

Examining the intersection of I/O psychology and IT in hospitality research: a PRISMA protocol approach

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Abstract

Purpose – This study aims to examine the intersection of information technology (IT) and industrial-organizational (I-O) psychology within the context of hospitality industry, focusing on workforce effects and outcomes. While extensive scholarly work exists on the consumer applications of emerging technologies such as artificial intelligence (AI) and service robots, workplace-oriented impacts remain underexamined.

Design/methodology/approach – Using Preferred Reporting Items for Systematic Reviews and Meta-Analyses protocol, a systematic literature review was conducted across three major databases. A targeted search strategy identified 37 relevant peer-reviewed articles, focusing on workplace-oriented outcomes of IT adoption in hospitality. The studies collected were assessed for common themes, patterns and prominent gaps.

Findings – The leading topics include AI, service robots, digital transformation and technostress. A key insight revealed by the systematic review is that employees' technological awareness positively influences acceptance and engagement with new technologies, whereas lack of training exacerbates resistance and workplace anxiety. The collected studies underscore both positive and negative outcomes for technology inclusion.

Research limitations/implications – This study provides actionable insights for hospitality professionals aiming to integrate new technologies into the workplace. Future studies can examine different workplace outcomes using particular contexts, such as regional/cultural. This study also provides a foundation for future research by identifying critical gaps, including the need for longitudinal studies on technology's long-term effects on employee retention and well-being.

Originality/value – To the best of the authors' knowledge, this study is the first systematic literature review to assess the role of I-O psychology in hospitality IT research, shifting the focus from consumer-oriented studies to workplace implications.

Keywords I-O psychology, Information technology, Systematic review, PRISMA protocol, Workplace

Paper type Literature review

酒店研究中 I/O 心理学与信息技术交叉领域的考察：一种 PRISMA 协议方法

摘要

目的 – 本研究考察了信息技术与工业/组织心理学 (I/O psychology) 在酒店业情境中的交叉, 重点关注其对员工队伍的影响与结果。尽管已有大量学术研究探讨了人工智能 (AI) 和服务机器人等新兴技术在消费者端的应用, 但其面向工作场所的影响仍未得到充分研究。



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研究设计/方法 – 本研究采用 PRISMA 协议, 在三个主要数据库中开展系统文献综述。通过有针对性的检索策略, 共识别出 37 篇相关的同行评审文章, 重点关注酒店业中信息技术采用所带来的工作场所导向结果。研究对所收集的文献进行了评估, 以识别共同主题、模式以及突出的研究空白。

研究发现 – 主要研究主题包括人工智能、服务机器人、数字化转型和技术压力。系统综述揭示的一个关键见解是, 员工的技术意识会正向影响其对新技术的接受和参与, 而缺乏培训则会加剧员工的抵触情绪和工作场所焦虑。所收集的研究强调了技术引入对员工既可能产生积极结果, 也可能带来消极影响。

研究启示/局限 – 本研究为希望在工作场所中整合新技术的酒店业从业者提供了可操作的见解。未来研究可以在特定情境下, 例如区域或文化情境, 考察不同的工作场所结果。本研究还通过识别关键研究空白, 为未来研究奠定了基础, 包括需要开展纵向研究, 以考察技术对员工留任和福祉的长期影响。

原创性 – 本研究是首个评估 I/O 心理学在酒店业信息技术研究中作用的系统文献综述, 将研究重点从消费者导向研究转向工作场所影响。

关键词 I/O 心理学; 信息技术; 系统综述; PRISMA 协议; 工作场所。

文章类型 文献评论

1. Introduction

The intersection of information technology (IT) and industrial-organizational psychology (I-O psychology) represents a rapidly evolving area of inquiry, particularly within the hospitality industry. The hospitality industry, characterized by high employee turnover rates and a need for exceptional service standards, has increasingly turned to technological innovations such as artificial intelligence (AI), service robots and digital platforms to enhance operational efficiency (Lee *et al.*, 2021; Mehmood *et al.*, 2023). However, the introduction of these new technologies requires research to understand their effects on hospitality employees and the workplace. I-O psychology focuses on the study of human beings within the workplace and organizations, including individual, group and organization-level behaviors (American Psychological Association, 2025). A number of workplace theories developed under the I-O psychology umbrella, including Conservation of Resources (COR) theory proposed by Hobfoll (1989) and Job Demand–Resources (JD-R) Theory developed by Bakker *et al.* (2014), can provide important context on how evolving technologies in the workplace might influence employee behaviors. Theories such as COR involve an employee’s motivation as the attainment and preservation of “resources,” such as their time or competence, elements that new technologies may threaten to undermine. Others, including JD-R and Person–Environment Fit Theory, focus more upon potential mismatches between the employee and the job environment, including skill mismatch, difference in values or difference in competence; another area where new technologies may impact preestablished (and possibly now irrelevant) job knowledge.

While substantial research exists on the consumer-focused applications of these technologies, the effect of these new technologies on the hospitality workplace remains underexplored. This is due in part to the recent pace of technological innovations in this area, as groundbreaking new technologies in AI such as large language models (ChatGPT, Grok, etc.) were only recently made available to the public (Wu *et al.*, 2023). The length of time required to produce academic research often spans into years, making it difficult for research to keep up with the exponential growth of AI-based technologies (Kording, 2025). In addition, the effect of AI-based technologies on the workplace is considerably less accessible than consumer-facing effects, requiring nuance in navigating relationships with businesses capable of providing this data to researchers (Dewey, 2023). This imbalance in research focus overlooks critical dynamics, as employee outcomes such as job satisfaction, engagement and technostress directly influence organizational success in this sector (Christ-Brendemühl, 2022; Wu *et al.*, 2022).

Several works of hospitality scholarship have highlighted the need to examine more closely the impacts of disruptive new technologies, such as AI-oriented technologies and service robots, on the hospitality workforce (Bankins *et al.*, 2024; Zhang and Lu, 2024). This includes not only negative outcomes, such as AI-related job insecurity (Kang *et al.*, 2024) or abuse directed toward new technologies by employees (Shum *et al.*, 2024), but also those orientated toward a collaborative, beneficial approach. In these situations, studies have shown that new technologies can lead to lower task-related stress for employees (Wang *et al.*, 2024) and enhance employee satisfaction while reducing the physical exertion required by human employees (Mejia *et al.*, 2024). While the discourse regarding the benefits and detriments of new technology introduction into the hospitality workplace continues, both the positives and negatives are important for industry practitioners and academic researchers alike (Guo *et al.*, 2023; Seyitoğlu *et al.*, 2025). Additionally, new and disruptive technologies often involve specific, unique features that require a case-by-case analysis of each's advantages and disadvantages.

This work seeks to describe the existing body of hospitality technology research through an I-O psychology lens, with a specific focus on both beneficial and adverse employee-related outcomes. The effects of AI-based technologies on the workplace remains an underexamined area of hospitality research. Given the pace of introduction of new AI-based technologies such as in-room smart assistants and service robotics, the research produced on this topic has occurred almost exclusively in the past five years (2020 to present), including explorations of both employees' reaction to service robots (Sarfraz *et al.*, 2024; Skubis *et al.*, 2024) and AI-based technologies (Alawami *et al.*, 2025; Kumawat *et al.*, 2025). Literature reviews are excellent ways to collect and collate information on a particular topic, particularly one that is new and emerging, to capture current and future trends and synthesize emerging patterns (Snyder, 2019).

This study will explore the following research questions:

- RQ1. What is the state of academic research as it relates to information technology and I-O psychology in the context of the hospitality industry?
- RQ2. What are the key findings and trends in hospitality technology literature as it relates to workplace-oriented outcomes?
- RQ3. What are the current research gaps and possible topics for future research in hospitality IT research as it relates to I-O psychology?

2. Systematic review protocol

Systematic literature review is a common method of effectively assessing the current state and trends of a particular research topic (Mulrow, 1994). In particular, systematic review protocols are meant to ensure scientific rigor while at the same time limiting bias and enhancing reproducibility (Mishra and Mishra, 2023). To develop the protocol for this study, the authors first assessed previous literature that focused upon the intersection of IT, organizational psychology and the hospitality. Previous works in organizational psychology which examined technology-related effects on employees were not specific to the hospitality industry (Coetzee and Veldsman, 2022; Crespín and Austin, 2002), limiting the relevance of their conclusions to their specific industries. This is an important distinction, as the hospitality industry possesses a number of unique factors that differentiate itself from other industries, including an extremely high rate of turnover (Notch, 2022) and a push toward technological innovation as the result of the COVID-19 pandemic (Norris *et al.*, 2021). Hospitality requires a high level of emotional labor from its employees, defined as the necessary effort to perform and demonstrate organizationally-expected emotions

when interacting with customers (Shani *et al.*, 2014). The in-person, face-to-face (often called “high touch”) service element of hospitality, considered one of its most essential elements, is also partially responsible for the level of emotional labor required by hospitality employees (Solnet *et al.*, 2020).

At the time of this work’s creation, there existed no hospitality-specific literature reviews on the intersection of organizational psychology and IT. Previous literature reviews which examined hospitality and technology assessed a broader perspective on technological growth in tourism (Cai *et al.*, 2019), or wireless technologies in hospitality (Navio-Marco *et al.*, 2019). As a result, the authors chose to use a related review in an adjacent industry as a guide for this article’s research protocol. Asfahani’s (2022) systematic review of AI’s impact on I-O psychology used Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) protocol to further substantiate its findings. PRISMA is a list of research recommendations used to encourage transparent and comprehensive reporting of a literature review’s findings (Sarkis-Onofre *et al.*, 2021). Use of PRISMA protocol is also meant to enhance the reproducibility of systematic literature reviews, a common critique often directed toward qualitative research (Page *et al.*, 2021).

3. Eligibility criteria

This review is intended to collect and collate scholarly literature to identify current trends, research gaps and future avenues for exploration. To accomplish this, the authors chose to limit data sources to academic research only. Several systematic literature reviews used this approach and were subsequently used by the research team to develop the eligibility criteria for this review (Asfahani, 2022; Ivanov *et al.*, 2019). While nonacademic literature may provide unique insights into current trends in technology and the workplace, lack of a peer-review process increases the potential bias of these works. As this review is qualitative and therefore more susceptible to subjective bias, the research team limited the search to peer-reviewed articles to strengthen rigor and credibility. The peer-review process, while not flawless, remains the gold standard of academic publishing to assure a level of impartiality and reproducibility in scholarly works (Jefferson *et al.*, 2002). The full eligibility criteria and the rationale associated with each are displayed below in Table 1.

4. Information sources

Three major databases of peer-reviewed academic work were used to conduct this search: ABIInform, Web of Science and Scopus. These databases were chosen in consultation with a subject matter expert librarian, along with several other doctorate-level experts in the field, to ensure access to the highest-quality and relevant articles. Other possible databases, such as EBSCOhost and ScienceDirect, were considered during the planning phase. However, prior research on systematic literature review sources also indicated that overlap between these databases was common, as they often aggregated publications also indexed in ABIInform, Web of Science, or Scopus (Gusenbauer and Haddaway, 2020). To reduce unnecessary duplication of the articles retrieved, EBSCOhost and ScienceDirect were not included as a primary search platform. This decision aligns with systematic review recommendations to avoid redundant database searching while maintaining comprehensiveness (Bramer *et al.*, 2017; Gusenbauer and Haddaway, 2020). Google Scholar was used solely as a supplementary tool, to ensure that relevant articles were not missing from the primary databases listed above. This is consistent with academic research indicating Google Scholar’s strengths as a supplementary platform to more robust peer-reviewed platforms (Haddaway *et al.*, 2015), while also making clear that Google Scholar is inappropriate for use as a principal search system (Gusenbauer and Haddaway, 2020).

Table 1. Eligibility criteria

Criteria	Selection	Rationale
Date	No time frame specified	Exploratory work; time frame should include no specific limits that risk narrowing the scope of the results
Databases	ABInform, Scopus, Web of Science	Three databases with the largest volume of scholarly works in hospitality
Language(s)	English	Research team is fluent in this language
Source(s)	Peer-reviewed journal articles	Nonacademic literature is beyond the scope of this work's intended purpose
Setting	Hospitality (e.g. hotels, restaurants, tourism)	This work's scope is intended to be specific to the hospitality industry

Source(s): Authors' own work

5. Search

To conduct the literature search, the authors identified two main variables ("I-O psychology" and "hospitality technology"). From this, the research team developed a list of synonyms to account for the variability in term vocabulary across different research works. Synonyms were drawn from previously-published articles in I-O psychology and hospitality technology, in particular prior literature reviews that addressed either of these two topics (Bailey, 1995; Briner and Rousseau, 2011; Khatri, 2019; Li *et al.*, 2021). Once a full list of search terms was assembled, the authors collaborated to determine which terms were superfluous; this was done primarily by conducting preliminary searches using two databases (Web of Science and Scopus). Terms were removed one at a time from the preliminary searches, to determine whether the number of results increased, decreased, or stayed the same. Terms that did not change the number of results were considered redundant and removed.

The completed search syntax displayed in Table 2 was used for all three databases, with minor changes as required by the individual syntax of each database. None of the core search terms were altered, changed or excluded.

6. Screening

Screening was performed by all of the researchers involved in this project. Located studies from each of the three databases were exported into Rayyan, a systematic review platform designed to streamline the collection and screening process (Ouzzani *et al.*, 2016). These

Table 2. Search term syntax

Variable	Terms
I-O psychology	"I-O psychology" "organizational psychology" "industrial psychology" "industrial organizational psychology"
Hospitality technology	"hospitality technology" "hotel technology" "restaurant technology" "tourism technology" "hospitality IT"

Source(s): Authors' own work

studies were then combined into a single pool, from which duplicate articles were detected and deleted via the automated functionality provided by Rayyan.

From the three databases, the search syntax retrieved a total of 468 results. These results were examined to identify and remove any duplicate entries, ensuring that only unique records were considered for further screening. After the removal of duplicate entries, a total of 444 unique records remained and were subsequently forwarded to the study authors for the initial stage of screening. This involved the review of each work's title and abstract for relevance and a brief assessment of the article's fit with the inclusion criteria. For this stage, each article was assessed by the research team, with each researcher marking the articles as "Yes" (e.g. appropriate for inclusion) "No" (e.g. inappropriate or not relevant for inclusion) or "Maybe" (e.g., unsure; prompting other researchers to investigate) in a blind review process. A majority consensus was used to determine which articles would proceed to full-text review, while articles marked with a majority of "Maybe" votes were determined by the research team on a case-by-case basis using discussion. During this phase, 372 articles were deemed irrelevant or unsuitable based on the predetermined inclusion criteria and were therefore excluded from further consideration.

The remaining 72 articles underwent a full-text review, wherein the contents of each article was reviewed fully by all three reviewers, to determine whether they met all necessary inclusion criteria. Upon closer examination, an additional 35 articles were excluded from the final selection due to their failure to satisfy one or more of the predefined eligibility requirements (for example, 12 articles were not related to the hospitality industry, instead assessing technology's impact on other industries). The same voting system previously used by the research team was also replicated here, though disagreements were rarer in this stage. Nonetheless, the importance of minimizing bias (particularly as qualitative research can often be subjective in nature) necessitated the involvement of all members of the research team to reach a consensus (Noble and Smith, 2015). Following the full-text screening process, a total of 37 articles were deemed suitable for appraisal and included in the final data set for analysis.

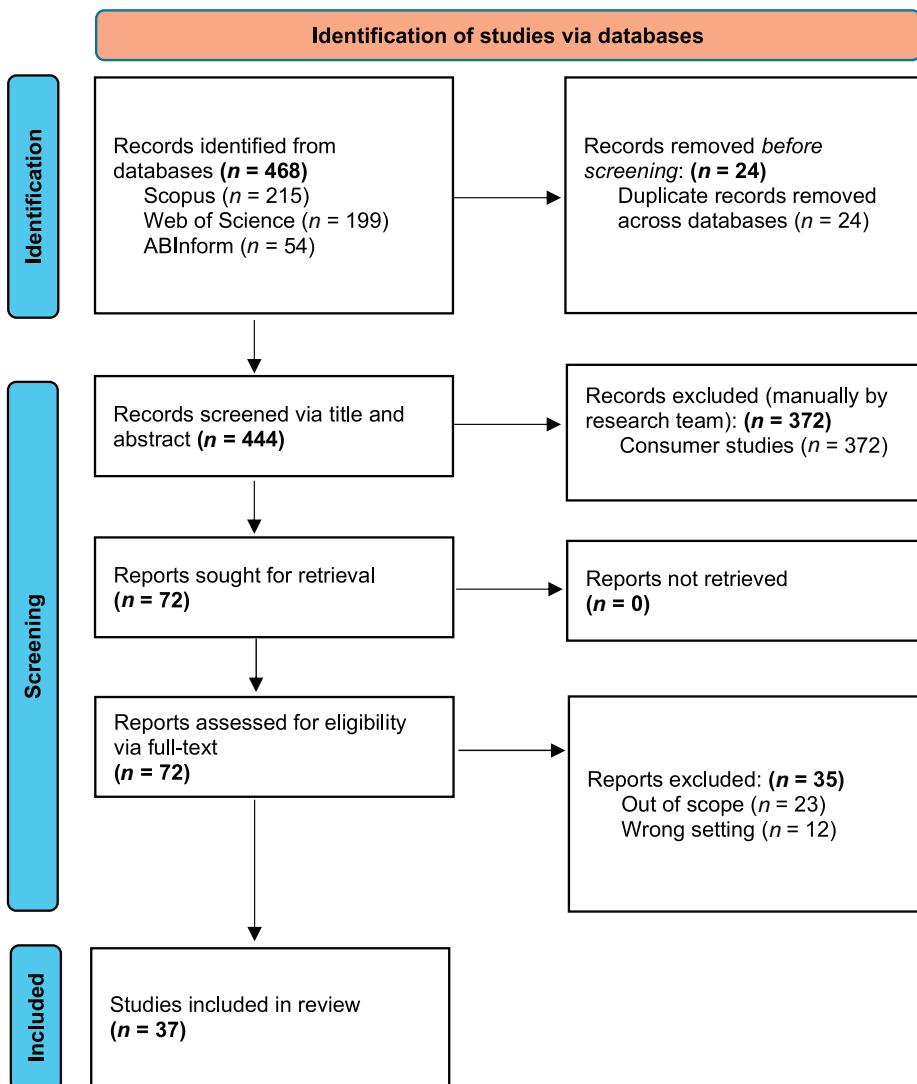
Figure 1 illustrates the above process in totality. A full table of the articles screened can be found in this work's Supplementary Materials.

7. Analysis

7.1 Demographic characteristics of included studies

As displayed in Figure 2, 37 total studies were marked for inclusion in this literature review. To begin addressing RQ1, the current state of academic research on I-O psychology and hospitality technology was analyzed through a temporal lens. Of the journal articles included, a total of 35 articles were published from 2019 to 2024. Workplace-focused articles on hospitality technology remained limited prior to 2019. In addition, despite the role of the COVID-19 pandemic in pushing the hospitality industry toward technological innovation, only two of the 37 articles included in this literature review directly mention COVID-19 as a motivating factor at the time of study publication. Nonetheless, several mentioned the growing change in consumer preferences toward the inclusion of new technology, such as self-service kiosks and in-room AI assistants, some of which is driven by lingering consumer sentiment following the pandemic (Teng et al., 2023).

A total of 30 articles were published in hospitality-specific journals. As shown in Figure 3, *International Journal of Hospitality Management* was the most common journal hosting works of this subject matter, with six total articles. *Tourism Management* held the second highest number, with five articles total. Four articles were published by *International Journal of Contemporary Hospitality Management*. Hospitality journals remained the most



Boolean search string:
 ("I-O psychology" OR "organizational psychology" OR "industrial psychology" or
 "industrial organizational psychology") AND ("hospitality technology" OR "hotel
 technology" OR "restaurant technology" OR "tourism technology" OR "hospitality IT")
 AND (LIMIT-TO (DOCTYPE , "ar")) AND (LIMIT-TO (LANGUAGE , "English"))

Figure 1. Flow diagram of article screening and selection

Source: Authors' own work

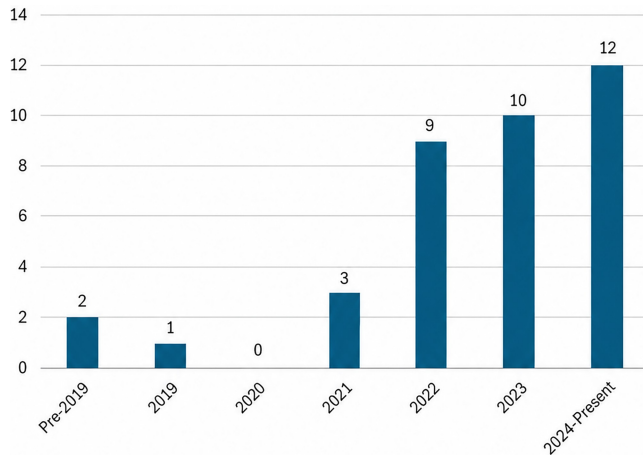
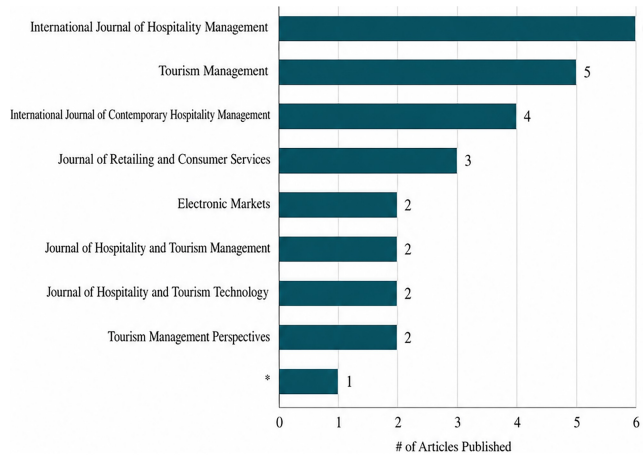


Figure 2. Number of publications by year
Source: Authors' own work



- * The following journals published one article:
- *International Journal of Hospitality Management*
 - *Computers in Human Behavior*
 - *Journal of Business Research*
 - *Journal of Hospitality & Tourism Research*
 - *Journal of Hospitality and Tourism Insights*
 - *Journal of Human Resources in Hospitality & Tourism*
 - *Journal of Service Management*
 - *Sage Open*
 - *Sustainability*
 - *The Journal of Services Marketing*
 - *Work, Aging and Retirement*

Figure 3. Number of publications by journal
Source: Authors' own work

popular source of articles on I-O psychology and hospitality technology, with numerous other hospitality journals publishing one article during this time period. Of those articles not associated with hospitality journals, a further three articles were published in IT-specific journals, including *Electronic Markets* (2) and *Computers in Human Behavior* (1). Three additional articles were published in other journals nonspecific to hospitality or business, including an Open Science publication (Cai *et al.*, 2023), a sustainability journal (Kim, 2023) and a social science/psychology journal on aging (Van Fossen *et al.*, 2023). Finally, one article was published in a business-specific journal, *Journal of Business Research* (De Obesso Arias *et al.*, 2023).

7.2 General topics and subtopics

To further examine RQ1, articles were assessed by examining the frequency of topic similarity. As shown in Figure 4, frequency-based patterns indicated that the most prevalent topics in the assessed research were AI (11 articles) and service robots (10 articles), followed by digital transformation/technology adoption (6 articles) and technostress (6 articles). This is representative of two major trends in the hospitality industry at present, namely, the potential of AI-powered technologies in the hospitality space, and the nascence of service robots to further augment the hospitality experience for guests and employees. AI technologies, in particular, have leaped to the forefront of public consciousness following the emergence of consumer-facing tools such as ChatGPT and other large language models (Aydm and Karaarslan, 2023). The prevalence of service robots and other automated technologies in the hospitality industry has also increased, in part due to the health concerns raised by person-to-person interaction during the COVID-19 pandemic (Pillai *et al.*, 2021).

It is important to note that all of these articles assessed the impact of these technologies on the workplace, rather than consumers. In particular, a majority of the 37 articles focused upon identification or mitigation of a *negative* outcome of workplace interactions with the technology in question, such as technostress (Christ-Brendemühl, 2022; Tuan, 2022a; Wu *et al.*, 2022), cyberloafing (Peng *et al.*, 2023), resistance to change or resistance to adoption (Cai *et al.*, 2023; Tavitiyaman *et al.*, 2024) and workplace anxiety (Liu *et al.*, 2024). These articles were rarely specific to a single technology (such as AI or service robots) and instead approached the topic with more general qualifiers, such as “a new technology” or “technology that employees were previously untrained in.” As a result, no specific

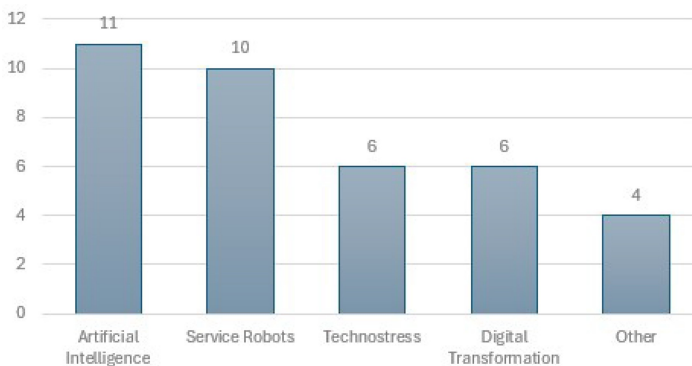


Figure 4. Number of articles by technology theme
Source: Authors' own work

technology was identified as being particularly disruptive or detrimental to employees in comparison to any other.

Those articles that focused upon *positive* outcomes of workplace interaction with technology included leveraging AI as a boundary-crossing object for employee engagement (Prentice *et al.*, 2023), a management system for workplace bullying (De Obesso Arias *et al.*, 2023) and job crafting (Kang *et al.*, 2023; Li *et al.*, 2024). Articles examining service robots and hospitality employees focused primarily upon the effects for frontline employees and were careful to qualify the benefits to employee workloads and stress levels with the loss of human-touch interaction and potential job security anxiety for the employees in question. This “double-edged sword” approach made it difficult to consider these works wholly “positive” in nature (Pan *et al.*, 2025; Zhang *et al.*, 2023). Similar themes were echoed in articles specific to digital transformation and technology adoption, wherein both the benefits and detriments to the workplace were highlighted.

7.3 Key findings

To address both RQ2 and RQ3, the articles reviewed were first grouped by technology theme. To determine what constitutes a “theme,” the research team performed open coding using each article’s keywords and the most common terms used in the full text. The goal of open coding is to break down the article data into distinct sections to identify themes, patterns and salient meanings (Charmaz and Belgrave, 2012). Each researcher identified a list of terms for each article, which was then compared to the lists of the other researchers to determine similarities. This process was also assisted by the qualitative coding software platform nVivo, which uses AI to parse article text and auto-generate particular codes, such as open codes, per line or block of text (Allsop *et al.*, 2022). However, nVivo coding was used as a supplementary process only, with the primary codes being produced by the researchers themselves.

Of the articles collected, over half focused on the specific technologies of AI or service robots. Though the popularity of these technologies is common in current hospitality research, there was no evidence in this literature review of any particular technology connecting to negative outcomes. Technostress articles generally addressed digitalization and unfamiliar new technologies in a broad sense, without specifically calling attention to AI, service robots, or other technologies. Several articles exploring the relationships between AI and hospitality employees portrayed AI technologies in a positive light, such as improving employee and engagement (Prentice *et al.*, 2023), individual productivity (Ding, 2021) or increasing positive emotion (Qiu *et al.*, 2022). However, others portrayed AI usage in the hospitality workplace as a “double-edged sword,” containing both positive and negative elements (Huang and Gursoy, 2024; Li *et al.*, 2024; Liu *et al.*, 2024; Yin *et al.*, 2024), making attempts to identify a consensus limited in this study.

Several reoccurring themes provided the means for clustering based on frequency and content analysis. The first key finding stipulated that employees’ technological awareness positively influenced their attitudes toward using and/or cooperating with said new technology. This is echoed in consumer research, wherein consumers with higher awareness of a new technology, or a higher familiarity with it, are more comfortable with using it. Several articles either addressed the need to develop this familiarity with employees as a means to ease technology adoption and lower employees’ resistance to change (Su *et al.*, 2024; Yin *et al.*, 2024) or otherwise examined ways to best facilitate growing said familiarity with its workforce (Pan *et al.*, 2025; Tu *et al.*, 2023). Consequently, failure to adequately develop this awareness can lead to higher resistance to change, workplace anxiety, or employee technostress when a new technology is introduced (Shi *et al.*, 2024; Tuan, 2022b).

Nonetheless, there was also evidence that even with increased technological awareness from employees, negative consequences still occurred – or employees’ awareness did not mitigate the downsides of a more digitized workplace (Zhan and Xie, 2025). A meta-analysis by Xu *et al.* (2025) found that while the benefits of a digital workplace were evident, withdrawal behaviors, burnout and work anxiety were still present despite the presence of a technologically-savvy workforce. A study by Pothuganti *et al.* (2025) found a significant negative correlation between technostress and employee engagement, indicating that technological awareness and/or adoption can certainly have “backfire effects” on engagement in certain situations.

The consequences of technostress were prevalent in literature, with articles highlighting that technology-related stress for the workforce was a significant detriment in the hospitality industry. Several existing theories in I-O psychology serve to add further explanation to the mechanism of the effect of technostress on hospitality employees. In particular, Hobfoll’s COR theory posits that employees strive to obtain and retain their valued resources, including time, control and social status (Hobfoll, 1989). The introduction of new technologies in the workplace, and particularly the process of learning to use these technologies effectively, can threaten an employee’s time and effort resources, leading to stress and burnout (Hobfoll, 1989). Person–Environment Fit Theory, first proposed by Edwards *et al.* (1998) is also applicable to modern-day technostress, stipulating that a mismatch between the employee (skills, abilities, values) and the workplace environment (demands, resources, technology) can create stress. Several of these research works sought to emphasize that technostress was not the “end result,” but instead a starting point for several harmful antecedents, including lower job performance (Christ-Brendemühl, 2022), employee well-being (Wu *et al.*, 2022), emotional exhaustion (Su *et al.*, 2024) and role ambiguity (Christ-Brendemühl and Schaarschmidt, 2019). Figure 5 displays the frequency of common theories, such as COR and Person–Environment Fit Theory, among the 37 articles assessed by this work.

As indicated in Figure 5, COR theory remained the most frequently referenced framework across the 37 studies assessed by this work, and is widely regarded as a cornerstone of I-O psychology (Hobfoll, 1989). In many of the articles, COR is applied to clarify the processes through which the adoption of new technologies contributes to employee technostress, shedding light on both the causes and consequences of such stress. This pattern suggests a meaningful contextual connection between prominent technological developments and the motivational foundations of the stress responses they may provoke, rather than an exclusive dependence on models centered on technology usability or usefulness (e.g. the Technology Acceptance Model [TAM] and the Unified Theory of Acceptance and Use of Technology

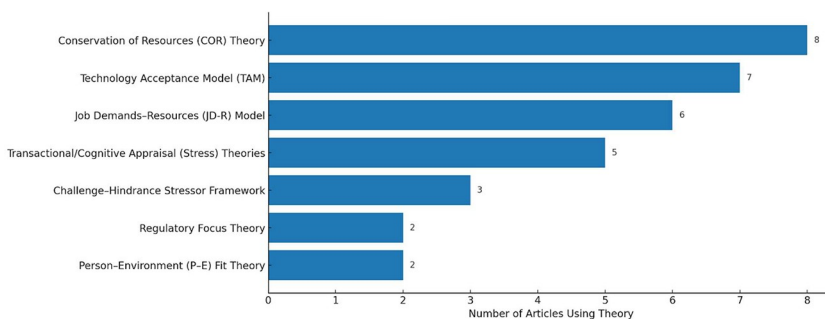


Figure 5. Most common theories by number of publications
Source: Authors’ own work

[UTAUT]). Although TAM and UTAUT are relevant to this line of inquiry, they primarily emphasize technology adoption intentions and behaviors, offering more limited insight into the wider psychosocial dynamics that can shape or moderate employee experiences.

The JD-R theory, another prominent framework within I-O psychology, was previously introduced by Bakker *et al.* (2014). JD-R theory views every job as comprising a distinct combination of job demands, defined as the requirements necessary for effective task performance, and job resources, which refer to the organizational supports that enable employees to meet those requirements. According to JD-R theory, elevated job demands, such as heightened time pressure or the complexity associated with advanced technologies, can increase the risk of strain and burnout. However, sufficient job resources, including thorough training, supportive management and clear channels of communication, can mitigate these adverse outcomes while promoting engagement and adaptability. This perspective highlights the JD-R model as especially relevant to hospitality settings, where technological change occurs quickly and frontline staff routinely encounter sustained performance pressures tied to personalized service delivery.

8. Discussion and conclusions

8.1 Conclusions

This review highlights why hospitality technology research must treat employees, not just customers, as the central unit of analysis. By synthesizing work at the intersection of IT and I-O psychology, it shows that emerging technologies should not be viewed simply as operational upgrades. Rather, they actively reconfigure job demands, resources and role expectations in ways that can either strengthen performance and service quality or accelerate technostress, burnout and turnover. In answering RQ1, the evidence indicates that “successful implementation” hinges on workforce conditions – most consistently technological awareness/competence support, leadership behaviors that prevent technology from becoming a chronic stressor, and the reality that AI/robot adoption changes how hospitality work is organized and experienced. RQ2 and RQ3 highlight that despite rapid industry adoption, workplace outcomes remain a relatively small portion of hospitality IT research, leaving decision-makers without strong guidance on how to design technology-enabled jobs that protect well-being while improving results. Advancing the hospitality industry’s technology agenda thus requires a deliberate shift toward employee-centered theorizing and measurement so that the industry can scale innovation without paying for it through diminished morale, eroded service delivery and avoidable talent loss.

8.2 Theoretical implications

This review advances hospitality scholarship by repositioning workplace hospitality technology research within an industrial-organizational psychology framing, moving beyond a narrow focus on adoption intentions to emphasize technology as a job redesign force. Conceptually, hospitality technologies (e.g. AI tools, service robots) reshape employees’ demand-resource profiles by altering what workers must invest, such as attention, emotional labor and time, and what they stand to gain, such as autonomy and efficiency. This aims to shift the lens of technology integration and adoption from “Will employees use the technology?” to “How does technology introduction and usage create worker-related outcomes such as engagement, strain, burnout, and retention?”

This work also extends resource-based theories by making technology-related demands highly social and identity-relevant. In guest-facing roles, errors and system failures occur in public view, increasing emotional and reputational costs – suggesting an important boundary condition for COR theory in hospitality. Similarly, JD-R theory becomes especially salient to explaining mixed findings; for example, technology introduction should be theorized

as a bundle of *demands* (cognitive load, pace intensification, role ambiguity, monitoring pressure) and *resources* (training quality, supportive leadership, peer knowledge sharing, usability, autonomy). This supports a dual-path interpretation in which the same technology can simultaneously promote engagement via resource enrichment and increase strain via demand escalation.

Finally, the review implies the need for tighter integration between technology acceptance models (e.g. TAM/UTAUT) and I-O explanations to capture downstream well-being and work outcomes. Perceptions such as usefulness/ease-of-use and technological awareness are not simply precursors to acceptance – they can function as resources that buffer uncertainty or, in some contexts, amplify expectations and performance pressure. The evidence also points toward more explicitly multilevel and temporal theorizing: implementation climate, unit norms and leadership practices shape demand–resource configurations, while effects likely evolve from short-run implementation strain to longer-run adaptation (or vice versa). A coherent theoretical agenda, then, is to model hospitality technology as an ongoing change process with dynamic resource “spirals” and outcome trajectories rather than static, singular impacts.

8.3 Practical implications

This review provides actionable insights for hospitality professionals that can directly inform workplace strategies and practices. Training initiatives in the hospitality sector should be specifically designed to address the unique operational contexts and employee roles found in hotels, restaurants and related service environments. For example, simulation- or scenario-based learning modules can simulate real-world guest interactions with AI systems or service robots, enabling staff to build confidence in low-risk settings before transitioning to live service (Lefrid *et al.*, 2024). Peer-mentoring programs, where early adopters of new technologies support colleagues, can further ease the learning curve and encourage knowledge sharing (Lan *et al.*, 2022). Moreover, accessible training delivered on demand ensures that shift-based and frontline employees receive support at their convenience, a current trend emphasized by industry journals such as Hospitalitynet (Leaman, 2025). Regular technology “refresh” sessions and on-the-floor coaching can help staff keep up with system updates and evolving guest expectations, processes performed by other businesses in their digital transformations and emphasized as part of their “coaching culture” (Gupta, 2021).

By emphasizing the importance of technological awareness, the findings highlight the value of comprehensive employee training programs tailored to new IT tools such as AI-powered systems and service robots. The Lodge, a hotel in Ireland, recently trained its kitchen employees in the use of AI-powered system called “Winnow” to assist with food waste. The executive head chef at The Lodge stated that the technology was very “tangible and engaging” for employees, especially younger employees (Pantazi, 2025). AI systems themselves can also be useful in the training of employees, not simply for purposes of familiarity, but to further engage employee participants using simulation and training games based upon real-world hospitality scenarios (Raharjo and Roedavan, 2025). Providing robust employee training when a new technology is introduced, such as hospitality employees automating routine tasks with Mews, a new cloud-based hospitality management system, can help workers navigate the challenges associated with a rapidly evolving technological landscape (Mews, 2025).

In addition, fostering a culture of adaptive leadership, where leaders actively address technostress and model positive attitudes toward technology, can improve workforce well-being and productivity (Yin *et al.*, 2024). Research indicates that empowering and supportive leadership styles are linked to reduced technostress by fostering psychological safety and enabling employees to cope more effectively with digital demands (Rademaker *et al.*, 2025). In the hospitality context, recent evidence has highlighted how leaders’ technological competency

and psychological support work in tandem to ease AI adoption. A study of 401 employees in Saudi five-star hotels showed that leaders with strong STARA (Smart Technology, AI, Robotics, Algorithms) competencies not only directly improved AI adoption performance but also did so indirectly by enhancing employees' self-efficacy and adaptive engagement (techno-eustress) (Ahmed *et al.*, 2025). These practices suggest that hospitality leaders who blend technological capabilities with emotional and psychological support help to bridge the gap between resistance and acceptance.

8.4 Limitations and future research

This study does possess several limitations. The reliance on a systematic literature review, while thorough, inherently excludes insights from grey literature or industry-specific reports, which may offer valuable, real-time perspectives on technological trends. Beyond ensuring each article completed a peer-review process and is published in a scholastic journal, no formal quality appraisal was conducted on the included studies, as the primary objective of this work is to synthesize and map existing evidence, rather than evaluate methodological rigor or assess risk of bias. In addition, by limiting the focus of the review to only peer-reviewed articles published in English, it examines primarily Western-centric viewpoints, potentially overlooking regional differences in technology adoption and its effects on hospitality workplaces outside English-speaking countries. Future studies could examine cross-cultural differences in IT workplace adoption, including the effects of cultural values on acceptance of hotel technology (Guo *et al.*, 2023; Sun *et al.*, 2020) and how cultural perceptions of technology influence employees' attitudes toward service robots (Jembere *et al.*, 2023).

To guide future inquiry into the long-term impacts of IT adoption on hospitality employee well-being, a comprehensive conceptual framework is recommended; one that integrates both individual and organizational factors. For example, subsequent studies in this area could draw further on the JD-R model to identify what "resources" are most appropriate for a business to provide to curtail technostress or role ambiguity arising from new technologies (Demerouti *et al.*, 2001; Lesener *et al.*, 2019). Integrating the TAM or the UTAUT can further clarify how perceived usefulness, ease of use and social influence mediate or moderate these relationships over time (El Archi and Benbba, 2023), while ensuring that the appropriate I-O psychology theories have a presence in the examination of these topics to provide psychosocial context from the employee perspective. Longitudinal research within this framework could track the trajectory of employee outcomes, such as engagement, burnout, turnover intentions and adaptability, before and after significant technology rollouts in their respective hospitality work environments.

The findings of this review point to the critical need for targeted organizational interventions, including robust training programs, adaptive leadership strategies and ongoing assessments of workforce well-being in technologically enhanced workplaces. In addition, this review also identifies several research gaps that warrant further exploration. Future studies should investigate the long-term effects of IT adoption on employee retention, the interplay between technology and organizational culture and the strategies needed to balance automation with the human touch that defines hospitality, among others. As the industry continues to embrace technological advancements, the alignment of employee well-being with organizational goals will be essential for sustainable success in the hospitality workforce.

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Supplementary material

The supplementary material for this article can be found online.

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