

# How Artificial Intelligence Awareness Could Harm Employees' Job Engagement: The Roles of Job Insecurity and Job Stress

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## ABSTRACT

*The widespread use of artificial intelligence (AI) has significantly impacted both management and society. This article investigates the potential effects of AI on tourism and hospitality industry employees, providing insights for both employees and managers. Specifically, the study explores the influence of artificial intelligence awareness (AIA) on job engagement (JE), examining job insecurity and stress as mediators. The PLS-SEM approach and WarpPLS statistical software 7.0 were used to evaluate 422 replies from full-time employees of Egypt's five-star hotels and category-A travel agencies. Findings reveal that AIA decreases JE while increasing JS and JI. In addition, JE is negatively affected by JS and JI. Findings also reveal a significant mediation effect of JS and JI in the AIA JE relationship. The study offers practical insights for tourism and hospitality businesses to effectively manage AI adoption threats and improve employee job engagement in the digital age.*

## INTRODUCTION

Artificial intelligence (AI) awareness involves understanding the advantages and potential drawbacks of AI technology, including its capacity to automate tasks, improve decision-making processes,

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and stimulate innovation across various industries. It also entails acknowledging ethical considerations such as data privacy, algorithmic bias, and the potential impact on employment (Gaafar & Al-Romeedy, 2024b). Within organizational contexts, AI awareness entails providing stakeholders with the knowledge necessary for the responsible implementation and utilization of AI, thereby enhancing efficiency and competitiveness. It also involves fostering a culture that is well-prepared to navigate the opportunities and challenges presented by advancements in technology (Al-Romeedy, 2024a, d).

AI awareness yields positive outcomes by empowering individuals and organizations to make well-informed decisions regarding the adoption and implementation of AI. With a comprehensive grasp of AI technologies, their capabilities, and potential impacts, stakeholders can effectively utilize AI to automate repetitive tasks, enhance decision-making processes, and foster innovation (Mohamed et al., 2022). This heightened awareness also encourages ethical considerations, mitigating risks associated with biases and privacy concerns, and facilitates proactive approaches to managing workforce transitions resulting from automation. Furthermore, AI awareness cultivates a culture of innovation, enabling organizations to maintain competitiveness through the utilization of data-driven insights, enhanced efficiency, and the delivery of personalized customer experiences, ultimately contributing to societal advancement and economic prosperity (Farahat et al., 2022).

Conversely, heightened AI awareness has the potential to diminish employees' job engagement, primarily when it triggers concerns regarding job displacement and redundancy resulting from automation (Mohamed et al., 2022; Hassan et al., 2024). As employees gain deeper insights into the transformative capabilities of AI technologies, particularly their ability to automate routine tasks and decision-making processes, they may begin to view their roles as less essential or vulnerable to replacement. This perceived risk can diminish motivation and emotional commitment to their work, leading to decreased job engagement (Gaafar & Al-Romeedy, 2024b; Al-Romeedy, 2024b).

Moreover, AI awareness has the potential to elevate job stress levels as employees become increasingly cognizant of the potential impacts of AI technologies on their roles (Mohamed et al., 2022; Hassan et al., 2024). As workers gain a deeper understanding of AI's capabilities in automating tasks and optimizing decision-making processes, concerns may emerge regarding job displacement, changes in job requirements, and the potential obsolescence of skills (Mindell & Reynolds, 2023). This heightened awareness can foster anxiety surrounding job security, thereby creating a stressful work environment. Additionally, employees may feel pressured to swiftly adapt to new technologies and acquire additional skills, further exacerbating their levels of stress (Farahat, 2023).

Furthermore, heightened AI awareness has the potential to amplify job insecurity among employees as they become more aware of AI technologies' capacity to automate tasks, streamline processes, and potentially replace certain job functions (Kong et al., 2021; Zhang & Jin, 2023). This heightened awareness can evoke apprehensions about job displacement and redundancy, particularly in roles involving routine and repetitive tasks. As employees grasp the potential implications of AI on their job stability, they may perceive their roles as increasingly vulnerable, leading to heightened job insecurity (Koo et al., 2021; Liu & Zhan, 2020).

Job stress can significantly undermine job engagement, as heightened levels of stress can diminish an employee's emotional and psychological commitment to their work. When employees contend with job stress stemming from factors like excessive workloads, ambiguous expectations, or concerns about job security, it can lead to burnout, exhaustion, and decreased motivation (Al-Azab & Al-Romeedy, 2024). This stress can dampen their enthusiasm and involvement, reducing their inclination to excel in

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