

## The moderating role of perceived social support on the relationship between shift work and individual appraisal toward employee engagement among hotel employees

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### ABSTRACT

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This study aims to examine the effect of irregular shift work on hotel employee engagement, taking into account the role of perceived individual hindrances and perceived social support. A quantitative approach was employed, involving 162 hotel employees in Surabaya who work under a shift-based operational system. Data were collected through structured questionnaires and analyzed using the Partial Least Squares Structural Equation Modeling (PLS-SEM) method. The results indicate that irregular shift work significantly increases the perception of individual hindrances, which in turn negatively affects employee engagement. Furthermore, perceived social support acts as a moderator in two key relationships. First, social support weakens the positive effect of irregular shift work on perceived hindrances, meaning that employees who receive social support are less likely to view shift work as a hindrance. Second, social support also reduces the negative relationship between perceived hindrances and engagement, enabling employees to maintain their engagement despite facing work-related obstacles. These findings highlight the importance of managing the work environment not only from an operational standpoint but also from social and psychological perspectives. The study offers a theoretical contribution by testing a dual moderation model in the hospitality industry context, integrating the transactional stress theory and the job demands-resources framework.

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## 1. INTRODUCTION

The hospitality industry is one of the service sectors that operates 24 hours a day to meet the diverse needs of customer service. To support this operation, most hotels implement an irregular shift work system, characterized by sudden schedule changes, night shifts, and uncertain days off. While this system is functionally necessary, various studies have shown that irregular shift work has negative effects on employees' psychological conditions and well-being. These effects include sleep disturbances, chronic fatigue, social disorientation, and stress due to imbalance between work and personal life (Costa et al., 2019; Wong et al., 2021;

Li et al., 2022). Amidst these challenges, it is important to understand how employees respond to such work conditions and how it impacts their engagement at work.

From the perspective of work psychology, employees' responses to shift systems are heavily influenced by their subjective assessment of the work situation. Based on the Transactional Model of Stress and Coping (Lazarus & Folkman, 1984), an individual will appraise a work situation as a challenge or hindrance depending on their perception and adaptive capacity. In the context of irregular shift work, employees tend to perceive it as a hindrance due to the uncertainty and disruption of personal control over their lives. This perception contributes to increased stress and decreased psychological energy needed to stay engaged at work (Iskandar et al., 2024). Previous studies have confirmed that perceived hindrances in the workplace are closely associated with decreased employee engagement, by emotionally, cognitively, and behaviourally (Crawford et al., 2010; Breevaart & Bakker, 2018).

Employee engagement is a positive psychological state characterized by vigor, dedication, and absorption in work (Schaufeli et al., 2002). In the hospitality context, such engagement is vital for maintaining service quality, customer satisfaction, and guest loyalty (Asmara & Mohi, 2024; Kartika et al., 2019; Pujiati et al., 2025). However, engagement is not a static condition that arises automatically; it is highly influenced by working conditions and the perception of job demands. The more employees perceive their jobs as hindering their growth or well-being, the lower their level of engagement is likely to be. Therefore, two initial hypotheses in this study are proposed:  $H_1$ , that irregular shift work positively affects the perception of individual hindrance; and  $H_2$ , that perceived individual hindrance negatively affects employee engagement.

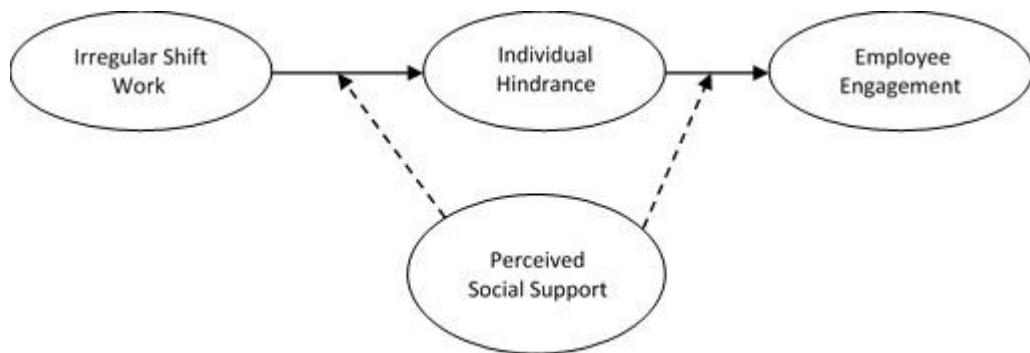
However, not all individuals facing challenging work systems will respond negatively (Oktavio et al., 2025). Recent literature highlights the importance of psychosocial resources, particularly perceived social support, in mitigating the adverse effects of high job demands (Sustiyatik et al., 2024). According to the Job Demands–Resources (JD-R) Model (Bakker & Demerouti, 2007), resources such as social support from supervisors, colleagues, or the organization can act as buffers against job-related stress caused by excessive demands or hindrances. Studies by Kim et al. (2020) and Wang et al. (2022) have shown that employees who feel supported tend to appraise work stressors more positively and exhibit greater psychological resilience.

Within this framework, the present study proposes a dual moderating role of perceived social support: first, in the relationship between irregular shift work and perceived individual hindrance ( $H_3$ ); and second, in the relationship between perceived hindrance and employee engagement ( $H_4$ ). In both pathways, social support is expected to weaken the negative effects,

suggesting that even when employees face challenges from work schedules or task loads, their engagement can be maintained if sufficient social support is available.

The novelty of this study can be identified from several aspects. First, the Indonesian context, especially a major city like Surabaya with its dynamic hotel industry growth, has rarely been explored in work psychology research concerning stressors and engagement. Second, the use of a dual moderation model is rarely applied explicitly within a single conceptual framework that integrates both the transactional stress theory and the JD-R model. Third, while social support is commonly treated as a mediator or direct predictor in many studies, this study positions it as a dual moderator to understand its buffering effect in two critical pathways influencing engagement.

By testing these hypotheses, this study is expected to contribute theoretically to the development of psychosocial work models based on stress and support, and practically to human resource management in the hospitality sector that prioritizes psychological well-being.



**Figure 1. Research Model**

The conceptual model in Figure 1 illustrates the relationships between the main variables in this study: irregular shift work, perceived individual hindrance, perceived social support, and employee engagement. In this model, irregular shift work is positioned as the independent variable, assumed to increase the perception of individual hindrance, defined as employees' negative appraisal of working conditions that are seen as obstacles to achieving work goals or maintaining comfort. This perception, in turn, is assumed to decrease employee engagement, which refers to a positive psychological state encompassing vigor, dedication, and absorption in one's work.

Furthermore, the model places perceived social support as a moderating variable along two critical paths. First, social support is assumed to moderate the relationship between irregular shift work and perceived hindrance, such that employees who feel supported are more likely to tolerate unpredictable work schedules without interpreting them as significant obstacles. Second, social support is also assumed to moderate the relationship between

perceived hindrance and employee engagement, thereby buffering the negative impact of hindrance on engagement when social support is high.

The structure of this model is grounded in the integration of two major theoretical frameworks: the Transactional Model of Stress and Coping (Lazarus & Folkman, 1984), which highlights the importance of individual appraisal in response to work stressors, and the Job Demands–Resources (JD-R) Model (Bakker & Demerouti, 2007), which identifies social support as a key job resource that can mitigate the adverse effects of job demands on psychological outcomes. Through this model, the study seeks to provide a deeper understanding of how working conditions, individual perceptions, and social factors interact to shape employee engagement within the dynamic and demanding context of the hotel industry.

## **2. METHODOLOGY**

This study employed a quantitative approach with an explanatory design aimed at testing causal relationships among the variables in the developed conceptual model. The main focus of this research is to understand how irregular shift work affects employee engagement, and how perceived individual hindrance and perceived social support strengthen or weaken that relationship. The quantitative approach was chosen for its ability to provide objective and measurable explanations of psychological and behavioral phenomena in the context of hotel work.

The population of this study consisted of hotel employees in Surabaya who work under a shift system. Surabaya was selected because it is an economic and tourism hub with a high concentration of star-rated hotels, making it representative of a work environment with dynamic rhythms and 24-hour operational demands. The sampling technique used was purposive sampling, with the following criteria: (1) employees working at three- to five-star hotels in Surabaya, (2) engaged in a shift system, and (3) having a minimum tenure of six months. Based on these criteria, a total of 162 respondents agreed to participate and completed the questionnaires.

Data collection was conducted using a closed-ended questionnaire organized into five main sections based on the study's constructs: irregular shift work, perceived individual hindrance, perceived social support, employee engagement, and demographic information. All constructs were measured using a 5-point Likert scale (1 = strongly disagree to 5 = strongly agree) to facilitate quantification and analysis. The instruments were adapted from widely used scales in previous studies and underwent back-translation to ensure semantic equivalence in the Indonesian language.

The variable of irregular shift work was measured using 4 items adapted from Li et al. (2022) and Wong et al. (2021), reflecting schedule irregularity, night shifts, and sudden changes in workdays. Perceived individual hindrance was measured using 5 items from the

hindrance stressors scale developed by Cavanaugh et al. (2000) and expanded by Crawford et al. (2010), which represent the perception of burdens or obstacles at work. Perceived social support was measured using 6 items adapted from the Multidimensional Scale of Perceived Social Support (MSPSS), modified for workplace context by Huang et al. (2021), and including support from supervisors and coworkers. Employee engagement was measured using 9 items from the Utrecht Work Engagement Scale (UWES-9) by Schaufeli et al. (2006), encompassing three core dimensions: vigor, dedication, and absorption.

The collected data were analyzed using the Partial Least Squares Structural Equation Modeling (PLS-SEM) approach, with the aid of the latest version of SmartPLS software. PLS-SEM was chosen due to its suitability for complex theoretical models and its robustness with moderate sample sizes and non-normally distributed data (Hair et al., 2021). The analysis was conducted in two stages: the first stage involved testing the measurement model (outer model) to ensure construct validity and reliability, and the second stage tested the structural model (inner model) to evaluate inter-construct relationships and the significance of hypotheses.

In testing the measurement model, evaluations were conducted on factor loadings, Average Variance Extracted (AVE), Composite Reliability (CR), and Discriminant Validity using the HTMT ratio criterion. In the structural model testing stage, path coefficients and statistical significance were obtained through a bootstrapping procedure using 5,000 subsamples. T-statistics and p-values were used to test the validity of the hypotheses.

The moderating effect of perceived social support was tested using the product indicator method in PLS-SEM. In this approach, the moderator construct was statistically multiplied with the independent construct to generate an interaction variable. If the interaction path demonstrated statistical significance, it was concluded that social support moderated the relationship between the constructs. To assess the strength of each construct's contribution in explaining the dependent variable,  $R^2$  and  $f^2$  values were also analyzed as indicators of the model's explanatory power.

With this methodological approach, the study is expected to provide a robust and in-depth empirical understanding of the psychological dynamics of hotel employees working in shift systems and to contribute to the development of more adaptive, socially supported human resource management strategies.

### 3. RESULTS AND DISCUSSION

The demographic profile of the respondents includes gender, age, length of service, work division, and education level. Based on the collected data, the majority of respondents were female (94 individuals or 58%) and male (68 individuals or 42%). In terms of age, most respondents were in the 25–35 age range (87 individuals or 53.7%), followed by those under 25 years old (40 individuals), and over 35 years old (35 individuals). The majority of

respondents had 1–3 years of work experience (90 individuals or 55.5%), reflecting a predominance of young employees with moderate experience. Regarding work divisions, most respondents came from the Front Office (60 individuals), followed by F&B Service (44 individuals), Housekeeping (38 individuals), and others such as kitchen, sales, and maintenance (20 individuals). In terms of education level, the respondents were predominantly D3 (Associate Degree) graduates (62 individuals), followed by high school/vocational school (SMA/SMK) graduates (55 individuals), and bachelor's degree (S1) holders (45 individuals).

**Table 1. Outer Loadings**

<b>Construct</b>	<b>Items</b>	<b>Outer Loading</b>
Irregular Shift Work	ISW1	0.801
	ISW2	0.832
	ISW3	0.845
	ISW4	0.788
Hindrance Appraisal	HA1	0.762
	HA2	0.803
	HA3	0.796
	HA4	0.775
	HA5	0.819
Perceived Social Support	PSS1	0.814
	PSS2	0.822
	PSS3	0.795
	PSS4	0.803
	PSS5	0.787
	PSS6	0.808
Employee Engagement	EE1	0.844
	EE2	0.861
	EE3	0.838
	EE4	0.849
	EE5	0.834
	EE6	0.828
	EE7	0.817
	EE8	0.822
	EE9	0.836

Source: Research Data (2025)

Table 1 presents the factor loading values of each indicator on the measured latent constructs. All indicators have loading values above 0.70, with the highest at 0.861 and the lowest at 0.762. This indicates that each indicator has a strong contribution in measuring its respective construct, in accordance with the indicator validity criteria by Hair et al. (2021). Therefore, all items in the instrument can be considered reflectively valid for their respective constructs.

**Table 2. Reliability and Convergent Validity**

Construct	Average Variance Extracted (AVE)	Composite Reliability (CR)	Cronbach's Alpha
Irregular Shift Work	0.669	0.867	0.798
Hindrance Appraisal	0.624	0.882	0.841
Perceived Social Support	0.656	0.902	0.879
Employee Engagement	0.703	0.943	0.936

Source: Research Data (2025)

Table 2 presents the results of the evaluation of convergent validity and internal reliability for each construct in the research model. All constructs have Average Variance Extracted (AVE) values above 0.5 and Composite Reliability (CR) values above 0.7, indicating good validity and internal consistency (Hair et al., 2021). In addition, the Cronbach's Alpha values for all constructs exceed the minimum threshold of 0.7, ranging from 0.798 to 0.936. These values indicate that each set of items within a construct has high internal reliability and consistently correlates to measure the same construct. Therefore, all constructs can be considered to have adequate measurement quality for use in the subsequent structural model analysis.

**Table 3. Discriminant Validity (HTMT Ratio)**

Construct	Irregular Shift Work	Hindrance Appraisal	Perceived Social Support	Employee Engagement
Irregular Shift Work	-			
Hindrance Appraisal	0.611	-		
Perceived Social Support	0.504	0.587	-	
Employee Engagement	0.482	0.603	0.621	-

Source: Research Data (2025)

Table 3 presents the results of the evaluation of discriminant validity among constructs using the HTMT Ratio, a more sensitive approach recommended for detecting discriminant validity issues in reflective models (Henseler, Ringle, & Sarstedt, 2015). HTMT measures the ratio between heterotrait-heteromethod correlations and monotrait-heteromethod correlations.

According to general guidelines, an HTMT value of  $< 0.85$  indicates that the tested construct has adequate discriminant validity. All HTMT values among constructs in this study range from 0.482 to 0.621, which is well below the maximum threshold of 0.85. This confirms that each construct in the research model does not overlap with one another and indeed measures distinct concepts. Therefore, it can be concluded that the model meets the discriminant validity requirement based on the HTMT approach and can proceed to the structural model testing stage with confidence in measurement quality.

**Table 4. Path Coefficients and Hypothesis Testing**

	Path	Original Sampel (O)	t-statistics	p-values	Remarks
H <sub>1</sub>	Irregular Shift Work → Hindrance Appraisal	0.476	8.12	0.000	Accepted
H <sub>2</sub>	Hindrance Appraisal → Employee Engagement	-0.394	6.35	0.000	Accepted
H <sub>3</sub>	Irregular Shift Work × Perceived Social Support → Hindrance Appraisal	-0.218	2.89	0.004	Accepted
H <sub>4</sub>	Hindrance Appraisal × Perceived Social Support → Employee Engagement	0.167	2.47	0.014	Accepted

Source: Research Data (2025)

The findings data in Table 4 indicate that all hypotheses in the model are supported. Irregular shift work significantly increases the perception of individual hindrances (H<sub>1</sub>), which in turn reduces employee engagement (H<sub>2</sub>). These findings are consistent with the transactional stress theory and previous studies highlighting the negative impact of hindrance stressors in the hospitality industry (Crawford et al., 2010; Li et al., 2022).

The moderating effect of perceived social support is also found to be significant. The negative moderation of social support on the path between irregular shift work and individual hindrance (H<sub>3</sub>) indicates that when social support is high, the adverse effect of shift work on hindrance perception becomes weaker. This suggests that social support acts as a psychological buffer in dealing with unpredictable work systems, aligning with the findings of Kim et al. (2020) and Wang et al. (2022).

Similarly, the positive moderation of social support on the relationship between individual hindrance and employee engagement (H<sub>4</sub>) demonstrates that perceived support can help maintain employee engagement even in the presence of work-related hindrances. In other words, social support provides psychological energy that offsets the impact of hindrances on work enthusiasm, as noted by Pohl et al. (2019) and Huang et al. (2021).

**Table 5. Coefficient of Determination (R<sup>2</sup>)**

Dependent Variable	R <sup>2</sup>
Hindrance Appraisal	0.426
Employee Engagement	0.562

Source: Research Data (2025)

Table 5 presents the coefficient of determination (R<sup>2</sup>) values for the two dependent constructs in the model, namely Individual Hindrance and Employee Engagement. An R<sup>2</sup> value of 0.426 for Individual Hindrance indicates that 42.6% of its variance can be explained by irregular shift work and its interaction with perceived social support. Meanwhile, the R<sup>2</sup> value of 0.562 for Employee Engagement suggests that approximately 56.2% of its variance is

influenced by hindrance perception and its interaction with social support. According to Chin's (1998) classification, these values fall within the moderate category, indicating that the model has a reasonably good predictive capability within the context of this study.

## Discussion

The findings of this study provide significant contributions to understanding the psychological dynamics of hotel employees working in shift systems, using an integrative approach from the Transactional Model of Stress and the Job Demands–Resources (JD-R) Model. Overall, the results indicate that challenging work systems like irregular shifts do not always have negative consequences, it depends on how individuals appraise the situation and the extent to which they receive social support. This research enriches the literature by demonstrating that perceived social support plays a strategic dual-moderating role within the stress-engagement pathway, a theoretical contribution that is rarely explored simultaneously within a single integrative model. The findings also carry strong practical implications: hotel management must not only manage workloads and schedules efficiently, but also create a socially supportive work ecosystem through empathetic leadership training, mentoring systems, and community-based employee wellness programs. The following discussion provides a deeper interpretation of each hypothesis testing result.

### Irregular Shift Work Positively Influences Individual Hindrance Perception

The analysis shows that irregular shift work significantly increases employees' perception of individual hindrance ( $\beta = 0.476$ ,  $p < 0.001$ ). This finding supports the basic premise of the Transactional Model of Stress and Coping (Lazarus & Folkman, 1984), which suggests that stress is not solely a result of objective conditions but also of individual appraisal. In this context, unpredictable work schedules, such as sudden shift changes, night shifts, and weekend duties, are perceived by employees as hindrances that disrupt work-life balance and evoke feelings of lack of control. This aligns with studies by Li et al. (2022) and Wong et al. (2021), which indicate that irregular shifts increase psychological pressure and impair employee well-being. Hence, hotel organizations should recognize that extreme schedule flexibility can backfire and trigger negative employee perceptions of their work environment.

### Individual Hindrance Perception Negatively Affects Employee Engagement

The results show a significant negative relationship between individual hindrance perception and employee engagement ( $\beta = -0.394$ ,  $p < 0.001$ ). This finding strengthens Crawford et al.'s (2010) distinction between hindrance and challenge stressors, noting that hindrance stressors tend to reduce psychological energy and intrinsic motivation. Employees who perceive their job as full of obstacles are more likely to experience emotional exhaustion

and show less enthusiasm in carrying out their duties. This is consistent with Breevaart and Bakker's (2018) findings, which show that negative perceptions of the work environment lead to lower levels of engagement components like vigor and dedication. In the hotel industry, such perceptions are crucial because high engagement is needed to maintain service quality. Therefore, managing individuals' appraisal of stressors becomes a key strategy in enhancing engagement (Oktavio et al., 2020).

### **Perceived Social Support Moderates the Relationship Between Irregular Shift Work and Individual Hindrance Perception.**

The findings reveal that perceived social support significantly weakens the effect of irregular shift work on hindrance perception ( $\beta = -0.218$ ,  $p = 0.004$ ). In other words, when employees feel adequately supported, whether by coworkers, supervisors, or the broader work environment, they are less likely to view irregular shift schedules as major obstacles. This confirms the role of social support as a work resource that buffers psychological strain, as outlined in the JD-R Model (Bakker & Demerouti, 2007). These findings also align with studies by Kim et al. (2020) and Wang et al. (2022), which found that perceived social support can shift how employees interpret work stressors, from hindrances to manageable challenges. In practice, this highlights that organizations with supportive team dynamics and leadership can reduce the negative impacts of inflexible work systems.

### **Perceived Social Support Moderates the Relationship Between Individual Hindrance Perception and Employee Engagement**

The results also show that perceived social support reduces the negative impact of hindrance perception on employee engagement ( $\beta = 0.167$ ,  $p = 0.014$ ). This means that even when employees face obstacles at work, the presence of social support can help them maintain their enthusiasm and involvement. This is consistent with Pohl et al.'s (2019) findings, which state that supportive co-workers help maintain focus and energy in stressful conditions. Moreover, Huang et al. (2021) emphasize that supervisor support plays a major role in preserving emotional stability in the hospitality sector. These findings underscore that engagement is not only influenced by job demands, but also by the quality of social relationships in the workplace. Strong support fosters a sense of appreciation and recognition, which ultimately strengthens employee identity and professional commitment to the organization (Nugroho et al., 2020).

## **4. CONCLUSION**

This study aimed to address the question of how irregular shift work affects employee engagement, and how individual hindrance perception and perceived social support play roles

in this dynamic. Using a quantitative approach involving 162 hotel employees in Surabaya, the study found that irregular shift work significantly increases the perception of individual hindrances. These hindrances, in turn, negatively contribute to employee engagement levels. In other words, the more irregular the work schedule, the more likely employees are to experience psychological strain and negative perceptions of their job, ultimately lowering their enthusiasm and dedication at work.

The study also found that perceived social support plays an important role in reducing the negative impact of irregular shift work. Social support significantly weakens the relationship between shift work and hindrance perception, as well as the relationship between hindrance and engagement. In other words, the presence of a supportive work environment, whether from colleagues, supervisors, or organizational systems, can serve as a buffer that protects employees from the adverse effects of demanding work systems and helps maintain high levels of engagement.

Theoretically, this study expands our understanding of the relationship between work stressors and employee engagement by emphasizing the importance of perception and social resources in managing work-related stress. The integration of the transactional model of stress with the job demands-resources framework offers a more holistic perspective on the psychological dynamics of employees in demanding service industries like hospitality. The positioning of social support as a dual moderator also presents a novel approach in analyzing social interventions that can strengthen employees' psychological resilience.

From a practical standpoint, the findings provide valuable insights for hotel management to not only focus on the technical aspects of shift scheduling but also pay attention to the psychological and social conditions of their staff. Actions such as offering more consistent shift schedules, providing open communication channels, fostering a supportive work culture, and building internal support systems can be effective strategies for sustaining high employee engagement in the face of complex work systems.

Nevertheless, this study has several limitations. The cross-sectional design restricts the ability to observe behavioral or perceptual changes over time. Self-reported data from respondents also carries the risk of perceptual bias or socially desirable responses. Furthermore, the study was conducted in a single geographic area and within one specific industry sector, so generalizing the findings to other contexts should be done with caution.

As a direction for future research, it is recommended to adopt a longitudinal approach to capture the evolving dynamics of engagement and hindrance perception over time. Future studies could also incorporate other factors such as personality traits or family support as variables influencing the relationship between working conditions and employee engagement. Testing similar models in other service sectors such as transportation, hospitals, or emergency

services could also enrich cross-sectoral understanding of shift work challenges and their management strategies.

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