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AI Induced Technostress: A Systematic Review of Risks and Opportunities

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ABSTRACT

This systematic literature review explores the dual psychological impacts of artificial intelligence (AI) induced technostress, emphasizing both its detrimental and beneficial consequences. Using the PRISMA protocol, 32 peer-reviewed articles published between 2019 and 2025 were selected from an initial pool of 485 articles accessed through databases such as Scopus, Springer, Sage, ScienceDirect, and ProQuest. The synthesis reveal that AI may induce techno-distress, manifest anxiety, cognitive overload, and job insecurity a techno-eustress, which enhances engagement, creativity, and professional growth. These outcomes are mediated by mechanisms (e.g., self-efficacy, resilience) and organizational conditions (e.g., digital leadership, social support). The study underscores the importance of integrating human-centered strategies into AI implementation and calls for the development of multidimensional models that reflect both the risks and opportunities posed by AI in the workplace.

Key words: artificial intelligence, techno stress, techno distress, techno eustress, systematic review.

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Novelty and Significance

What is already known about the topic?

- Most studies have focused on stress responses related to traditional digital technologies including information systems and communication platforms.
- Artificial intelligence is increasingly recognized as a source of work-related stress, often associated with job insecurity, cognitive overload, and continuous learning demands.
- Some studies have conceptualized technostress as an exclusively deleterious phenomenon, thereby overlooking the potential of AI-related demands to adaptation.

What this paper adds?

- Proposes an integration of cognitive appraisal processes, coping strategies, and organizational conditions into a unified interpretative framework specific to AI contexts.
- Contributes to elucidate how technostress can be understood in the context of AI use. The study identifying theoretical inconsistencies and proposing future research directions, highlighting the necessity for updated technostress models that consider AI's autonomous and cognitive characteristics.

Artificial Intelligence (AI) is a technology that has been developing rapidly in recent years. AI has increasingly become embedded in everyday work activities, reshaping how tasks are performed and decisions are made. Unlike earlier digital technologies, AI systems are characterized by autonomy, learning capacity, and algorithmic decision-making, which fundamentally alter employees' interactions with technology. AI technology has become a primary driver of global digital transformation. According to the McKinsey

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(2023) Global Survey 55% of organizations worldwide have adopted AI in at least one business function, a significant increase from 20% in 2017. Furthermore, according to the International Data Corporation (IDC, 2024), global spending on AI systems reached \$154 billion in 2023 and is projected to double over the next five years. Although AI integration holds the potential for widespread efficiency and innovation, it also poses serious psychological consequences. One such consequence is the rise in technostress mental strain resulting from the demands of adapting to complex, rapidly changing technologies that often blur the boundaries between work and personal life. Have been identified five main dimensions of technostress (Pothuganti, 2024): techno-overload (information overload); techno-invasion (intrusion into personal life); techno-complexity (the complexity of AI development); techno-insecurity (feelings of threat from AI); and techno-uncertainty (uncertainty about technological development).

Previous studies have identified various factors that influence technostress. Spagnoli *et alii* (2020) concluded that technostress has a negative impact on well-being, job satisfaction, and individual performance. On the other hand, resilience, self-efficacy, and coping strategies have been shown to reduce the negative effects of technostress (Califf, Sarker, & Sarker, 2020). However, a critical review of the literature indicates that research specifically mapping how AI, as a new form of technology, triggers technostress, and how mechanisms operate in this context, remains limited. Most previous studies have been case studies or non-longitudinal quantitative studies and have not integrated findings into a unified conceptual framework that could serve as a basis for intervention.

This study aims to conduct a literature review to comprehensively map the psychological impacts of technostress, both positive and negative, and to present the key mechanisms involved in overcoming technostress triggered by AI in various environments. Theoretically, this research is important for enriching psychological literature by integrating coping strategies into a technostress framework relevant to the AI era. In practice, the findings of this research are beneficial for policymakers, educators, mental health professionals, and organizations in designing intervention programs to enhance societal resilience to the evolving pressures of technology. From a theoretical standpoint, this review will attempt to make a contribution to refining technostress frameworks, through evaluation-based explanations and resource-oriented perspectives particularly relevant in AI-driven contexts.

While the literature on technostress has grown significantly, most previous studies have focused on conventional digital technologies, such as information systems and communication platforms, which function as passive work support tools. This approach does not fully encompass the unique characteristics of AI, such as autonomy, learning capabilities, and the algorithmic role of AI in decision-making.

The mechanisms underlying individual responses to AI-based demands are still only partially understood. Furthermore, most previous studies have conceptualized technostress solely as a negative phenomenon, overlooking AI's potential as a stressor that can foster adaptation and growth. The timeliness of this study is heightened by the rapid penetration of AI into global society.

METHOD

Search Data and Analysis

The study includes systematic of high-quality academic journal databases, including Scopus, Springer, SAGE, ScienceDirect, and ProQuest. The selection of database sources

was carried out carefully, considering their broad coverage, high reputation, and access that ensured quality through a rigorous peer-review process. Data was collected using the keywords “artificial intelligence” and “technostress” simultaneously. The article search was conducted in April 2025, covering the period from 2019 to 2025, using the high-reputation databases Scopus, Springer, SAGE, ScienceDirect, and ProQuest, with a Systematic Literature Review (SLR) approach. This approach enabled researchers to conduct repeated and unbiased collection, evaluation, analysis, and documentation of studies within a specific research field (Azarian, Yu, Shiferaw, & Stevik, 2023). To ensure consistency in the analysis, only articles published in English were considered. The data analysis was conducted using a narrative synthesis approach, a methodology particularly appropriate for reviews characterised by heterogeneous research designs, samples, and outcome measures. The analysis focused on identifying recurring patterns in AI-induced technostress, including stressors, psychological outcomes, and contextual factors that shape individual responses. This approach facilitated the integration of findings across a range of empirical contexts, thus obviating the necessity for restrictive quantitative assumptions.

Although the search strategy focused on the keywords “artificial intelligence” and “technostress” to maintain conceptual consistency, the article screening process was conducted interpretively, taking into account related terms and concepts that substantively reflect the psychological stress associated AI use. Thus, studies discussing AI-based work pressure, automation anxiety, or algorithmic learning demands were considered provided they were conceptually aligned with the technostress framework, even when they did not use identical terminology.

Selection criteria

The study selection process followed four PRISMA stages (see Figure 1 for the flow diagram): Identification, Screening (selection and eligibility), and Final inclusion. The PRISMA components served as a valuable guide to ensure the clarity and integrity of the systematic review process for authors, reviewers, and editors (Page *et alii*, 2021). Articles were initially screened based on their titles and abstracts to assess their relevance

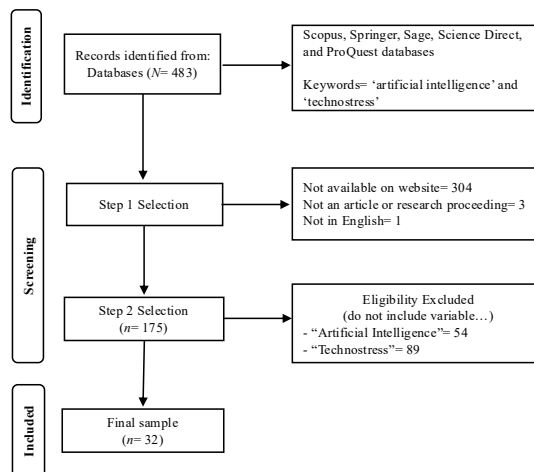


Figure 1. PRISMA flow diagram.

to AI and technostress. The initial identification yielded 483 records across the five databases. The next step involved selecting open access articles, finding that 304 were inaccessible, 3 were neither research results nor proceedings, and 1 was not in English, thus allowing for the screening of 175 articles that met the criteria.

Following the screening phase, a more thorough selection of articles was conducted based on their focus on artificial intelligence and technostress (eligibility criterium). In this phase, 54 articles were excluded for not including artificial intelligence and 89 articles for not including technostress as a variable. This resulted in the final selection of 32 articles that met the requirements of this systematic review.

Study Quality and Risk of Bias

The quality of the included studies and potential sources of bias were evaluated using predetermined criteria, adapted from established guidelines for systematic reviews in psychology. Instead of implementing a formal quantitative rating system, a pragmatic quality assessment was conducted to facilitate transparent context-sensitive interpretation of the findings. The assessment was centered on four fundamental dimensions: For a research study to be considered, four criteria must be met. The fundamental principles that must be observed in order to ensure the integrity of research are as follows: (a) the research objectives must be clearly defined; (b) The study design and analytical methods must be appropriate; (c) The measurement and reporting of results must be transparent; (d) The sample description must be adequate.

The risk of bias stems primarily from the use of cross-sectional designs, limitations in longitudinal measurement, and reliance on self-report data. Notwithstanding, these findings, they continue to make a significant contribution to the broader understanding of general patterns of psychological responses to AI, particularly when interpreted with meticulous attention within the framework of a narrative synthesis.

The classification of each study was determined by its risk of bias, assessed in accordance with established criteria. The level of risk of bias ranged from low to high. Disagreements in quality assessment were resolved through discussion among the authors. It is noteworthy that this assessment was utilized to inform the interpretation of results rather than to exclude studies, thereby ensuring that this review reflects the methodological variability present in the extant literature. In light of prior research syntheses, no original data were collected in the present study.

RESULTS

A total of 32 empirical studies published between 2019 and 2025 were included in this systematic review (see Table 1). The number of publications increased markedly after 2022, reflecting growing scholarly attention to the psychological implications of artificial intelligence in work and educational contexts (Kim, Park, Kim, Kim, & Seo, 2022; Xia, 2023; Nascimento, Correia, & Califf, 2024). The reviewed studies were conducted across a wide range of countries and sectors, indicating that AI-induced technostress has been examined in both developed and developing contexts (Sarfo, 2024; Nedeljko, Gu, & Bostan, 2023). The research contexts covered diverse occupational sectors, including education, healthcare, information technology, public administration, tourism, and legal services (Huo & Siau, 2023; AQUÍ Keshavarz *et alii*, 2025; Cadieux *et alii*, 2024; Raj & Goute, 2025).

Most studies employed quantitative research designs, predominantly cross-sectional surveys analyzed using structural equation modeling (SEM) or partial least squares SEM (PLS-SEM) (Raj & Goute, 2025; Kim & Kim, 2025). Qualitative approaches, such as interviews and critical incident techniques, were less frequently used but provided in-depth insights into individual experiences of AI-related stress (Siitonen *et alii*, 2025). A small number of studies adopted mixed-methods designs, combining quantitative and qualitative data (Nascimento *et alii*, 2024).

The synthesis of results indicates that the main sources of technostress triggered by AI can be classified into several main categories. Firstly, the prevalence of cognitive demands, particularly the necessity for continuous learning, the processing of complex information, and interaction with transparent algorithmic systems, has been identified as a predominant source of stress. Secondly, uncertainty and loss of control are fundamental concerns, especially in the context of algorithm-based decision-making and automated performance evaluation. Thirdly, perceptions of threats to job security and role changes due to automation also contribute to the experience of technostress. These stressors are generally operationalized through classic technostress dimensions, such as overload, complexity, uncertainty, and insecurity, but with characteristics increased by the autonomous and predictive nature of AI systems (Tarafdar *et alii*, 2007; Xia, 2023; Keshavarz *et alii*, 2025).

The literature review indicates that AI-induced technostress yields two distinct patterns of psychological outcomes. On the one hand, techno-distress is reflected in increased psychological pressure, emotional exhaustion, decreased job satisfaction, and reduced subjective well-being (Muhamad *et alii*, 2025; Kim & Lee, 2025). This pattern generally arises when AI demands are perceived as excessive, uncontrollable, or threatening to job role stability. On the other hand, several studies have identified the techno-eustress, an adaptive response to the demands of AI. Several studies documented positive outcomes, such as enhanced work engagement, learning motivation, creativity, and professional development, particularly in contexts where AI-related demands were perceived as manageable or meaningful (Nascimento *et alii*, 2024; Xia, 2023).

The reviewed studies also identified factors associated with variability in technostress outcomes. At the individual level, factors such as self-efficacy, prior experience with digital technologies, and adaptive coping strategies were frequently examined (Kim & Lee, 2025; Pagán-Garbín *et alii*, 2024). At the organizational level, supportive leadership, access to training, role clarity, and work autonomy were commonly associated with more favorable outcomes (Ertiö *et alii*, 2024; Rademaker *et alii*, 2025). These factors were analyzed as mediators or moderators in several empirical models, highlighting their relevance in shaping responses to AI-induced technostress.

DISCUSSION

The findings of this systematic review indicate that technostress triggered by artificial intelligence cannot be understood solely as a negative reaction to technology use. Traditional digital technology functions as a passive support tool. In contrast, AI presents an autonomous, adaptive system that plays a direct role in the decision-making process Soori, Jough, Dastres, & Arezoo (2024). These characteristics fundamentally alter the relationship between individuals and technology and increase psychological stressor in the workplace.

Table 1. Overview of the studies included.

Study Country	Key Finding	Participants	Method	Variables	Conclusions
Kaltenegger <i>et alii</i> (2020) Germany	Digital technology as a potential stress factor at work that may influence systemic inflammation	Adult workers from various sectors	Protocol systematic review & meta-analysis	Working conditions, use of digital technology, systemic inflammation	The original publication was a study protocol without definitive conclusions. A later review (2021/2022) found limited, heterogeneous evidence between working conditions and inflammatory markers. The review concluded that evidence on the direct effects of digital technology need for future research into a wider range of workplace stressors and biomarkers.
Tams <i>et alii</i> (2020) USA & Canada	Interruption overload increases work-life conflict and decreases the use of work technology.	601 knowledge workers	Conditional process analysis	Interruption overload, work-life conflict	Work-life conflict mediates the relationship between overload and technology use; control moderates that relationship.
Bunjak <i>et alii</i> (2021) USA & Canada	Cognitive absorption encourages creativity, but 263 gig workers (Amazon MTurk) overload causes burnout and reduces creativity.	263 gig workers (Amazon MTurk)	Moderated mediation	Cognitive absorption, Tech overload, Burnout	Digital overload undermines the cognitive benefits of technology use.
Zolg <i>et alii</i> (2021) Germany	Digital connected work triggers cognitive, social, and organizational demands, affecting stress and well-being; physiological data is rarely used.	Various studies from the 1980s to 2019	Systematic Review	Digital work demands, work pressure, health	It highlights the importance of combining subjective and objective approaches to achieve comprehensive results on work factors and health.
Kim <i>et alii</i> (2022) South Korea	High-stress participants experienced cognitive overload and decreased performance compared to low-stress participants when using the kiosk.	25 people (12 low stress levels, 13 high stress levels)	Experiments eye tracking & performance	Technostress hybrid, Cognitive load, Performance	An adaptive interface is needed for vulnerable groups in the use of ICT.
Marsh <i>et alii</i> (2022) UK	The digital workplace can cause technostress, overload, and burnout if not managed properly.	Literature-based study	Integrative review of 194 studies	Digital workplace, technostress, overload, addiction	A holistic approach is needed to understand the negative effects of the digital workplace
Rasool <i>et alii</i> (2022) Pakistan	Technology overload causes work-life conflict, stress, and decreased productivity.	Secondary empirical studies	Systematic Literature Review (NVivo)	Technostress, Self-efficacy, Work-life conflict	Training and time management are necessary to mitigate overload.
Shen & Kuang (2022) China	Technostress increases knowledge hiding through work exhaustion; influenced by job autonomy.	287 ICT users	SEM	Technostress, Knowledge hiding, Work exhaustion	Work autonomy reduces the negative effects of technostress.
Wach <i>et alii</i> (2023) Poland & Vietnam	Seven risks of AI: regulation, content quality, job loss, privacy violations, social manipulation, social inequality, and technostress.	Literature-based studies and online media	Narrative and critical literature review	Risks: generative AI (technostress and disinformation)	Emphasizing the need for regulation, digital skills training, and ethical development in the use of AI
Xia (2023) USA	Human-AI collaboration produces techno-eustress and techno-distress; job insecurity and complexity are the main technostressors.	Literature-based study	Integrative literature review	Technostressors, psychological response, job outcome	Collaboration with AI can be positive or negative stress depending on perception; organizational support is important

Table 1(cont.) Overview of the studies included.

Study Country	Key Finding	Participants	Method	Variables	Conclusions
Cadeux <i>et alii</i> (2024) Canada	TSM-II has been proven valid for measuring technostress in a second-order formative model.	4,482 legal professionals	Scale validation, SEM	Techno stressors, Techno distress	Techno stress should be understood as a process, not result.
Erilo <i>et alii</i> (2024) Finland & Ireland	Emotional Intelligence (EI) of digital leaders is important in reducing technostress	Literature-based study	Conceptual and thematic literature review	Emotional Intelligence, digital leadership, technostress	Digital leaders with high EI can reduce technostress through communication, transparency, and trust.
Kim & Lee, 2024 South Korea	AI adoption increases job stress and burnout, moderated by self-efficacy.	416 professionals	3-wave longitudinal survey + SEM	AI adoption, Job stress, Burnout, AI self-efficacy	Self-efficacy can reduce stress from AI adoption.
Kumar (2024) India	Techno stress consists of techno-overload, techno-invasion, techno-complexity, techno-insecurity, and techno-uncertainty. Its impact on psychology, life balance, and work performance	Study of various work contexts	Systematic Literature Review (46 articles, PRISMA)	Dimensions of technostress, psychological and physiological impact, mitigation strategies	Techno stress has a widespread impact.
Li, Lim, & Ang (2024) China	All technostress factors have a significant effect on technostress. Teachers can be grouped into five clusters.	507 elementary and secondary school teachers	Quantitative: Questionnaires, Statistical Tests	Techno-complexity, techno-insecurity, techno-uncertainty, techno-invasion, new technology adoption	This study identified 5 technostress factors among school teachers; identified significant positive relationships between the 5 factors and technostress; proposed a new technostress factor called 'new technology' adoption; cluster analysis helps to design specific technology training tailored to the type of technostress.
Li <i>et alii</i> (2024) China, USA, Spain, Malaysia, & India	Increase in publications since the COVID-19 pandemic; main themes: technostress among teachers and students, effects of COVID, and strategies for coping	125 articles from Scopus and WoS	Scitometric Review	Number and type of publications, technostress trends in education	Techno stress in education has increased post-COVID, requiring strategies to balance technology use and well-being.
Nascimento <i>et alii</i> (2024) Portugal	Techno-exhaust increases job satisfaction and performance of HETs	1,107 university lecturers in Portugal	Mixed methods: interviews & surveys	Techno-exhaust, job satisfaction, work performance, coping, IT mindfulness	Positive techno-exhaust is influenced by useful technology and organizational support.
Nedeljko <i>et alii</i> (2024) Multinational	Technology has a dual impact on the health and technostress of older workers, depending on the context and intervention.	12 articles	Integrative Literature Review (PRISMA)	Techno stressors, Health Technology use	Technology can either support or undermine the quality of work performed by older adults; evidence-based interventions are needed.
Pagan-Garbin <i>et alii</i> (2024) Spain	Resilience inversely proportional to stress and technostress; ANN predicts resilience.	168 teachers	Correlation and ANN	Stress, Burnout, Technostress, Resilience	Personal accomplishment is important for teacher resilience.
Sarlo (2024) Ghana & Sub-Saharan Africa	Attitudes toward AI, prevalence of technostress, and impact on academic productivity of SSA students	Students in Sub-Saharan Africa	Editorial/conceptual review	Use of AI, technostress, academic productivity	AI can aid learning, but it can also cause technostress, which has a negative impact on academic productivity.

Table 1 (cont.). Overview of the studies included.

Study Country	Key Finding	Participants	Method	Variables	Conclusions
Shin & Shin (2024) South Korea	Technostress has a significant impact on psychological contract violations and resistance to organizational change.	Employees in the tourism industry	Quantitative survey, snowball sampling	Technostress, psychological contract violation, organizational change resistance	Psychological contract violations mediate the relationship between technostress and resistance to organizational change
Wekenborg et alii (2024) Germany	Digital transformation changes perceptions of work stressors depending on age, gender, and digital experience.	268 physicians	Survey, multilevel analysis, hair cortisol testing	Digital transformation, Work stressors/resources	The effects of digital transformation are different, so you need to pay attention to individual factors.
Chuang et alii (2025) Germany	Technostress is not only a risk factor but also has the potential to be a challenge that can increase work engagement when combined with adequate work resources such as self-efficacy and organizational support.	304 workers various industries	Quantitative survey moderation regression analysis	Technostress, work engagement, job demands, resources, self-efficacy, organizational support	Technostress can reduce work engagement; impact depends on psychological and organizational resources. Job-demand and resources model explains moderating role of resources on negative impact of technostress.
Keshavarz et alii (2025) Iran	Healthcare workers experience moderate technostress related to techno uncertainty overload, complexity.	Healthcare workers at Apadana Hospital, Iran	Quantitative survey (SPSS)	Technostress, Techno-overload, Complexity, Insecurity, Uncertainty	HR strategies are essential for mitigating technostress among employees.
Kim & Lee, 2025 South Korea	Self-efficacy AI moderates the influence of perfectionism on stress and anxiety.	421 employees	3-wave longitudinal survey + SEM	OPP, Job stress, GAD, AI self-efficacy	AI competency as a technostress protector
Kim & Kim, 2025 South Korea	AI adoption increases work overload and decreases pro-environmental behavior, especially when self-efficacy is low.	416 employees at a Korean company	Three-stage (time-lagged) quantitative survey	AI adoption, work overload, pro-environmental behavior, self-efficacy in AI learning	Work overload mediates, and self-efficacy moderates the impact of AI adoption on PEBW
Litan, 2025 Romania	No direct effect of technostress on quality of life, mediating effect through positive and negative affect.	217 adults	Online survey, mediation analysis	Technostress, positive and negative affect, quality of life	Emotional affect (positive/negative) mediates the impact of AI-based technostress on quality of life
Muhammad et alii (2025) Malaysia	Technostress levels are dominant; burnout and fatigue are significantly correlated with technostress.	1,620 healthcare workers	Cross-sectional study, online survey	Technostress, burnout, fatigue	The need for psychological intervention to reduce the impact of technostress in the health sector
Rademaker et alii (2025) Germany	Supportive leadership reduces technostress, control and high connectivity expectations increase it.	Secondary data	Systematic Literature Review (44 articles)	Leadership, Technostress, Digital work, Empowering leadership	A digital leadership model that supports psychological well-being is needed.
Raj & Goutte (2025) India	Internal branding improves wellbeing and reduces technostress through internal digital communication.	401 IT sector employees	Quantitative, SmartPLS4, PLS-SEM	Internal branding, digital internal communication, technostress, wellbeing	Internal digital communication mediates the relationship internal branding-technostress. The importance of brand and well-being strategies for managing digital work pressure.
Sitonen et alii (2025) Finland	27 coping strategies identified, influenced by personal and organizational factors.	715 software engineers	Qualitative (critical incident technique)	Technostress, Coping, Context	Organizational support is important for effective coping.
Yang, et alii (2025) Pakistan	Defensive routines mediate impact of technostress; digital leadership mitigates negative effects.	221 salespeople and managers	SEM	Technostress, Defensive routines, Digital leadership	Effective digital leadership in managing technostress.

Consequently, the concept of technological stress in the context of artificial intelligence (AI) must be redefined as a multidimensional phenomenon consisting of maladaptive responses (techno-distress) and adaptive responses (techno-eustress), as has been increasingly recognized in recent studies focusing on AI (Califf *et alii*, 2020; Xia, 2023; Nascimento *et alii*, 2024). This approach refutes the prevailing notion that technological stress is inextricably linked to a decline in well-being. Instead, it offers a more dynamic perspective on the role of smart technology in the workplace.

The synthesis results support the cognitive appraisal perspective, which emphasizes that responses to AI-based demands are largely determined by how individuals assess the meaning and consequences of those demands. When AI demands are perceived as a threat to control, competence, or role security, individuals tend to experience techno-distress manifested in emotional exhaustion and decreased well-being (Muhamad *et alii*, 2025). In contrast, when individuals perceive the same demands as manageable challenges relevant to professional development, they exhibit a techno-eustress response characterized by increased work engagement, learning motivation, creativity and innovation (Califf *et alii*, 2020; Kim & Kim, 2025; Sari, Arsyad, Wyandini, & Pratiwi, 2025). This finding reinforces the argument that AI-induced technostress is not deterministic, but rather depends on subjective evaluation processes influenced by context and available resources.

A key finding of the review highlights the limitations of traditional technostress frameworks developed for earlier digital technologies. The capacity of AI systems to learn, predict, and influence decision-making processes varies with system quality. This variation has raised concerns about job insecurity, performance evaluation, and loss of control (Benbya *et alii*, 2020; Jarrahi, 2018). These observations indicate the need to refine current technostress models to accurately capture the psychological dynamics inherent in AI-driven work environments (Xia, 2023).

The findings also underscore the critical role of individual and organizational resources in shaping responses to AI-induced technostress. Individual resources such as self-efficacy and adaptive coping strategies appear to buffer negative effects and facilitate adjustment (Kim & Lee, 2025; Pagán-Garbín *et alii*, 2024). At the organizational level, supportive leadership, training opportunities, role clarity, and autonomy consistently emerge as key conditions that enable individuals to transform AI-related demands into opportunities rather than sources of strain (Ertiö *et alii*, 2024; Rademaker *et alii*, 2025). These results are consistent with resource-oriented perspectives such as the Job Demands-Resources Model (Shen & Kuang, 2022). These findings indicate that technostress cannot be separated from the social-organizational environment in which AI is implemented, underscoring the need for a systemic approach to understanding its impact.

From a theoretical standpoint, these findings suggest that technostress models developed in the context of non-autonomous technology should be expanded to accommodate the unique characteristics of AI. Conventional models have historically prioritized workload, system complexity, and technical uncertainty, while comparatively neglecting the cognitive and symbolic dimensions that surfaces when technology possesses learning and decision-making capabilities. Therefore, this article proposes a conceptual framework of technostress that integrates cognitive appraisal processes, individual resources, and organizational conditions within the context of AI. This approach enables a more comprehensive understanding of how AI-based demands can serve as both a source of psychological risk and an adaptive opportunity.

In practical terms, the findings of this review have significant implications for organizations that adopt AI in their work flows. AI implementations that disregard

psychological dimensions may exacerbate techno-distress and diminish employee well-being. However, resource-strengthening approaches, such as competency-based training, transparent communication, and supportive leadership, have the potential to transform the demands of AI into opportunities for learning and development. Consequently, the implementation of AI strategies should prioritize not only efficiency and performance but also the creation of working conditions that facilitate long-term psychological adaptation.

Several limitations should be acknowledged. Most of the reviewed studies relied on cross-sectional designs, limiting conclusions regarding causal relationships and long-term adaptation processes (Kim & Lee, 2025). In addition, empirical evidence from developing countries remains relatively limited, constraining the generalizability of findings across cultural and economic contexts (Sarfo, 2024). Future research would benefit from longitudinal designs, cross-cultural comparisons, and the incorporation of underexplored psychological perspectives, such as social and developmental approaches, to deepen understanding of AI-induced technostress.

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