsen & Knardahl, 2017). In the hospitality industry, HR practices such as flexible scheduling, access to counselling and stress management programmes can be instrumental in lessening the negative impacts of shift work. Effective HR policies signal to employees that their well-being is valued, which can influence how they perceive their work environment (Christensen et al., 2019).

When HR policies are viewed as supportive, employees are more likely to appraise work challenges positively and engage in adaptive coping strategies (Bakker & Demerouti, 2017). In the hospitality industry, where shift work is prevalent, HR policies that encourage work-life balance, provide mental health resources and offer opportunities for professional growth can help employees perceive shift work as a chance for development rather than a challenge (Wang et al., 2021). Thus, the study hypothesises:

H4: HRP moderates the relationship between shift work and challenge appraisal, such that the positive impact of shift work on challenge appraisal is stronger for employees with high HRP.

The theoretical framework for this study is based on the Transactional Model of Stress (Lazarus & Folkman, 1984), which posits that how employees appraise their work demands, whether as challenges or threats, determines their psychological outcomes. By introducing PSS and HRP as moderators, the study expands on the model by considering the role of social and organisational support systems in influencing challenge appraisal. The framework in Figure 1 suggests that shift work can lead to positive challenge appraisal, which in turn fosters resilience. This relationship is strengthened when employees perceive high levels of social support and effective HR policies.

Research design

Research approach

This study employs a quantitative, cross-sectional research design to examine the relationships between shift work, challenge appraisal, resilience and the moderating roles of PSS and HRP. A cross-sectional design was chosen as it allows for the collection of data at a single point in time, enabling the identification of patterns and relationships between variables efficiently (Creswell & Creswell, 2018). This approach is particularly suitable for studies examining cognitive appraisals and workplace dynamics, as it captures employees' current perceptions and responses to shift work conditions.

Research method

This study employs Partial Least Squares Structural Equation Modelling (PLS-SEM) to test the proposed hypotheses and examine the moderating effects of PSS and HRP on the relationship between shift work, challenge appraisal and resilience. The PLS-SEM was selected over covariance-based structural equation modelling (CB-SEM) for several reasons. Firstly, PLS-SEM is more suitable for exploratory research and theory development, particularly when the study aims to assess complex relationships with latent variables (Hair et al., 2021). Because this study integrates multiple psychological constructs (shift work, challenge appraisal, resilience and moderating effects), PLS-SEM offers greater flexibility in handling non-normally distributed data and small to medium sample sizes (Henseler et al., 2015). Secondly, PLS-SEM is advantageous when the research objective is to maximise the explained variance (R^2) of dependent constructs rather than testing absolute model fit, which is the primary focus of CB-SEM (Sarstedt et al., 2021). Given that this study seeks to explain the predictive relationships between shift work, challenge appraisal and resilience, PLS-SEM was deemed appropriate because of its ability to estimate path coefficients efficiently in complex models with multiple moderating variables. Finally, PLS-SEM allows for robust estimation of interaction effects, which is crucial for this study's focus on the moderating roles of PSS and HRP. Because the research examines how these moderators influence the relationship between shift work and challenge appraisal, PLS-SEM's capability of handling

interaction terms without requiring normally distributed data enhances the accuracy of moderation analysis (Sarstedt et al., 2021).

Research participants

A purposive sampling method was used to select participants with active shift work experience, defined as employment in a hospitality job with non-standard working hours (night shifts, rotating shifts or irregular weekends) for at least 12 consecutive months to ensure adequate exposure to shift work conditions (Ingram et al., 2023). The final sample of 280 hospitality employees across various roles (frontline service, housekeeping and kitchen staff) was determined using power analysis for PLS-SEM. Following Hair et al. (2021), the minimum recommended sample size is 10 times the maximum number of paths leading to a construct, which in this study was 40 (10×4 predictors). To enhance statistical power and model robustness, 280 participants were included, aligning with standard SEM research, where samples typically range between 200 respondents and 300 respondents (Sarstedt et al., 2021). This ensures reliable estimations of structural relationships and supports generalisability in hospitality research.

Measuring instruments

To guarantee the validity and reliability of the constructs, the study employed well-established measures from the literature, all of which have shown robust psychometric properties in prior research. The items were rated on a 5-point Likert scale, from 1 (strongly disagree) to 5 (strongly agree). Shift work was measured using a modified version of the Shift Work Index (Barton et al., 1995). The scale consists of 7 items, assessing the impact of shift work on the employee's schedule, health and work-life balance. A sample item includes: 'I struggle to align my personal life with my work schedule'. Challenge appraisal was assessed using the Challenge Appraisal Scale (Skinner & Brewer, 2002), which evaluates how employees perceive work demands as opportunities for growth. The scale consists of 4 items. A sample item is: 'I see my work as an opportunity to improve my skills and capabilities'. Furthermore, resilience was assessed using the resilience scale by Connor and Davidson (2003), which is designed to assess an individual's ability to bounce back from adversity. The 6-item version of the scale was chosen for its brevity and demonstrated reliability in occupational contexts. A sample item includes: 'I can adjust when changes happen in the workplace'. PSS was measured using 12 items from the Multidimensional Scale of Perceived Social Support (MSPSS) (Zimet et al., 1988). The MSPSS measures the perceived availability of social support from family, friends and significant others, but for this study, it was adapted to focus on support from family, colleagues and supervisors. A sample item includes: 'I can rely on my colleagues for help when work becomes difficult'. Lastly, HRP was measured using 4 items from an adapted version of the Perceived Organisational Support Scale (POS) developed by Eisenberger et al. (1986). The HRP construct evaluates the

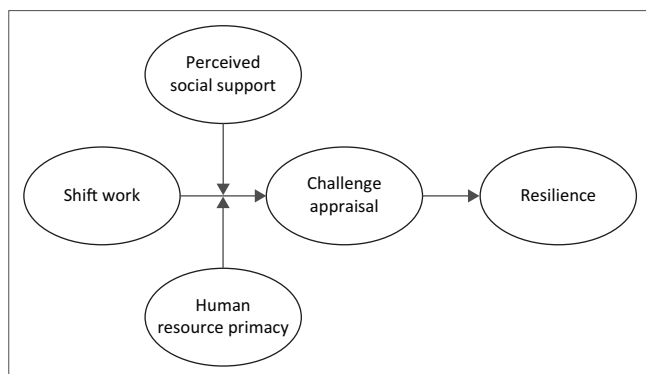


FIGURE 1: Research framework.

extent to which employees perceive the organisation's HR policies as being supportive of their well-being and career development. A sample item includes: 'My organisation offers HR policies that support my work-life balance'.

Research procedure

Data collection was conducted over 6 months (March–August 2024) with both online and paper-based questionnaires distributed through hospitality HR departments. Instead of a census approach, an open invitation strategy was used to ensure that only employees with active shift work experience participated (Etikan, 2016). This method allowed for greater accessibility while mitigating response bias, particularly for employees with limited digital access (Wetzels, 2010). Human resource representatives facilitated the distribution process, ensuring alignment with the study's inclusion criteria. Prior to data collection, participants were briefed on the purpose of the study and informed of their rights, including confidentiality and voluntary participation. Informed consent was obtained from all participants, and ethical guidelines were strictly followed, including securing necessary approvals and safeguarding personal information.

Statistical analysis

SmartPLS software was used to analyse the data through PLS-SEM, following a two-step approach: measurement model evaluation and structural model evaluation. Measurement model evaluation assessed reliability and validity (Fornell & Larcker, 1981; Hair et al., 2021). Meanwhile, structural model evaluation tested the hypotheses with path coefficients and assessed the significance using bootstrapping. Moderation analysis examined the effects of PSS and HRP on the shift work–challenge appraisal relationship by creating interaction terms and evaluating their significance.

Ethical considerations

Ethical clearance to conduct this study was obtained from the Universitas Ciputra Faculty Ethics Commission (No. 001/SOT-ETHICS/UC/III/2024).

Results

In line with the guidelines provided by Hair et al. (2021), the reliability and validity of the measurement model were evaluated through indicator reliability, internal consistency reliability, discriminant validity and convergent validity. Table 1 shows the indicator reliability, assessed by reviewing the outer loadings of each item on its respective latent construct.

All items in the Table 1 had loadings above the recommended threshold of 0.70 (Hair et al., 2021), indicating that the items adequately represented their respective constructs. For example, the items measuring shift work had loadings ranging from 0.76 to 0.85, and the items for challenge appraisal had loadings between 0.74 and 0.88.

Cronbach's alpha and composite reliability were used to assess internal consistency reliability (Hair et al., 2021). Both metrics surpassed the 0.70 threshold for all constructs (Hair et al., 2021). As shown in Table 2, Cronbach's alpha values ranged from 0.79 (for HRP) to 0.92 (for PSS), while composite reliability (CR) values varied from 0.85 (for HRP) to 0.93 (for PSS). These results indicate that the constructs exhibit satisfactory internal consistency.

Convergent validity was evaluated using Average Variance Extracted (AVE), with values above 0.50 considered acceptable (Fornell & Larcker, 1981). Data in Table 2 show that all constructs met this criterion, with AVE values ranging from 0.60 (for HRP) to 0.76 (for resilience). This indicates that the latent constructs explain a significant portion of the variance in their indicators.

In this study, discriminant validity was evaluated using the Fornell–Larcker criterion. Referring to Table 3, the square root of the AVE for each construct was greater than the correlations with other constructs (Henseler et al., 2015). This indicates that each construct has more shared variance with its own indicators than with other constructs, confirming discriminant validity. After validating the measurement model, the model was assessed to test the hypotheses.

TABLE 1: Outer loadings.

Construct	Items	Outer loading
Shift work	SW1	0.82
	SW2	0.85
	SW3	0.78
	SW4	0.80
	SW5	0.76
	SW6	0.79
	SW7	0.83
Challenge appraisal	CA1	0.88
	CA2	0.74
	CA3	0.81
	CA4	0.77
Resilience	RES1	0.81
	RES2	0.79
	RES3	0.85
	RES4	0.82
	RES5	0.86
	RES6	0.87
Perceived social support	PSS1	0.72
	PSS2	0.75
	PSS3	0.78
	PSS4	0.80
	PSS5	0.74
	PSS6	0.77
	PSS7	0.81
	PSS8	0.83
	PSS9	0.79
	PSS10	0.76
	PSS11	0.82
	PSS12	0.84
Human resource primacy	HRP1	0.77
	HRP2	0.82
	HRP3	0.79
	HRP4	0.84

Bootstrapping with 500 resamples was conducted to test the significance of the path coefficients. The results are summarised in Table 4.

The path coefficients represent the strength and direction of the relationships between the constructs. Hypothesis 1 was supported ($\beta = 0.42, p < 0.01$). The path coefficient was significant, indicating that shift work positively influences challenge appraisal. Employees engaged in shift work tend to perceive their work demands as opportunities for growth. Likewise, Hypothesis 2 was also supported ($\beta = 0.47, p < 0.01$). This path was also significant, confirming that challenge appraisal positively influences resilience. Employees who appraise their work as a challenge are more likely to exhibit resilience.

The moderation effects of PSS and HRP were tested using interaction terms created by multiplying the predictor (shift work) by each moderator (PSS and HRP). The interaction term for shift work \times PSS was significant ($\beta = 0.21, p < 0.05$), supporting Hypothesis 3. This outcome suggests that PSS influences the relationship between shift work and challenge appraisal, with employees who perceive greater social support more likely to interpret shift work as a challenge. Furthermore, the interaction term for shift work \times HRP was also significant ($\beta = 0.19, p < 0.05$), supporting Hypothesis 4. This result suggests that HRP moderates the relationship between shift work and challenge appraisal. Employees who experience strong HR support are more inclined to view shift work in a positive light.

To enhance the comprehensiveness of the results, effect size (f^2) was computed, indicating small moderation effects for both PSS ($f^2 \approx 0.05$) and HRP ($f^2 \approx 0.04$) (Hair et al., 2021).

TABLE 2: Reliability and convergent validity.

Construct	Cronbach's alpha	Composite reliability	Average variance extracted
Shift work	0.84	0.88	0.65
Challenge appraisal	0.81	0.87	0.63
Resilience	0.89	0.92	0.76
Perceived social support	0.92	0.93	0.62
Human resource primacy	0.79	0.85	0.60

TABLE 3: Discriminant validity.

Construct	Shift work	Challenge appraisal	Resilience	PSS	HRP
Shift work	0.81	-	-	-	-
Challenge appraisal	0.62	0.79	-	-	-
Resilience	0.55	0.66	0.87	-	-
Perceived social support	0.50	0.63	0.60	0.79	-
Human resource primacy	0.52	0.61	0.56	0.58	0.77

PSS, perceived social support; HRP, human resource primacy.

TABLE 4: Path coefficients and hypothesis testing.

Hypothesis	Path	Path coefficient	<i>p</i>	Remarks
H1	Shift Work \rightarrow Challenge Appraisal	0.42	0.001	Accepted
H2	Challenge Appraisal \rightarrow Resilience	0.47	0.001	Accepted
H3	Shift Work \times PSS \rightarrow Challenge Appraisal	0.21	0.012	Accepted
H4	Shift Work \times HRP \rightarrow Challenge Appraisal	0.19	0.023	Accepted

A simple slope analysis confirmed that when PSS is high (+1 standard deviation [SD]), the shift work on the challenge appraisal relationship strengthens ($\beta = 0.32, p < 0.01$), whereas at low PSS (−1 SD), the effect weakens ($\beta = 0.10, p < 0.05$). Similarly, HRP strengthens the relationship at high levels (+1 SD, $\beta = 0.30, p < 0.01$) but weakens it at low levels (−1 SD, $\beta = 0.09, p < 0.05$). These findings confirm that employees with greater social support and HR policies that prioritise well-being are more likely to appraise shift work as a challenge rather than a burden, reinforcing the role of PSS and HRP as significant, albeit small, moderators in resilience-building mechanisms.

Table 5 presents the results of the coefficient determination (R^2) test to determine the amount of variance explained by the independent variables. The R^2 value for challenge appraisal was 0.35, indicating that 35% of the variance in challenge appraisal is explained by shift work. For resilience, the R^2 value was 0.41, meaning that 41% of the variance in resilience is explained by challenge appraisal. These R^2 values indicate moderate explanatory power (Chin, 1998).

Discussion

This study's findings offer valuable insights into the impact of shift work on challenge appraisal and resilience among hospitality employees, specifically highlighting the moderating roles of PSS and HRP. The findings support all four proposed hypotheses and reveal significant interactions between shift work, social support and HR policies in determining how employees cope with the demands of shift work.

Employees involved in shift work tend to view their job demands as challenges instead of threats. This finding aligns with the Transactional Model of Stress (Lazarus & Folkman, 1984), which posits that individuals who interpret stressors as challenges are more inclined to adopt adaptive coping strategies. Recent research shows that challenge appraisal fosters motivation and engagement, particularly in dynamic and high-stress environments such as hospitality (Li et al., 2020). In the context of hospitality, employees working irregular hours may face numerous stressors, including disrupted sleep, long working hours and managing customer expectations (Arlinghaus et al., 2019). However, when they see these demands as chances for growth and development, they are more likely to build resilience and continue performing effectively (Li et al., 2020). Research within the hospitality sector shows that viewing work as a challenge contributes to greater job satisfaction and reduced turnover intentions (Hall et al., 2023; Ma et al., 2021).

The strong positive link between challenge appraisal and resilience indicates that employees who view shift work as

TABLE 5: Coefficient of determination (R^2).

Dependent variable	R^2
Challenge appraisal	0.35
Resilience	0.41

a challenge are more likely to exhibit resilience (Gillman et al., 2023). In this context, resilience denotes the ability to adjust and bounce back from work-related stress. Recent studies emphasise that resilience is critical for maintaining well-being and performance in the face of adversity (Hall et al., 2023; Kim et al., 2019; Näswall et al., 2019). Employees who perceive work demands as challenges are more inclined to employ problem-solving and proactive coping strategies, strengthening their adaptability to evolving work conditions (Li et al., 2020; Searle & Auton, 2015). This result is especially pertinent in the hospitality industry, where employees often encounter challenging and unpredictable work environments. Research in this field has demonstrated that resilient employees are less prone to burnout and show a stronger commitment to providing high-quality service (Karatepe & Karadas, 2015).

The moderation analysis indicated that PSS significantly influences the link between shift work and challenge appraisal. Employees with greater levels of PSS are more inclined to view shift work positively, supporting the buffering hypothesis (Cohen & Wills, 1985). This finding implies that employees who feel supported by colleagues and supervisors are better prepared to manage the challenges of shift work. Recent studies have confirmed that PSS enhances employees' coping strategies by reducing perceived stress and improving emotional resilience (Andersen et al., 2021). Social support offers emotional comfort, practical help and a sense of community, all of which foster a more positive perception of work-related stressors (Gillman et al., 2023). In the hospitality field, support from colleagues and supervisors has been linked to higher job satisfaction and improved performance (Gillman et al., 2023).

Similarly, the interaction between HRP and shift work indicates that effective HR policies enhance the positive appraisal of shift work (Christensen et al., 2019). Employees who feel that their organisation's HR policies emphasise their well-being are more inclined to view shift work positively as a challenge. This result aligns with research indicating that supportive HR practices improve job performance and reduce employee stress (Bakker & Demerouti, 2017). In the hospitality sector, HR policies such as flexible schedules, stress management initiatives and career growth opportunities significantly influence employees' work experiences (Ma et al., 2021). Studies indicate that employees who feel backed by their organisation's HR policies are more inclined to view work challenges as manageable and are less prone to work-related exhaustion (Wang et al., 2021).

Theoretical implication

This study expands the Transactional Model of Stress (Lazarus & Folkman, 1984) by demonstrating that challenge appraisal plays a critical role in fostering resilience among hospitality shift workers. While prior research primarily highlights the adverse effects of shift work, these findings

emphasise that employees can reframe job demands as growth opportunities, enabling them to develop adaptive coping strategies (Li et al., 2020). Additionally, by introducing PSS and HRP as moderating factors, this study reinforces the context-dependent nature of stress appraisal, showing that organisational and social support can strengthen employees' ability to perceive shift work as a challenge rather than a threat. These insights refine the Transactional Model of Stress by highlighting the role of workplace resources in shaping positive cognitive appraisals, ultimately enhancing resilience in demanding work environments.

Practical implication

This study provides actionable insights for hospitality managers and HR professionals aiming to foster resilience among shift workers. Firstly, organisations should consider strengthening PSS by promoting a supportive culture among colleagues and supervisors. Initiatives such as peer support programmes, team-building activities and regular feedback sessions can reinforce employees' sense of belonging, enabling them to view shift work demands more positively. Secondly, the study highlights the importance of HRP in enhancing challenge appraisal. HR policies that prioritise employee well-being, including options like flexible scheduling, mental health resources and opportunities for career advancement, can help employees perceive shift work as a chance for growth, rather than a burden. This approach could lead to greater resilience, lower turnover and improved job satisfaction, ultimately benefiting both organisation and employees.

Limitations and recommendations

While this study offers valuable insights into resilience and shift work within the hospitality industry, several limitations should be noted. Firstly, as the research is specific to the hospitality sector, its findings may not be universally applicable across other industries. Sectors such as healthcare or retail, which also heavily rely on shift work, may have different dynamics, indicating the necessity for future research to explore whether the results can be generalised to these settings. Secondly, the study's cross-sectional design offers just a single view of the relationships between shift work, challenge appraisal and resilience, limiting causal conclusions. Longitudinal studies would offer a deeper perspective on how these variables interact over time, particularly how resilience develops in response to ongoing support from HR and social networks.

Thirdly, while PSS and HRP were examined as moderators in this study, there are likely additional factors influencing how employees appraise shift work challenges. Organisational culture, leadership style and the degree of autonomy in the workplace may also shape employees' perceptions and could be explored in future research to offer a more complete perspective. Finally, this study primarily focuses on the positive impacts of shift work, such as resilience and challenge appraisal, but does not extensively address

potential negative outcomes such as burnout or job dissatisfaction. Including both positive and negative aspects in future research would offer a balanced understanding of the complexities of shift work, particularly in high-stress industries like hospitality.

Conclusion

This study examined how shift work influences resilience among hospitality employees through the lens of challenge appraisal and identified the moderating roles of PSS and HRP. Firstly, the findings confirm that shift work positively impacts challenge appraisal, suggesting that employees can view their work demands as growth opportunities rather than stressors. This appraisal, in turn, was found to enhance resilience, underscoring its importance in helping hospitality workers cope with the demands of irregular schedules and high-pressure environments. Secondly, the study revealed that both PSS and HRP strengthen the positive effect of shift work on challenge appraisal. Employees with higher PSS from colleagues and robust HR policies are more likely to see shift work as a manageable challenge, thereby fostering resilience. These insights highlight the value of organisational support structures in promoting resilience and job satisfaction among shift workers. Overall, the study contributes to resilience research by integrating social and organisational support factors, providing a framework for hospitality organisations to improve workforce well-being and productivity.

Acknowledgements

This article is an official research output funded by the Internal International Research Grant from the Research and Community Service Institute, Universitas Ciputra Surabaya, under reference number 009/UC-LPPM/DIPI/SP3H/2023.

Competing interests

The authors declare that they have no financial or personal relationships that may have inappropriately influenced them in writing this article.

Authors' contributions

A.O. led the script writing efforts. V.B. assisted with the literature review, hypothesis development, formal analysis and data validation. A.N. helped in assembling the research instruments, while T.S.K. and R.A. crafted the research methodology. A.O., V.B., A.N., T.S.K. and R.A. also contributed feedback to the in-depth analysis and interpretation sections.

Funding information

The authors disclosed receipt of funding received from the Internal International Research Grant, Research and Community Service Institute, Universitas Ciputra Surabaya, Ref. no. 009/UC-LPPM/DIPI/SP3H/2023.

Data availability

The data that support the findings of this study are available from the corresponding author, A.N., upon reasonable request.

Disclaimer

The views and opinions expressed in this article are those of the authors and do not necessarily reflect the official policy or position of any affiliated agency of the authors.

References

- Andersen, L.M.B., Rasmussen, A.N., Reavley, N.J., Bøggild, H., & Overgaard, C. (2021). The social route to mental health: A systematic review and synthesis of theories linking social relationships to mental health to inform interventions. *SSM – Mental Health*, 1, 100042. <https://doi.org/10.1016/j.ssmmh.2021.100042>
- Arlinghaus, A., Bohle, P., Iskra-Golec, I., Jansen, N., Jay, S., & Rotenberg, L. (2019). Working time society consensus statements: Evidence-based effects of shift work and non-standard working hours on workers, family and community. *Industrial Health*, 57(2), 184–200. <https://doi.org/10.2486/indhealth.SW-4>
- Bakker, A.B., & Demerouti, E. (2017). Job demands-resources theory: Taking stock and looking forward. *Journal of Occupational Health Psychology*, 22(3), 273–285. <https://doi.org/10.1037/ocp0000056>
- Barton, J., Spelten, E., Totterdell, P., Smith, L., Folkard, S., & Costa, G. (1995). The Standard Shiftwork Index: A battery of questionnaires for assessing shiftwork-related problems. *Work & Stress*, 9(1), 4–30. <https://doi.org/10.1080/02678379508251582>
- Baum, T. (2015). Human resources in tourism: Still waiting for change? – A 2015 reprise. *Tourism Management*, 50, 204–212. <https://doi.org/10.1016/j.tourman.2015.02.001>
- Bhadke, M., Ahemad, M., & Rehman, A. (2022). Consequences of shift work in industry: A critical review. *Journal of Ergonomics Review Article 1 J Ergonomics*, 12(2), 1–6. <https://doi.org/10.35248/2165-7556-22.12.302>
- Cash, K. (2016). *Meeting the challenges of shiftwork: Perspectives from Carolyn Shur, sleep educator*. HES. Retrieved from <https://carolynshur.com/wp-content/uploads/2016/06>
- Chang, Y.F. (2021). Model of resilience to learning frustration: The relationships among psychological capital, social capital, frustration tolerance, positive emotions, and adaptive motivational engagement. *Bulletin of Educational Psychology*, 53(1), 173–198.
- Chin, W.W. (1998). The partial least squares approach for structural equation modeling. In G.A. Marcoulides (Ed.), *Modern methods for business research* (pp. 295–336). Lawrence Erlbaum Associates.
- Christensen, J.O., Birkeland, M., Finne, L.B., & Stein, K. (2019). Human resource primacy, dispositional optimism, and chest pain: A prospective, cross-lagged study of work, personality, and health. *PLoS One*, 14(4), e0215719. <https://doi.org/10.1371/journal.pone.0215719>
- Cohen, S., & Wills, T.A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin*, 98(2), 310–357. <https://doi.org/10.1037/0033-2909.98.2.310>
- Connor, K.M., & Davidson, J.R.T. (2003). Development of a new resilience scale: The Connor-Davidson Resilience scale (CD-RISC). *Depression and Anxiety*, 18(2), 76–82. <https://doi.org/10.1002/da.10113>
- Creswell, J.W., & Creswell, J.D. (2018). *Research design: Qualitative, quantitative and mixed methods approaches*. Sage.
- Dara, D., Febriantina, S., & Suwatno, S. (2025). Enhancing well-being in hybrid work: The crucial role of organizational support for Indonesia's State Civil Apparatus. *Cogent Psychology*, 12(1), 2454084. <https://doi.org/10.1080/23311908.2025.2454084>
- Davis, M.E. (2021). Health effects of night and irregular shiftwork: A longitudinal cohort study of US workers. *Journal of Occupational and Environmental Medicine*, 63(4), 265–269. <https://doi.org/10.1097/JOM.0000000000002084>
- Dawson, D., McCulloch, K., & Baker, A. (2017). Extended working hours in Australia: Counting the costs. *Journal of Industrial Relations*, 42(1), 160–175.
- Dweck, C.S. (2006). Mindset: The new psychology of success. *Choice Reviews Online*, 44(4), 44-2397. <https://doi.org/10.5860/CHOICE.44-2397>
- Dweck, C.S., & Yeager, D.S. (2019). Mindsets: A view from two eras. *Perspectives on Psychological Science*, 14(3), 481–496. <https://doi.org/10.1177/1745691618804166>
- Eisenberger, R., Huntington, R., Hutchison, S., & Sowa, D. (1986). Perceived organizational support. *Journal of Applied Psychology*, 71(3), 500–507. <https://doi.org/10.1037/0021-9010.71.3.500>
- Eisenberger, R., Rhoades Shanock, L., & Wen, X. (2020). Perceived organizational support: Why caring about employees counts. *Annual Review of Organizational Psychology and Organizational Behavior*, 7, 101–124. <https://doi.org/10.1146/annurev-orgpsych-012119-044917>
- Etikan, I. (2016). Comparison of convenience sampling and purposive sampling. *American Journal of Theoretical and Applied Statistics*, 5(1), 1. <https://doi.org/10.11648/j.ajtas.20160501.11>

- Ford, M., & Im, S. (2023). Tourism workers' resilience in Siem Reap during COVID-19. *Annals of Tourism Research Empirical Insights*, 4(2), 100114. <https://doi.org/10.1016/j.annale.2023.100114>
- Fornell, C., & Larcker, D.F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research*, 18(1), 39. <https://doi.org/10.2307/3151312>
- Gillman, J.C., Turner, M.J., & Slater, M.J. (2023). The role of social support and social identification on challenge and threat cognitive appraisals, perceived stress, and life satisfaction in workplace employees. *PLoS One*, 18(7), e0288563. <https://doi.org/10.1371/journal.pone.0288563>
- Gustiawan, D., Noermijati, A.S., & Indrawati, N.K. (2023). Customer incivility, employee emotional exhaustion, and job embeddedness relationship in the Indonesian hospitality sector: The socio-economic status perspective. *Cogent Social Sciences*, 9(1), 2178613. <https://doi.org/10.1080/23311886.2023.2178613>
- Hair Jr, J.F., Hult, G.T.M., Ringle, C.M., & Sarstedt, M. (2021). *A primer on partial least squares structural equations modeling (PLS-SEM)*. Sage.
- Hall, C.M., Safonov, A., & Naderi Koupaie, S. (2023). Resilience in hospitality and tourism: Issues, synthesis and agenda. *International Journal of Contemporary Hospitality Management*, 35(1), 347–368. <https://doi.org/10.1108/IJCHM-11-2021-1428>
- Henseler, J., Ringle, C.M., & Sarstedt, M. (2015). A new criterion for assessing discriminant validity in variance-based structural equation modeling. *Journal of the Academy of Marketing Science*, 43(1), 115–135. <https://doi.org/10.1007/s11747-014-0403-8>
- Ingram, W., Murphy, K.S., & Weinland, J. (2023). The moderating effect of hotel shift work on the relationship between employee work engagement and job satisfaction. *Journal of Human Resources in Hospitality and Tourism*, 22(2), 239–265. <https://doi.org/10.1080/15332845.2023.2154029>
- Jolly, P.M., Kong, D.T., & Kim, K.Y. (2021). Social support at work: An integrative review. *Journal of Organizational Behavior*, 42(2), 229–251. <https://doi.org/10.1002/job.2485>
- Karatepe, O.M., & Karadas, G. (2015). Do psychological capital and work engagement foster frontline employees' satisfaction?: A study in the hotel industry. *International Journal of Contemporary Hospitality Management*, 27(6), 1254–1278. <https://doi.org/10.1108/IJCHM-01-2014-0028>
- Kim, J.-I., Lee, S.-H., & Byun, J.-W. (2019). Mediation effect of resilience between religious activity and job engagement : Based on employees of luxurious hotels in Korea. *Korean Journal of Hospitality & Tourism*, 28(5), 195–211. <https://doi.org/10.24992/KJHT.2019.07.28.05.195>
- Kuntz, J.R.C., Naswall, K., & Malinen, S. (2016). Resilient employees in resilient organizations: Flourishing beyond adversity. *Industrial and Organizational Psychology*, 9(2), 456–462. <https://doi.org/10.1017/iop.2016.39>
- Lazarus, R.S., & Folkman, S. (1984). *Stress, appraisal, and coping* (pp. 1–445). Springer Publishing Company.
- Li, P., Taris, T.W., & Peeters, M.C.W. (2020). Challenge and hindrance appraisals of job demands: One man's meat, another man's poison?. *Anxiety, Stress and Coping*, 33(1), 31–46. <https://doi.org/10.1080/10615806.2019.1673133>
- Ma, C., Ren, L., & Zhao, J. (2021). Coping with stress: How hotel employees fight to work. *Sustainability (Switzerland)*, 13(19), 10887. <https://doi.org/10.3390/su131910887>
- Näswall, K., Malinen, S., Kuntz, J., & Hodliffe, M. (2019). Employee resilience: Development and validation of a measure. *Journal of Managerial Psychology*, 34(5), 353–367. <https://doi.org/10.1108/JMP-02-2018-0102>
- Nielsen, M.B., & Knardahl, S. (2017). Does human resource primacy moderate the impact of psychological distress on subsequent risk for disability retirement?. *Scandinavian Journal of Work, Environment and Health*, 43(2), 187–190. <https://doi.org/10.5271/sjweh.3621>
- Olafsen, A.H., & Frølund, C.W. (2018). Challenge accepted! Distinguishing between challenge- and hindrance demands. *Journal of Managerial Psychology*, 33(4–5), 345–357. <https://doi.org/10.1108/JMP-04-2017-0143>
- Saksvik, I.B., Bjorvatn, B., Hetland, H., Sandal, G.M., & Pallesen, S. (2011). Individual differences in tolerance to shift work – A systematic review. *Sleep Medicine Reviews*, 15(4), 221–235. <https://doi.org/10.1016/j.smrv.2010.07.002>
- Sarstedt, M., Ringle, C.M., & Hair, J.F. (2021). Partial least squares structural equation modeling. In C. Homburg, M. Klarmann, & A. Vomberg (Eds.), *Handbook of market research* (pp. 587–632). Springer.
- Schneider, B. (2000). The psychological life of organizations. In N. Ashkanasy, C.P.M. Wilderom, & M.F. Peterson (Eds.), *Handbook of organizational culture and climate* (pp. 17–21). Sage.
- Schwarzer, R., & Knoll, N. (2007). Functional roles of social support within the stress and coping process: A theoretical and empirical overview. *International Journal of Psychology*, 42(4), 243–252. <https://doi.org/10.1080/00207590701396641>
- Searle, B.J., & Auton, J.C. (2015). The merits of measuring challenge and hindrance appraisals. *Anxiety, Stress and Coping*, 28(2), 121–143. <https://doi.org/10.1080/10615806.2014.931378>
- Senbeto, D.L., & Hon, A.H.Y. (2021). Development of employees' resilience in technologically turbulent environments: Probing the mechanisms of consonance–dissonance and crisis leadership. *International Journal of Contemporary Hospitality Management*, 33(8), 2721–2740. <https://doi.org/10.1108/IJCHM-11-2020-1263>
- Silva, A., Silva, A., Duarte, J., & Torres da Costa, J. (2020). Shift-work: A review of the health consequences. *International Journal of Occupational and Environmental Safety*, 4(2), 48–79. https://doi.org/10.24840/2184-0954_004.002_0005
- Skinner, N., & Brewer, N. (2002). The dynamics of threat and challenge appraisals prior to stressful achievement events. *Journal of Personality and Social Psychology*, 83(3), 678–692. <https://doi.org/10.1037/0022-3514.83.3.678>
- Tondang, E., & Ginting, E.D.J. (2022). Hotel employee resilience in Medan, Indonesia. *International Journal of Progressive Sciences and Technologies*, 34(2), 202. <https://doi.org/10.52155/ijpsat.v34.2.4626>
- Tuan, L.T. (2021). Employer event communication and hospitality workers' resilience during the COVID-19 crisis: The role of core beliefs examination and family support. *International Journal of Contemporary Hospitality Management*, 33(5), 1593–1619. <https://doi.org/10.1108/IJCHM-08-2020-0877>
- Vella, S.-L., & Pai, N. (2019). A theoretical review of psychological resilience: Defining resilience and resilience research over the decades. *Archives of Medicine and Health Sciences*, 7(2), 233. https://doi.org/10.4103/amhs.amhs_119_19
- Wang, D., Chen, H., Chen, D., Ma, Z., Zhang, Y., Wang, T., Yu, Q., Jiang, J., Chen, Z., Li, F., Zhao, L., Fan, F., & Liu, X. (2021). Shift work disorder and related influential factors among shift workers in China. *Sleep Medicine*, 81, 451–456. <https://doi.org/10.1016/j.sleep.2021.03.008>
- Wetzel, A.P. (2010). Internet, mail, and mixed-mode surveys: The tailored design method*. *Journal of Continuing Education in the Health Professions*, 30(3), 206. <https://doi.org/10.1002/chp.20083>
- Zimet, G.D., Dahlem, N.W., Zimet, S.G., & Farley, G.K. (1988). The multidimensional scale of perceived social support. *Journal of Personality Assessment*, 52(1), 30–41. https://doi.org/10.1207/s15327752jpa5201_2