How AI Awareness Triggers Employees' Counterproductive Work Behaviors in Hospitality and Tourism Enterprises: The Mediating Role of Job Insecurity

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Abstract

The rapid integration of AI is reshaping the professional landscape, introducing both opportunities and challenges for employees. This study examines the potential negative consequences of AI awareness on employee behavior within the tourism and hospitality industry. Specifically, it investigates the relationship between AI awareness and counterproductive work behaviors (CWBs), focusing on the mediating role of job insecurity (JI). Data was collected from 234 employees working in Egyptian five-star hotels and category-A travel agencies. The study employed a quantitative approach, using structural equation modeling (SEM-PLS) to analyze the collected data. The findings revealed a significant positive relationship between AI awareness and CWBs, suggesting that increased awareness of AI may lead to negative employee behaviors. Additionally, the study confirmed a positive relationship between AI awareness and job insecurity, indicating that AI awareness can exacerbate feelings of job insecurity among employees. Furthermore, job insecurity was found to partially mediate the relationship between AI awareness and CWBs, highlighting the importance of job insecurity as a mechanism through which AI awareness may lead to negative employee behaviors. This research contributes to the existing literature by shedding light on the potential negative impacts of AI on employee behavior, particularly in the tourism and hospitality sector. It provides valuable insights for organizations to proactively address the challenges associated with AI implementation and mitigate the risk of negative employee behaviors. By understanding the factors that contribute to CWBs in the context of AI, organizations can develop strategies to foster a positive work environment and maintain employee morale and productivity.

Introduction

The rapid advancement of Artificial Intelligence (AI) technologies is transforming industries globally, offering both opportunities and challenges for the modern workforce. In an era where

technology permeates every aspect of business operations, the tourism and hospitality sector is increasingly adopting AI to enhance service quality and improve guest experiences (Zhao et al., 2023; Bilal et al., 2024). AI-driven tools, such as chatbots for customer inquiries and robotic assistance at the front desk, represent a significant shift in service dynamics within this sector (Fang et al., 2024; Scarpi, 2024). While these innovations improve operational efficiency, they also contribute to a growing wave of automation in areas traditionally reliant on human labor (Arias-Pérez & Vélez-Jaramillo, 2022; Zhou et al., 2024). A notable example is Japan's Henn-na Hotel, where 70% of operations have been automated, with AI-powered hotelier robots assuming roles at the front desk and in food and beverage services (Rajesh, 2015). Additionally, AI integration disrupts resource allocation within organizations, potentially altering employee-organizational dynamics and reshaping the person-organization fit (Xu et al., 2020; Kong et al., 2021).

The evolving business environment has allowed today's hotel and tourism industries to leverage AI and automation to offer more personalized and memorable experiences for guests, while also reducing labor costs (Li et al., 2019). However, the impact of AI implementation on established workplace dynamics—particularly regarding increased productivity and cost savings from replacing human labor—has largely been overlooked (Lo et al., 2024). The introduction of AI into the workforce may unintentionally affect employees' psychological well-being, potentially diminishing their sense of belonging and emotional commitment to their roles (Cramarenco et al., 2023). As AI continues to replace traditional job functions, employees may become increasingly concerned about job security. The awareness of AI's potential to automate tasks historically performed by humans can trigger feelings of job insecurity, which may lead to negative emotional responses, disengagement, and ultimately counterproductive work behaviors (Hassan et al., 2024).

Job insecurity has been defined in various ways by researchers, with some viewing it as employees' expectations about the stability of their employment, while others define it as the perception of the likelihood of losing one's job during times of crisis (Aguiar-Quintana et al., 2021). It represents the perceived threat to an employee's position, whereas perceived job security refers to expectations of stability, often contributing to stress in contemporary work environments (Nemteanu et al., 2021).

Counterproductive Work Behaviors (CWBs) refer to intentional actions by employees that harm the organization or its members, including colleagues and customers (Spector & Fox, 2005). Zhao et al. (2013) highlights CWBs as common negative behaviors in the hospitality industry, with their widespread occurrence often undermining both organizational performance and employee well-being. For instance, sabotage in frontline services can damage service quality and overall business success, while deviant workplace behavior among healthcare employees can threaten organizational effectiveness (Zhao et al., 2013).

As AI continues to be integrated into service industries, it is crucial to examine its impact on employee well-being and behavior. Despite this importance, there are significant gaps in the current research on AI in the workplace. While studies have explored the effects of AI awareness

on work withdrawal (Teng et al., 2024), turnover intention (Li et al., 2019), knowledge hiding (Arias-Pérez & Vélez-Jaramillo, 2022), and job crafting (Kang et al., 2023), there has been limited attention to the counterproductive behaviors that AI may encourage in the workplace (Zhou et al., 2024). Specifically, the effects of socio-technical evolution, including the rise of AI, on counterproductive work behaviors remain poorly understood. This gap is particularly concerning in the service sector, where negative behaviors can directly impact customer satisfaction, loyalty, and the service climate (Hu et al., 2020). To address this, research focused on the implications of new technologies and their implementation is essential (Im & Kim, 2022). Furthermore, the hospitality industry, in particular, requires further investigation into CWBs (Vatankhah & Darvishi, 2022; Wallace & Coughlan, 2023), as the role of robots and automation remains unclear and raises concerns about their adoption (Lukanova & Ilieva, 2019; Jabeen et al., 2022).

This study aims to address the gap in the existing literature by investigating the relationship between AI awareness, job insecurity, and counterproductive work behaviors in the context of five-star hotels and category-A travel agencies in the Greater Cairo region of Egypt. Grounded in the widely used job demands-resources (JD-R) model— which explores factors influencing employee well-being, motivation, and performance— the research examines the mediating role of job insecurity. By doing so, it seeks to offer valuable insights into the psychological mechanisms that drive CWBs in response to AI awareness, with practical implications for managing the human side of AI integration in these industries. In particular, the findings could help hotel and travel agency managers develop strategies to address employees' concerns about job security, thereby reducing the likelihood of counterproductive behaviors. Understanding how AI awareness leads to job insecurity and, in turn, impacts employee performance and organizational outcomes will be crucial for organizations aiming to navigate the challenges of AI adoption effectively.

Literature review and hypotheses development

Job Demands-Resources (JD-R)

The JD-R model, a widely recognized framework in organizational psychology, focuses on the factors that influence employee well-being, motivation, and performance. Central to the model is the balance between job demands and job resources, which significantly impact employee outcomes (Demerouti et al., 2001). According to the JD-R model, job demands, such as heavy workload or time pressure, can lead to stress and burnout if not offset by sufficient job resources, like social support, feedback, or autonomy. When resources are inadequate, employees are more likely to experience negative outcomes, including exhaustion, disengagement, and counterproductive work behaviors. Conversely, job resources can enhance motivation and engagement by helping employees manage demands. High levels of job resources can result in positive outcomes, such as increased job satisfaction, improved performance, and a reduction in turnover intentions (Demerouti et al., 2001, Jang et al., 2017). The JD-R model can provide a comprehensive framework for understanding the impact of AI awareness on counterproductive work behaviors, specifically focusing on the mediating role of job insecurity.

AI awareness and counterproductive work behavior

AI awareness refers to employees' perception of AI technologies as a threat to their future career prospects (Brougham & Haar, 2018), which can result in emotional exhaustion. This exhaustion exacerbates resource depletion, further increasing the likelihood of negative behaviors like CWBs (Bai et al., 2024). The heightened awareness of AI can lead to emotional exhaustion in employees, which, in turn, may trigger CWBs (Huang et al., 2017). AI awareness also fosters uncertainty, leading to pessimism, cynicism, burnout, and insecurity (Liang et al., 2022; He et al., 2023). This uncertainty can contribute to negative attitudes and behaviors, such as CWBs, intensifying the negative impact of AI adoption (Bai et al., 2024).

According to the JD-R model, when employees perceive their jobs as threatened by AI advancements, they often experience negative emotions such as stress, frustration, and fear (Liu et al., 2023). These emotions negatively affect their psychological well-being and hinder their ability to engage in productive, positive work behaviors. Job insecurity can reduce employees' commitment to their organization, as they may feel undervalued or uncertain about their long-term prospects (Huang et al., 2021). This weakened commitment can lead to disengagement and an increased likelihood of counterproductive work behaviors, such as absenteeism, deliberate underperformance, and workplace deviance (Swinton-Douglas, 2016).

AI can also create job insecurity and anxiety among employees, potentially leading to CWBs (Bai et al., 2024). As employees become aware of AI's capabilities, they may perceive it as a threat to their jobs, causing feelings of insecurity that can escalate into anxiety, stress, and decreased motivation. If employees feel the organization has failed to fulfill promises about job security or career development, it may result in a breach of the psychological contract, causing frustration and anger (Morrison & Robinson, 1997). These negative emotions, driven by perceived unfairness or lack of control, can weaken organizational commitment, making employees less loyal. This loss of commitment may lead to various forms of CWBs, such as workplace deviance (Al-Romeedy & Khairy, 2024; Helmy et al., 2024). Consequently, the following hypothesis is formulated:

H1: *AI awareness increases counterproductive work behaviors.*

AI awareness and job insecurity

According to the JD-R model, employee well-being and behavior are determined by the balance between job demands and job resources (Brauchli et al., 2013). In the context of AI awareness, the growing recognition of AI’s potential to disrupt job roles can be seen as a job demand, creating stressors that contribute to job insecurity. As employees become more aware of AI technologies, they may perceive their jobs to be at risk, leading to heightened feelings of uncertainty and anxiety about the future.

As employees recognize AI’s capabilities, particularly its potential to perform tasks more efficiently or cost-effectively, they may view it as a greater threat to their jobs (Chiu et al., 2021). This awareness can generate uncertainty about the future, with employees questioning how their roles and career paths will evolve in an AI-dominated environment. Such uncertainty often

heightens feelings of job insecurity, and employees may also develop a fear of replacement, worrying that AI will eventually take over their positions, leading to job loss and unemployment. The reduction in labor costs through AI automation can exacerbate this concern, potentially resulting in job losses for hotel employees and further increasing job stress and insecurity regarding the adoption of new technologies (Kong et al., 2021; Im & Kim, 2022).

In addition, AI awareness can diminish self-efficacy and job satisfaction, particularly among employees who perceive their roles as vulnerable to automation (Kong et al., 2018; Alisic & Wiese, 2020). As AI systems may outperform human workers in efficiency (Zhu & Chang, 2020), employees could experience career dissatisfaction and find it more difficult to achieve personal accomplishments (Karatepe, 2012). Job insecurity can lead to decreased organizational commitment and lower performance, especially as AI continues to replace certain jobs (Hassan et al., 2024). Worldwide, employees are increasingly concerned about job security in the face of advancing technologies, fearing job losses and eliminations (Bhargava et al., 2021). With the projected replacement of 25% of the hospitality workforce by AI-driven automation by 2030 (Khaliq et al., 2022), anxiety about job stability and continuity is on the rise. AI-aware employees often express concerns about their job security and professional competencies, contributing to feelings of insecurity in their current roles and organizations (Colakoglu, 2011; Brougham & Haar, 2018). Consequently, the following hypothesis is formulated:

H2: *AI awareness increases job insecurity.*

Job insecurity and counterproductive work behavior

Job insecurity is widely acknowledged as one of the most prevalent job stressors, closely linked to negative psychological and physical health outcomes (Aguiar-Quintana et al., 2021). According to the JD-R model, negative emotions arising from job insecurity can lead to CWBs as employees attempt to cope with the stress they experience. The perceived threat posed by AI, for example, may evoke feelings of helplessness or resentment, motivating employees to engage in actions that undermine organizational goals. These actions may include workplace deviance, such as theft, sabotage, or neglect of duties, as well as poor task performance, including reduced effort, deliberate lateness, or absenteeism. Furthermore, employees may exhibit workplace aggression, such as verbal abuse or hostility, toward colleagues or supervisors.

Job insecurity leads to CWBs through several psychological mechanisms (Van den Broeck et al., 2014). First, counterproductive work behaviors often trigger negative emotions like anxiety, frustration, and anger, which can impair employees' judgment and decision-making abilities (Fox & Spector, 2006; Al-Romeedy & Khairy, 2024). These negative emotions may prompt irrational or hostile actions in the workplace. Additionally, when employees feel insecure about their jobs, their commitment to the organization and its goals typically declines (Feather & Rauter, 2004). This decreased commitment results in disengagement, lower motivation, and a heightened likelihood of CWBs. Finally, job insecurity can lead employees to perceive injustice, especially if they feel unfairly treated or undervalued by the organization (Piccoli & De Witte, 2015; Aliedan

et al., 2022; ElAdawi et al., 2024). This sense of injustice can foster resentment, driving retaliatory behaviors that further contribute to CWBs. Consequently, the following hypothesis is formulated:

H3: *Job insecurity increases counterproductive work behaviors.*

Job insecurity as a mediator

The integration of AI into workplaces is rapidly transforming the job landscape (Ahmad & Norzaidi, 2024). Ongoing advancements in AI technology are set to profoundly impact job roles, working hours, employee relationships with colleagues and managers, and compensation structures (Li et al., 2019). While AI offers numerous benefits, it can also evoke feelings of job insecurity among employees, which in turn can lead to CWBs. The JD-R model emphasizes how job insecurity, triggered by the demands associated with AI awareness, exacerbates negative behaviors (Wu et al., 2024). When employees perceive their positions to be at risk, they may begin to view their work environment as unfair, leading to feelings of organizational injustice. This sense of injustice can foster resentment, increasing the likelihood of retaliatory behaviors, which are core components of counterproductive work behaviors (Helmy et al., 2024).

Job insecurity serves as a mediator between AI awareness and counterproductive work behavior. As employees become more aware of AI technologies and their potential impact on their jobs, they may worry about job displacement or reduced roles (Brougham & Haar, 2018). This heightened awareness can lead to job insecurity, often characterized by anxiety, stress, and uncertainty about the future. Subsequently, this job insecurity can trigger various forms of CWBs (Lu et al., 2023). Consequently, the following hypothesis is formulated:

H4: *Job insecurity mediates the relationship between AI awareness and counterproductive work behaviors.*

The theoretical framework underpinning the study is depicted in Figure 1 presented below.

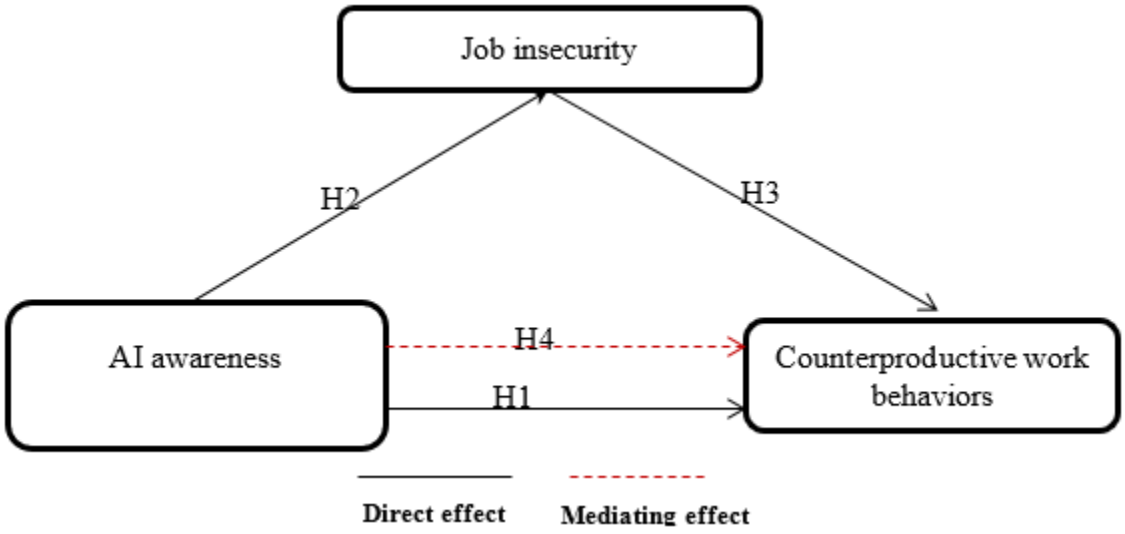

Figure (1): The conceptual model of the study

Methodology

To analyze the proposed hypotheses, a quantitative research approach was employed. Partial least squares structural equation modeling (PLS-SEM) was utilized to examine the direct and indirect effects of AI awareness and job insecurity on counterproductive work behavior. PLS-SEM, implemented using WarpPLS 8.0 (Kock, 2022), is well-suited for complex models with multiple latent variables and has been widely adopted in hospitality and tourism research (Khairy et al., 2023). Additionally, descriptive statistics were employed to characterize the sample demographics.

Measures and Instrument Development

All key constructs were operationalized using well-established scales from prior research. These scales, originally developed in English, were adapted into Arabic through a rigorous back-translation process. The resulting Arabic versions underwent validation procedures to ensure their reliability and validity for this study. Participants responded to items on a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree).

Artificial intelligence awareness (AIA): To measure AIA, we employed a four-item scale adapted from Kong et al. (2021), originally developed by Brougham and Haar (2018). A sample item from this scale is, "*I am personally worried about my future in my industry due to AI replacing employees.*" Higher scores on this scale indicate a greater perception of AI awareness, specifically concerning potential job displacement.

Job insecurity (JI): JI was assessed using a four-item scale adopted from Darvishmotevali et al. (2017), based on the original work of De Witte (2000). A representative item from this scale is, "*I am worried that I may be fired.*" Higher scores on this scale reflect higher levels of perceived job insecurity.

Counterproductive work behaviors (CWBs): CWBs were measured using a six-item scale adapted from Dalal et al. (2009). A sample item from this scale is, "*I spend time on tasks unrelated to work.*" Higher scores on this scale indicate a greater tendency to engage in counterproductive work behaviors.

Sampling and Data Collection

Data for this study was collected from employees at category (A) travel agencies and five-star hotels in Greater Cairo, Egypt, between September 2024 and January 2025. A purposive sampling technique was employed to select 27 five-star hotels and 54 category (A) travel agencies, focusing on establishments with the financial capacity to adopt AI technologies. This strategy was chosen to ensure the relevance of the sample to the research objectives and to optimize resource allocation. Additionally, a convenience sampling approach was used to collect data from employees within these organizations who volunteered to participate.

To maintain confidentiality, participants were assured that their responses would remain anonymous. Approximately 500 questionnaires were distributed in person, resulting in 234 valid responses, yielding a response rate of 46.8%. Of these, 100 (42.7%) were from employees at five-

star hotels and 134 (57.3%) were from category (A) travel agencies. According to Hair et al. (2010), it is recommended to have a minimum sample size of 10 participants for each item. Since the study includes 14 items related to its constructs (AIA, CWBs, and JI), a sample size of 234 participants significantly exceeds this requirement.

Results

Study participants

The study sample comprised 234 employees from Egyptian hospitality and tourism enterprises. The sample was relatively balanced in terms of gender, with 121 males (51.7%) and 113 females (48.3%). The majority of participants (47%) were aged between 36 and 45 years. Educational attainment was high, with 213 participants (91%) holding a bachelor's degree, followed by 17 (7.3%) with a master's or PhD degree. Regarding professional experience, 138 participants (59%) had 5 to 10 years of experience, while 96 (41%) had 10 years or more. The sample was predominantly from travel agencies (134 participants, 57.3%), with 100 (42.7%) employed in hotels. A detailed breakdown of participant characteristics is presented in Table 1.

Table 1. participants' demographics

		Frequency	Percent
Gender	Male	121	51.7
	Female	113	48.3
Age	<25years	36	15.4
	25: ≤35 years	88	37.6
	36: ≤45 years	110	47
	46 years and more	-	
Education	High schools/institute	4	1.7
	Bachelor	213	91
	Master/PhD	17	7.3
Experience	< 5 years	-	-
	5 to <10 years	138	59
	10 years and more	96	41
Employer	Hotels	100	42.7
	Travel agency	134	57.3

Measurements outer model assessment

To ensure the validity and reliability of the measurement instrument, several psychometric properties were assessed for all latent variables:

a. Convergent Validity: It evaluates the degree to which a measure correlates with other measures of the same construct. The average variance extracted (AVE) is a key metric for assessing convergent validity. An AVE value of 0.5 or higher indicates adequate convergent validity, suggesting that at least half of the variance in the indicators is explained by the latent construct (Hair et al., 2021). As shown in Table 2, all constructs exhibit AVE values exceeding 0.5, ranging from 0.564 to 0.787, confirming satisfactory convergent validity.

b. Internal Consistency Reliability: It ensures that the items designed to measure a particular construct consistently reflect the underlying latent variable. Two primary measures were used:

Composite Reliability (CR): A CR value of 0.7 or higher indicates a high level of internal consistency (Kock, 2022). Table 2 shows CR values ranging from 0.837 to 0.957 for all constructs, exceeding the recommended threshold. Cronbach's Alpha (CA): While typically lower than CR, Cronbach's Alpha should also ideally exceed 0.7. Table 2 reveals CA values ranging from 0.740 to 0.946, confirming satisfactory internal consistency for most constructs.

c. Indicator Reliability: It assesses the strength of the association between individual items (indicators) and their respective latent constructs. Outer loadings (factor loadings) should ideally be greater than 0.5 (Sarstedt et al., 2021). Table 2 demonstrates satisfactory indicator reliability, with all outer loadings ranging from 0.657 to 0.923, surpassing the recommended threshold.

d. Common Method Bias (CMB): CMB can arise when both independent and dependent variables are measured using the same method. To mitigate CMB concerns, full collinearity variance inflation factors (VIFs) were employed. VIF values below 3.3 indicate the absence of multicollinearity and common method bias (Kock et al., 2021). As shown in Table 2, all VIF values are below 3.3, confirming the absence of CMB.

Table 2. Factor loadings, Cronbach Alpha, CR, AVE, and VIF

	Item Loading	CR	CA	AVE	VIF
AI Awareness (AIA)	-	0.860	0.782	0.605	2.340
AIA-1.	0.759				
AIA-2.	0.807				
AIA-3.	0.814				
AIA-4.	0.730				
Job Insecurity (JI)	-	0.837	0.740	0.564	2.278
JI-1.	0.748				
JI-2.	0.657				
JI-3.	0.789				
JI-4.	0.802				
Counterproductive Work Behaviors (CWBs)	-	0.957	0.946	0.787	2.452
CWBs-1.	0.852				
CWBs-2.	0.893				
CWBs-3.	0.898				
CWBs-4.	0.856				
CWBs-5.	0.900				
CWBs-6.	0.923				

e. Discriminant Validity

Discriminant validity ensures that constructs are distinct from one another. Two criteria were used to assess discriminant validity. Fornell-Larcker Criterion: The square root of AVE for each latent variable should be higher than its correlations with other latent variables (Sarstedt et al., 2021). As shown in Tables 3 and 4, this criterion is met for all constructs. HTMT Ratio: HTMT ratios below 0.85 indicate strong discriminant validity. Table 4 confirms that all HTMT ratios are below 0.85, supporting the distinctiveness of the constructs.

In conclusion, the measurement instrument exhibits satisfactory psychometric properties, including convergent validity, internal consistency reliability, indicator reliability, absence of common method bias, and discriminant validity. These findings bolster the reliability and validity of the study's empirical results.

Table 3. Fornell– Larcker results

	AIA	CWBs	JI
AI Awareness (AIA)	***0.778***	0.711	0.684
Counterproductive Work Behaviors (CWBs)	0.711	***0.887***	0.701
Job Insecurity (JI)	0.684	0.701	***0.751***

Table 4. HTMT ratios

(good if < 0.90, best if < 0.85)	AIA	CWBs	JI
AIA			
CWBs	0.825		
JI	0.893	0.830	

Structural model assessment

The second stage of PLS-SEM analysis involves evaluating the structural model to assess the hypothesized relationships between latent constructs. To comprehensively evaluate the model's efficacy, the current study employed five key criteria.

a. Path coefficients: It quantifies the strength and direction of relationships between latent variables. According to Figure (2), a significant path coefficient ($p< 0.05$) indicates a statistically significant relationship (Hair et al., 2017). In the current study, AIA was found to have a significant positive impact on both counterproductive work behaviors ($\beta= 0.47$, $p< 0.001$) and job insecurity ($\beta= 0.69$, $p< 0.001$). Additionally, job insecurity significantly positively influenced counterproductive work behaviors ($\beta= 0.38$, $p< 0.001$). Furthermore, a multi-group analysis was employed to investigate potential workplace effects (travel agencies vs. five-star hotels) on employee responses. Table 5 reveals that the path coefficients were not significantly different between the two groups.

Table 5. Multi-group analysis

Group pair results (Five-Star Hotel=1 (N=100); Travel Agency=2 (N=134))						
Path coefficient	**Path coeff. (Five-Star Hotel)**	**Path coef. (Travel Agency)**	**Absolute path coeff. Diff.**	**p-values**	**T-statistic**	**Decision**
AIA→CWBs	0.487	0.473	0.067	0.150	1.035	No significance
AIA → JI	0.658	0.696	0.104	0.052	1.627	
JI→CWBs	0.383	0.352	0.009	0.444	0.141	

b. Coefficient of determination (R^2): R^2 measures the proportion of variance in a dependent variable explained by its independent variables. A higher R^2 indicates a stronger explanatory power of the model (Hair et al., 2017). Based on Figure (2), AIA explained 48% of the variance in job insecurity, suggesting a moderate influence. Additionally, AIA and job insecurity together explained 62% of the variance in counterproductive work behaviors (Chin,1998).

c. Effect size (f^2): f^2 quantifies the magnitude of the impact of independent variables on a dependent variable. A larger f^2 indicates a stronger effect. In this study, AIA and job insecurity had medium positive effects on counterproductive work behaviors ($f^2= 0.345$ and 0.271, respectively). AIA also had a strong positive effect on job insecurity ($f^2= 0.480$) (Hair et al., 2021).

d. Predictive relevance (Q^2): Q^2 assesses the model's predictive accuracy. A positive Q^2 value indicates acceptable predictive accuracy. The reflective measurement model in this study demonstrated strong predictive relevance, with Q^2 values exceeding 0 (Sarstedt et al., 2021) as shown in Table (6).

Table 6. The predictive relevance Q^2 of the model

Constructs/Dimensions	Q2	Predictive Relevance
Counterproductive Work Behaviors (CWBs)	0.619	Strong
Job Insecurity (JI)	0.478	Strong

e. Model fit: Overall model fit evaluates the goodness-of-fit of the structural model. Various fit indices, such as SRMR, RMStheta, APC, and ARS, were used to assess the model fit. The results indicated a good overall fit for the study's model as indicated in Table (7) based on (Kock, 2022).

Table 7. Model fit

	Assessment	Criterion	Supported/Rejected
Average path coefficient (APC)	0.516, P<0.001	P<0.05	Supported
Average R-squared (ARS)	0.548, P<0.001	P<0.05	Supported
Average adjusted R-squared (AARS)	0.545, P<0.001	P<0.05	Supported
Average block VIF (AVIF)	1.858	acceptable if <= 5, ideally <= 3.3	Supported
Average full collinearity VIF (AFVIF)	2.357	acceptable if <= 5, ideally <= 3.3	Supported
Tenenhaus GoF (GoF)	0.598	small >= 0.1, medium >= 0.25, large >= 0.36	Supported
Sympson's paradox ratio (SPR)	1.000	acceptable if >= 0.7, ideally = 1	Supported
R-squared contribution ratio (RSCR)	1.000	acceptable if >= 0.9, ideally = 1	Supported
Statistical suppression ratio (SSR)	1.000	acceptable if >= 0.7	Supported
Nonlinear bivariate causality direction ratio (NLBCDR)	1.000	acceptable if >= 0.7	Supported

Hypotheses Testing

The path analysis results, as presented in Table 8 and Figure 2, provided strong empirical support for the hypothesized model.

Hypotheses 1 and 3: AIA was found to have a significant positive impact on both counterproductive work behaviors (β= 0.47, p< 0.001) and job insecurity (β= 0.69, p< 0.001). Hypothesis 2: Job insecurity was also significantly positively associated with counterproductive work behaviors (β= 0.38, p< 0.001). Hypothesis 4: A bootstrapped confidence interval analysis was conducted to examine the mediating role of job insecurity as shown in Table (9). The analysis

revealed a significant indirect effect of AIA on counterproductive work behaviors through job insecurity (β= 0.266, t-value= 6.064). The 95% confidence interval (LL=0.181, UL=0.353) excluded zero, further confirming the mediating role of job insecurity as per Kisbu-Sakarya et al. (2014). Therefore, the findings suggest that job insecurity partially mediates the relationship between AIA and employees' counterproductive work behaviors.

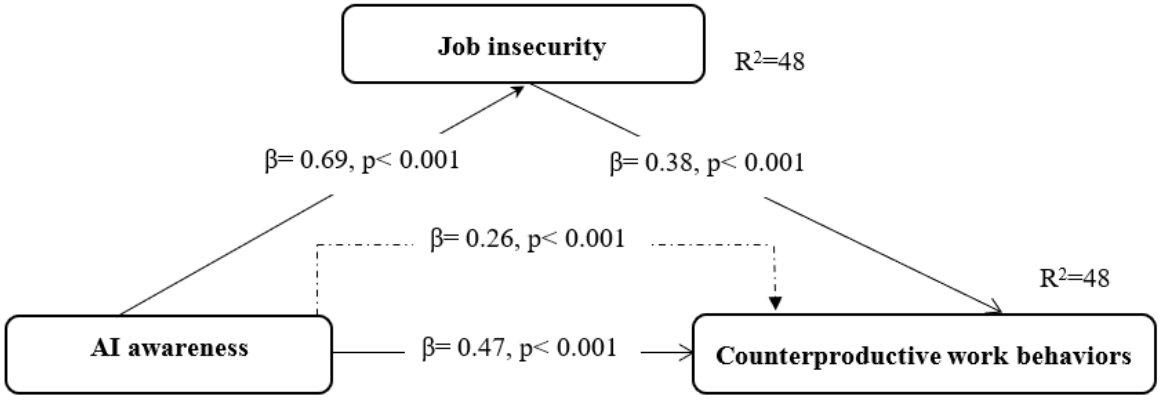

Figure (2): Final figure of the study

Table 8. The path coefficient of the research hypotheses

H	Relationships	Std. Beta	Std. Error	T- Value	P- Value	Result
H1	AIA → CWBs	0.471	0.060	7.839	<0.001	Accepted **
H2	AIA → JI	0.693	0.058	11.986	<0.001	Accepted **
H3	JI → CWBs	0.385	0.061	6.300	<0.001	Accepted **
H4	AIA → JI → CWBs	0.266	0.044	6.064	<0.001	Accepted **

Table 9. Mediation analysis results

H4	Path a AIA→JI	Path b JI→CWBs	Indirect Effect	SE	t-value	95% LL	95% UL	Decision
AIA→JI→CWBs	0.693	0.385	0.266	0.044	6.064	0.181	0.353	Mediation

Discussion

This study, informed by the JD-R model, examined the mediating role of job insecurity in the relationship between AI awareness and counterproductive work behaviors among Egyptian tourism and hospitality employees. The first hypothesis, proposing a positive relationship between AI awareness and CWBs, was supported, corroborating the findings of Bai et al. (2024). AI awareness can induce job insecurity, as employees may perceive AI as a potential job substitute (Brougham & Haar, 2018). This perceived threat can lead to counterproductive work behaviors as employees may feel a sense of injustice and seek to protect their resources and well-being. Such behaviors can be viewed as a form of protest perceived unfairness or other negative influences (Schulte-Braucks et al., 2019). Furthermore, AI awareness can trigger negative emotions such as pessimism, emotional exhaustion, and insecurity (Liang et al., 2022), further contributing to CWBs. As employees perceive increased AI awareness, they may experience a sense of competition or even hostility toward AI, leading to feelings of stress and resource depletion. This,

in turn, can exacerbate CWBs as employees seek to mitigate these negative emotions and protect their psychological well-being (He et al., 2023).

The second hypothesis, positing a positive relationship between AI awareness and job insecurity, was supported. This finding aligns with the research of Lingmont & Alexiou (2020) and Hassan et al. (2024), who also found a positive association between AI awareness and job insecurity. Employees with high AI awareness often perceive their careers as uncertain, fearing potential job displacement by AI. However, this finding contrasts with Lestari et al. (2023), who reported a negative association between STARA awareness and job insecurity. This discrepancy may be explained by the context of the COVID-19 pandemic, during which hotels worldwide accelerated technology adoption as a survival strategy. In this context, STARA awareness might have been perceived as a tool for job security rather than a threat.

Lastly, the study found that job insecurity positively influences CWBs and mediates the relationship between AI awareness and CWBs, consistent with previous research (Oluwole et al., 2020; Yiwen & Hahn, 2021; Lu et al., 2023; Hassan et al., 2024). Employees facing job insecurity may use CWBs as a coping mechanism, particularly when they feel a sense of helplessness and perceive a threat to their resources. This aligns with the cognitive theory of stress, which suggests that individuals in stressful situations may resort to maladaptive behaviors, such as CWBs, to cope with perceived threats (Lu et al., 2023). In the context of AI awareness, employees who perceive their jobs to be at risk of automation may experience increased job insecurity, leading to a higher likelihood of engaging in CWBs. This finding is consistent with previous research on the relationship between AI awareness, job insecurity, and CWBs (Hassan et al., 2024).

Theoretical implications

This study comes to address the growing demand for research in the area of AI in the workplace. A review of the current research landscape on AI in the workplace highlights significant gaps that require further exploration, specifically, the counterproductive behaviors that AI may encourage in the workplace have not been sufficiently examined (Zhou et al., 2024). Therefore, it is crucial to conduct worker-centered research on both emerging and upcoming technologies (Im & Kim, 2022). In addition, this study responds to the calls for further investigation into counterproductive work behaviors in the hospitality industry (Vatankhah & Darvishi, 2022; Wallace & Coughlan, 2023).

The key theoretical contribution of this study is the introduction of AI awareness as a new job demand within the JD-R framework. Traditional research in the JD-R model has primarily focused on physical or psychological job demands such as workload, time pressure, or interpersonal conflict. However, this study expands the model by considering AI awareness as a significant stressor or demand that creates anxiety, fear, and uncertainty among employees. As employees in the hotel and travel agency industries become more aware of AI's potential to impact their roles, the resulting job insecurity can elevate their stress levels and lead to a heightened risk of CWBs. In addition, the study's emphasis on the mediating role of job insecurity between AI awareness and CWBs offers a valuable contribution to the JD-R Model. While previous research has examined the relationship between job insecurity and employee outcomes, this manuscript extends that understanding by demonstrating how job insecurity specifically mediates the relationship between technological awareness (in this case, AI) and counterproductive behaviors in the workplace. It highlights the psychological mechanisms through which job insecurity is activated

by AI awareness and leads to behaviors like theft, absenteeism, sabotage, and workplace aggression.

Practical implications

To address the potential negative consequences of AI on employee behavior, organizations should implement several key strategies. First, transparent communication about the role of AI in the organization is essential to alleviate employee fears and uncertainty. Additionally, offering employee training and development programs can enhance their skills and better prepare them for the future of work. Providing counseling and support services through employee support programs is also crucial in helping employees cope with stress and anxiety related to job insecurity. Cultivating a positive organizational culture fosters employee engagement and reduces counterproductive work behavior. Finally, ensuring the ethical and responsible implementation of AI can build trust and confidence among employees, further mitigating potential negative impacts.

Mitigating job insecurity through AI awareness involves several proactive strategies. First, skill enhancement is key: by understanding AI's potential, employees can identify valuable and in-demand skills in the age of automation, allowing them to upskill or reskill to remain competitive in the job market. Collaboration with AI also plays an important role, as employees can view AI as a tool to augment human capabilities rather than replace them. This shift in perspective encourages employees to learn how to work alongside AI to improve efficiency and productivity. Additionally, AI can create new job opportunities in fields like AI development, data science, and AI ethics. By gaining a deeper understanding of AI, employees can position themselves to take advantage of these emerging opportunities. On the organizational side, transparent communication is vital: open and honest discussions about the organization's AI implementation plans can alleviate employee fears and uncertainty. Skill development programs are essential, providing employees with the training and development needed to adapt to the changing technological landscape and reduce job insecurity. Lastly, reassurance and support from organizations are crucial; by reassuring employees that their skills and contributions are valued and offering support services to help them manage any anxiety or stress related to AI, organizations can foster a more secure and positive work environment.

Limitations and further research avenues

One limitation of this study is its cross-sectional design, which captures data at a single point in time. This limits the ability to draw causal conclusions between AI awareness, job insecurity, and counterproductive work behavior. A more comprehensive approach would involve longitudinal studies that track changes in AI awareness, job insecurity, and CWB over time. Such studies could provide deeper insights into the causal relationships between these variables, allowing researchers to assess the long-term impact of AI awareness on employee behavior and job security. Longitudinal research would also clarify how sustained exposure to AI technologies might influence employee perceptions and actions in the future.

Another limitation is the geographical focus on the Greater Cairo Region of Egypt. While this region is a significant hub for the hospitality and travel industries in the country, it may not fully represent the experiences of employees in other parts of Egypt or in different countries. The socio-cultural, economic, and technological context of Egypt could shape how employees respond to AI awareness and job insecurity, limiting the generalizability of the study's findings. Therefore, cross-cultural research is needed to explore how AI awareness impacts CWB in different countries and regions. Comparative studies between developed and developing economies could provide

insights into the cultural and economic factors that influence employees' perceptions of AI and their subsequent behaviors.

Additionally, the study's focus on five-star hotels and category-A travel agencies presents another limitation, as it may not account for how AI awareness and job insecurity affect employees in other sectors of the hospitality and travel industries. High-end establishments often face different challenges compared to smaller hotels or travel agencies. To improve generalizability, future studies could expand the scope to include a wider range of organizations within the hospitality and travel sectors. This would help determine whether the observed patterns hold across different organizational contexts or if they are unique to more premium service providers. Finally, this study does not fully explore the role of other organizational factors that might influence the relationship between AI awareness, job insecurity, and CWB. Factors such as leadership styles, organizational support, communication strategies, and company culture could significantly impact how employees perceive AI's role in the workplace and how it affects their job security. Future research could incorporate these variables to better understand how organizational contexts and interventions may buffer or exacerbate the negative effects of job insecurity. Investigating the role of supportive leadership and transparent communication could offer valuable insights into how organizations can reduce job insecurity and prevent CWB during AI transitions.

References

Aguiar-Quintana, T., Nguyen, T. H. H., Araujo-Cabrera, Y., & Sanabria-Díaz, J. M. (2021). Do job insecurity, anxiety and depression caused by the COVID-19 pandemic influence hotel employees' self-rated task performance? The moderating role of employee resilience. *International Journal of Hospitality Management*, *94*, 102868.

Ahmad, A. A., & Norzaidi, N. H. R. (2024). Adapting to technological transformations: jobs and skills in Malaysia's evolving work landscape. In *Islamic finance: New trends in law and regulation* (pp. 527-538). Cham: Springer Nature Switzerland.

Aliedan, M. M., Sobaih, A. E. E., Alyahya, M. A., & Elshaer, I. A. (2022). Influences of distributive injustice and job insecurity amid COVID-19 on unethical pro-organisational behaviour: Mediating role of employee turnover intention. *International Journal of Environmental Research and Public Health*, *19*(12), 7040.

Alisic, A., & Wiese, B. S. (2020). Keeping an insecure career under control: The longitudinal interplay of career insecurity, self-management, and self-efficacy. *Journal of Vocational Behavior*, *120*, 103431.

Al-Romeedy, B. S., & Khairy, H. A. (2024). Organizational politics and employee job performance in the tourism and hospitality industry: workplace stress and counterproductive work behavior. *Tourism Review*.

Arias-Pérez, J., & Vélez-Jaramillo, J. (2022). Understanding knowledge hiding under technological turbulence caused by artificial intelligence and robotics. *Journal of Knowledge Management*, *26*(6), 1476-1491.

Bai, S., Zhang, X., Yu, D., & Yao, J. (2024). Assist me or replace me? Uncovering the influence of AI awareness on employees' counterproductive work behaviors. *Frontiers in Public Health*, *12*, 1-13.

Bhargava, A., Bester, M., & Bolton, L. (2021). Employees' perceptions of the implementation of robotics, artificial intelligence, and automation (RAIA) on job satisfaction, job security, and employability. *Journal of Technology in Behavioral Science*, *6*(1), 106-113.

Bilal, M., Zhang, Y., Cai, S., Akram, U., & Halibas, A. (2024). Artificial intelligence is the magic wand making customer-centric a reality! An investigation into the relationship between consumer purchase intention and consumer engagement through affective attachment. *Journal of Retailing and Consumer Services*, *77*, 103674.

Brauchli, R., Schaufeli, W. B., Jenny, G. J., Füllemann, D., & Bauer, G. F. (2013). Disentangling stability and change in job resources, job demands, and employee well-being—A three-wave study on the job-demands resources model. *Journal of Vocational Behavior*, *83*(2), 117-129.

Brougham, D., & Haar, J. (2018). Smart technology, artificial intelligence, robotics, and algorithms (STARA): Employees' perceptions of our future workplace. *Journal of Management & Organization*, *24*(2), 239-257.

Chin, W. W. (1998). The partial least squares approach to structural equation modeling. *Modern Methods for Business Research*, *295*(2), 295-336.

Chiu, Y. T., Zhu, Y. Q., & Corbett, J. (2021). In the hearts and minds of employees: A model of pre-adoptive appraisal toward artificial intelligence in organizations. *International Journal of Information Management*, *60*, 102379.

Colakoglu, S. N. (2011). The impact of career boundarylessness on subjective career success: The role of career competencies, career autonomy, and career insecurity. *Journal of Vocational Behavior*, *79*(1), 47-59.

Cramarenco, R. E., Burcă-Voicu, M. I., & Dabija, D. C. (2023). The impact of artificial intelligence (AI) on employees' skills and well-being in global labor markets: A systematic review. *Oeconomia Copernicana*, *14*(3), 731-767.

Dalal, R. S., Lam, H., Weiss, H. M., Welch, E. R., & Hulin, C. L. (2009). A within-person approach to work behavior and performance: Concurrent and lagged citizenship-counterproductivity associations, and dynamic relationships with affect and overall job performance. *Academy of Management Journal*, *52*(5), 1051-1066.

Darvishmotevali, M., Arasli, H., & Kilic, H. (2017). Effect of job insecurity on frontline employee's performance: Looking through the lens of psychological strains and leverages. *International Journal of Contemporary Hospitality Management*, *29*(6), 1724-1744.

De Witte, H. (2000). Work ethic and job insecurity: Assessment and consequences for wellbeing, satisfaction and performance at work. In R. Bouwen, K. De Witte, H. De Witte, & T. Taillieu (Eds.), *From group to community* (pp. 325–350). Leuven, Belgium: Garant.

Demerouti, E., Bakker, A. B., Nachreiner, F., & Schaufeli, W. B. (2001). The job demands-resources model of burnout. *Journal of Applied Psychology*, *86*(3), 499.

ElAdawi, F. M. I., Hashad, M. E., Awad, A. H. I., & Mahmoud, H. A. H. (2024). The effect of injustice on employees' intention to leave: The mediating role of job insecurity in the tourism and hospitality industry. *International Journal of Tourism, Archaeology and Hospitality*, *4*(2), 130-148.

Fang, S., Han, X., & Chen, S. (2024). Hotel guest-robot interaction experience: A scale development and validation. *Journal of Hospitality and Tourism Management*, *58*, 1-10.

Feather, N. T., & Rauter, K. A. (2004). Organizational citizenship behaviours in relation to job status, job insecurity, organizational commitment and identification, job satisfaction and work values. *Journal of Occupational and Organizational Psychology*, *77*(1), 81-94.

Fox, S., & Spector, P. E. (2006). The many roles of control in a stressor-emotion theory of counterproductive work behavior. In *Employee health, coping and methodologies* (Vol. 5, pp. 171-201). Emerald Group Publishing Limited.

Jang, Y., Lee, A. A., Zadrozny, M., Bae, S. H., Kim, M. T., & Marti, N. C. (2017). Determinants of job satisfaction and turnover intent in home health workers: The role of job demands and resources. *Journal of Applied Gerontology*, *36*(1), 56-70.

Hair, J. F., Black, W. C., Balin, B. J., & Anderson, R. E. (2010). *Multivariate data analysis*: Maxwell Macmillan International Editions.

Hair, Jr, J. F., Hult, G. T. M., Ringle, C. M., Sarstedt, M., Danks, N. P., & Ray, S. (2021). *Partial least squares structural equation modeling (PLS-SEM) using R: A workbook* (p. 197). Springer Nature.

Hair, Jr, J. F., Matthews, L. M., Matthews, R. L., & Sarstedt, M. (2017). PLS-SEM or CB-SEM: Updated guidelines on which method to use. *International Journal of Multivariate Data Analysis, 1*(2), 107-123.

Hassan, A. H., Baquero, A., Salama, W. M., & Khairy, H. A. (2024). Engaging hotel employees in the era of artificial intelligence: The interplay of artificial intelligence awareness, job insecurity, and technical self-efficacy. *Journal of Logistics, Informatics and Service Science*,11 (5), 522-539.

He, C., Teng, R., & Song, J. (2023). Linking employees' challenge-hindrance appraisals toward AI to service performance: the influences of job crafting, job insecurity and AI knowledge. *International Journal of Contemporary Hospitality Management*, *36*(3), 975-994.

Helmy, O. S., Sallam, O. T., Shawaly, A. S., & Fawzy, A. M. (2024). Do organizational politics triggers counterproductive work behaviors in hospitality and tourism organizations: The roles of job stress and distributive justice. *The International Journal of Tourism and Hospitality Studies*, *7*(2), 150-169.

Hu, H. H. H. S., Lai, H. S. H., & King, B. (2020). Restaurant employee service sabotage and customer deviant behaviors: The moderating role of corporate reputation. *Journal of Hospitality & Tourism Research*, *44*(7), 1126-1152.

Huang, G. H., Wellman, N., Ashford, S. J., Lee, C., & Wang, L. (2017). Deviance and exit: The organizational costs of job insecurity and moral disengagement. *Journal of Applied Psychology*, *102*(1), 26-60.

Huang, G. H., Zhang, Y., Zhang, X., & Long, L. (2021). Job insecurity, commitment and proactivity towards the organization and one's career: Age as a condition. *Human Resource Management Journal*, *31*(2), 532-552.

Im, Y., & Kim, C. (2022). A study on hotel employees' perceptions of the fourth industrial technology. *Journal of Hospitality and Tourism Management*, *51*, 559-567.

Jabeen, F., Al Zaidi, S., & Al Dhaheri, M. H. (2022). Automation and artificial intelligence in hospitality and tourism. *Tourism Review*, *77*(4), 1043-1061.

Kang, D. Y., Hur, W. M., & Shin, Y. (2023). Smart technology and service employees' job crafting: Relationship between STARA awareness, performance pressure, receiving and giving help, and job crafting. *Journal of Retailing and Consumer Services*, *73*, 1-11.

Karatepe, O. M. (2012). Perceived organizational support, career satisfaction, and performance outcomes: A study of hotel employees in Cameroon. *International Journal of Contemporary Hospitality Management*, *24*(5), 735-752.

Khairy, H. A., Elzek, Y., Saeed, A. A. A., & Hashad, M. E. (2023). The impact of tourism seasonality on employees' entrepreneurship intention and intention to leave in Egyptian tourism and hospitality industry: The moderating role of internal corporate social responsibility. *African Journal of Hospitality, Tourism and Leisure, 12*(1),171-189.

Khaliq, A., Waqas, A., Nisar, Q. A., Haider, S., & Asghar, Z. (2022). Application of AI and robotics in hospitality sector: A resource gain and resource loss perspective. *Technology in Society*, *68*, 101807.

Kisbu-Sakarya, Y., MacKinnon, D. P., & Miočević, M. (2014). The distribution of the product explains normal theory mediation confidence interval estimation. *Multivariate Behavioral Research, 49*(3), 261-268.

Kock, F., Berbekova, A., & Assaf, A. G. (2021). Understanding and managing the threat of common method bias: Detection, prevention and control. *Tourism Management*, *86*, 104330.

Kock, N. (2022). WarpPLS user manual: Version 8.0. *ScriptWarp Systems: Laredo, TX, USA*, *141*, 47-60.

Kong, H., Jiang, X., Chan, W., & Zhou, X. (2018). Job satisfaction research in the field of hospitality and tourism. *International Journal of Contemporary Hospitality Management*, *30*(5), 2178-2194.

Kong, H., Yuan, Y., Baruch, Y., Bu, N., Jiang, X., & Wang, K. (2021). Influences of artificial intelligence (AI) awareness on career competency and job burnout. *International Journal of Contemporary Hospitality Management*, *33*(2), 717-734.

Lestari, N. S., Rosman, D., & Millenia, E. (2023). The association between smart technology, artificial intelligence, robotics, and algorithms (STARA) awareness, job stress, job insecurity, and job satisfaction among hotel employees during COVID-19 pandemic. In *E3S Web of Conferences* (Vol. 388, p. 03021). EDP Sciences.

Li, J. J., Bonn, M. A., & Ye, B. H. (2019). Hotel employee's artificial intelligence and robotics awareness and its impact on turnover intention: The moderating roles of perceived organizational support and competitive psychological climate. *Tourism Management*, *73*, 172-181.

Liang, X., Guo, G., Shu, L., Gong, Q., & Luo, P. (2022). Investigating the double-edged sword effect of AI awareness on employee's service innovative behavior. *Tourism Management*, *92*, 1-14.

Lingmont, D. N., & Alexiou, A. (2020). The contingent effect of job automating technology awareness on perceived job insecurity: Exploring the moderating role of organizational culture. *Technological Forecasting and Social Change*, *161*, 1-10.

Liu, N. C., Wang, Y. C., & Lin, Y. T. (2023). Employees' adaptation to technology uncertainty in the digital era: An exploration through the lens of job demands–resources theory. *IEEE Transactions on Engineering Management*, *71*, 7286-7297.

Lo, W., Yang, C. M., Zhang, Q., & Li, M. (2024). Increased productivity and reduced waste with robotic process automation and generative AI-powered IoE services. *Journal of Web Engineering*, *23*(1), 53-87.

Lu, W., Liu, X., Liu, S., Wu, H., Qin, C., & Ma, B. (2023). On the link between job insecurity and CWB: Moderated mediation by employment status and turnover intention. *Chinese Management Studies*, *17*(3), 683-700.

Lukanova, G., & Ilieva, G. (2019). Robots, artificial intelligence, and service automation in hotels. In *Robots, artificial intelligence, and service automation in travel, tourism and hospitality* (pp. 157-183). Emerald Publishing Limited.

Morrison, E. W., & Robinson, S. L. (1997). When employees feel betrayed: A model of how psychological contract violation develops. *Academy of Management Review*, *22*(1), 226-256.

Nemteanu, M. S., Dinu, V., & Dabija, D. C. (2021). Job insecurity, job instability, and job satisfaction in the context of the COVID-19 pandemic. *Journal of Competitiveness*, *13*(2), 65-82.

Oluwole, O. J., Aderibigbe, J. K., & Mjoli, T. Q. (2020). The attenuating effects of organisational justice on job insecurity and counterproductive work behaviours relationship. *African Journal of Business & Economic Research*, *15*(1), 205-227.

Piccoli, B., & De Witte, H. (2015). Job insecurity and emotional exhaustion: Testing psychological contract breach versus distributive injustice as indicators of lack of reciprocity. *Work & Stress*, *29*(3), 246-263.

Rajesh, M. (2015). Inside Japan's first robot-staffed hotel. *The Guardian*, *14*. https://www.theguardian.com/travel/2015/aug/14/japan-henn-na-hotel-staffed-by-robots. (Accessed 6 December 2024).

Sarstedt, M., Ringle, C. M., & Hair, J. F. (2021). Partial least squares structural equation modeling. In *Handbook of market research* (pp. 587-632). Cham: Springer International Publishing.

Scarpi, D. (2024). Strangers or friends? Examining chatbot adoption in tourism through psychological ownership. *Tourism Management*, *102*, 104873.

Schulte-Braucks, J., Baethge, A., Dormann, C., & Vahle-Hinz, T. (2019). Get even and feel good? Moderating effects of justice sensitivity and counterproductive work behavior on the relationship between illegitimate tasks and self-esteem. *Journal of Occupational Health Psychology*, *24*(2), 241-255.

Spector, P. E., & Fox, S. (2005). The Stressor-Emotion Model of Counterproductive Work Behavior. In S. Fox & P. E. Spector (Eds.), *Counterproductive work behavior: Investigations of actors and targets* (pp. 151–174). American Psychological Association

Swinton-Douglas, V. (2016). *Worker attitudes and perceptions about job insecurity and factors that lead to counterproductive behaviors in the workplace*. USA, Northcentral University.

Teng, R., Zhou, S., Zheng, W., & Ma, C. (2024). Artificial intelligence (AI) awareness and work withdrawal: Evaluating chained mediation through negative work-related rumination and emotional exhaustion. *International Journal of Contemporary Hospitality Management*, *36*(7), 2311-2326.

Van den Broeck, A., Sulea, C., Vander Elst, T., Fischmann, G., Iliescu, D., & De Witte, H. (2014). The mediating role of psychological needs in the relation between qualitative job insecurity and counterproductive work behavior. *Career Development International*, *19*(5), 526-547.

Vatankhah, S., & Darvishi, M. (2022). Unpacking solutions to counterproductive work behavior using hybrid fuzzy MCDM. *The Service Industries Journal*, *42*(15-16), 1123-1150.

Wallace, E., & Coughlan, J. (2023). Burnout and counterproductive workplace behaviours among frontline hospitality employees: The effect of perceived contract precarity. *International Journal of Contemporary Hospitality Management*, *35*(2), 451-468.

Wu, T. J., Liang, Y., & Wang, Y. (2024). The buffering role of workplace mindfulness: How job insecurity of human-artificial intelligence collaboration impacts employees' work–life-related outcomes. *Journal of Business and Psychology*, 1-17.

Xu, S., Stienmetz, J., & Ashton, M. (2020). How will service robots redefine leadership in hotel management? A Delphi approach. *International Journal of Contemporary Hospitality Management*, *32*(6), 2217-2237.

Yiwen, F., & Hahn, J. (2021). Job insecurity in the COVID-19 pandemic on counterproductive work behavior of millennials: A time-lagged mediated and moderated model. *International Journal of Environmental Research and Public Health*, *18*(16), 1-17.

Zhao, H., Peng, Z., & Sheard, G. (2013). Workplace ostracism and hospitality employees' counterproductive work behaviors: The joint moderating effects of proactive personality and political skill. *International Journal of Hospitality Management*, *33*, 219-227.

Zhao, J., Hu, E., Han, M., Jiang, K., & Shan, H. (2023). That honey, my arsenic: The influence of advanced technologies on service employees' organizational deviance. *Journal of Retailing and Consumer Services*, *75*, 103490.

Zhou, S., Yi, N., Rasiah, R., Zhao, H., & Mo, Z. (2024). An empirical study on the dark side of service employees' AI awareness: Behavioral responses, emotional mechanisms, and mitigating factors. *Journal of Retailing and Consumer Services*, *79*, 103869.

Zhu, D. H., & Chang, Y. P. (2020). Robot with humanoid hands cooks food better? Effect of robotic chef anthropomorphism on food quality prediction. *International Journal of Contemporary Hospitality Management*, *32*(3), 1367-1383.

كيف يحفز الوعي بالذكاء الاصطناعي سلوكيات العمل المضادة للإنتاجية لدى الموظفين في مؤسسات الضيافة والسياحة: الدور الوسيط لانعدام الأمن الوظيفي

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الملخص باللغه العربية

إن التكامل السريع للذكاء الاصطناعي يعيد تشكيل المشهد المهني، ويقدم فرصًا وتحديات للموظفين. تدرس هذه الدراسة العواقب السلبية المحتملة للوعي بالذكاء الاصطناعي على سلوك الموظفين داخل صناعة السياحة والضيافة. على وجه التحديد، تبحث في العلاقة بين الوعي بالذكاء الاصطناعي وسلوكيات العمل المضادة للإنتاجية، مع التركيز على الدور الوسيط لانعدام الأمن الوظيفي. تم جمع البيانات من 234 موظفًا يعملون في فنادق الخمس نجوم ووكالات السفر من الفئة أ المصرية. استخدمت الدراسة نهجًا كميًا، باستخدام نمذجة المعادلة الهيكلية باستخدام المربعات الصغرى الجزئية (SEM-PLS) لتحليل البيانات المجمعة. كشفت النتائج عن وجود علاقة إيجابية بين الوعي بالذكاء الاصطناعي وسلوكيات العمل المضادة للإنتاجية، مما يشير إلى أن زيادة الوعي بالذكاء الاصطناعي قد تؤدي إلى سلوكيات سلبية للموظفين. بالإضافة إلى ذلك، أكدت الدراسة وجود علاقة إيجابية بين الوعي بالذكاء الاصطناعي وانعدام الأمن الوظيفي، مما يشير إلى أن الوعي بالذكاء الاصطناعي يمكن أن يؤدي إلى تفاقم مشاعر انعدام الأمن الوظيفي بين الموظفين. علاوة على ذلك، وجد أن انعدام الأمن الوظيفي يتوسط جزئيًا العلاقة بين الوعي بالذكاء الاصطناعي وسلوكيات العمل المضادة للإنتاجية، مما يسلط الضوء على أهمية انعدام الأمن الوظيفي كآلية يمكن من خلالها أن يؤدي الوعي بالذكاء الاصطناعي إلى سلوكيات سلبية للموظفين. يساهم هذا البحث في الأدبيات الموجودة من خلال تسليط الضوء على التأثيرات السلبية المحتملة للذكاء الاصطناعي على سلوك الموظفين، وخاصة في قطاع السياحة والضيافة. كما يوفر رؤى قيمة للمنظمات لمعالجة التحديات المرتبطة بتنفيذ الذكاء الاصطناعي بشكل استباقي وتقليل مخاطر السلوكيات السلبية للموظفين. من خلال فهم العوامل التي تساهم في سلوكيات العمل المضادة للإنتاجية في سياق الذكاء الاصطناعي، يمكن للمنظمات تطوير استراتيجيات لتعزيز بيئة عمل إيجابية والحفاظ على معنويات الموظفين وإنتاجيتهم.

الكلمات المفتاحية: الوعي بالذكاء الاصطناعي، سلوكيات العمل المضادة للإنتاجية، انعدام الأمن الوظيفي، الفنادق، وكالات السفر.