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Article

Beyond Burnout: Employee Technostress in Digital Work - A Systematic Literature Review

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Abstract: Technostress has become a salient issue in digitally intensive workplaces, yet the evidence remains fragmented across sectors, outcomes, and theoretical lenses. This study synthesizes empirical evidence on employee technostress through a systematic literature review guided by PRISMA 2020. The review used the Scopus database with the keyword combination "technostress employee" and a publication window of 2015-2025. The screening process identified 64 records, of which 15 studies met the eligibility criteria and were included in the final review. The synthesis indicates that technostress is most commonly triggered by techno overload, techno invasion, techno-complexity, techno insecurity, and techno uncertainty. Across the reviewed studies, technostress is consistently associated with burnout, exhaustion, lower job satisfaction, reduced performance, work-life imbalance, and stronger turnover intention. At the same time, organizational support, digital competence development, user involvement, leadership support, and clear technology governance emerge as recurring inhibitors that can attenuate these harmful effects. The review suggests that technostress should be understood not merely as an individual adaptation problem, but as a work design and organizational capability issue. Future research should strengthen longitudinal, cross-country, and intervention-based evidence to support more sustainable and human-centered digital work systems.

Keywords: technostress; employee well-being; digital work; burnout; SLR

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1. Introduction

The rapid integration of digital technologies into organizational life has transformed how employees communicate, coordinate, and perform their work. Although these technologies increase speed, flexibility, and access to information, they also generate new forms of pressure that may undermine employee well-being and work effectiveness. One of the most widely used concepts for describing this phenomenon is technostress, originally introduced as a modern disease of adaptation linked to difficulties in coping with computer-based technologies [1].

In organizational research, technostress has developed into a multidimensional construct. Foundational studies emphasize technology-related overload, complexity, invasion into personal life, insecurity, and uncertainty as major stress creators [2] [3]. Subsequent work extended this view by linking technostress to person-environment misfit, work design, and digital capability gaps [4]. As digitalization accelerates through remote work, collaboration platforms, algorithmic systems, and mobile connectivity, technostress has become a significant concern in management, information systems, and occupational health research.

Recent evidence shows that technostress is associated with reduced job satisfaction, lower organizational commitment, emotional exhaustion, burnout, and weaker performance, while several studies also report buffering effects from organizational support, literacy development, and participative implementation practices [3] [5].

However, the literature remains dispersed across sectors, methods, and explanatory frameworks. A focused synthesis is therefore needed to clarify how technostress affects employees and which organisational responses appear most promising.

Accordingly, this study aims to systematically review empirical studies on technostress among employees. The review addresses three questions: (1) What antecedents of employee technostress are most frequently reported? (2) What individual and organizational outcomes are most consistently identified? and (3) What inhibitors or managerial responses are highlighted in the literature? By answering these questions, the paper offers a concise synthesis that can support future research and practical intervention design.

2. Materials and Methods

This review employed a systematic literature review (SLR) approach guided by the PRISMA 2020 reporting framework [5]. PRISMA was used to structure the identification, screening, eligibility assessment, and inclusion stages in a transparent manner. The review focused specifically on technostress in employee or organizational work settings.

The search was conducted in the Scopus database using the keyword combination "technostress employee". The publication period was limited to 2015-2025 to capture relatively recent evidence from a period marked by accelerated workplace digitalization. Only journal articles written in English and clearly related to employees, workplace settings, or organizational consequences of technostress were considered. Non-empirical papers, inaccessible papers, studies outside workplace settings, and articles not aligned with the review topic were excluded.

The included studies were synthesized narratively rather than statistically because the corpus was heterogeneous in terms of sector, research design, variables, and outcome measures. Each article was read in full and coded for study context, main stress creators, key outcomes, inhibitors, and theoretical perspectives. The synthesis then proceeded through thematic grouping, allowing repeated patterns to be compared across studies.

Screening was conducted in three stages. First, titles and abstracts were checked against the scope of the review. Second, potentially relevant studies were assessed at the full-text level whenever access was available. Third, the final corpus was checked to ensure that each article provided usable evidence on antecedents, outcomes, inhibitors, or theoretical explanations of technostress. The PRISMA flow showed that 64 records were initially identified, 11 were removed before screening, and 53 records proceeded to title and abstract review. Of these, 38 reports could not be retrieved in full text at the time of review, mainly because full articles were not accessible through the available database and institutional access. The remaining 15 studies were assessed for eligibility, and all satisfied the inclusion criteria.

Table 1. Review protocol and eligibility criteria.

Item	**Specification**
Database	Scopus
Keyword	technostress employee
Publication period	2015–2025
Document type	Journal articles
Language	English
Inclusion focus	Employee/workplace/organizational context; empirical evidence on technostress
Exclusion focus	Editorials, conceptual notes without empirical evidence, duplicates, inaccessible papers, and studies outside employee settings
Reporting guideline	PRISMA 2020

3. Results and Discussion

3.1. Descriptive Visual Overview

Figure 1 presents the screening results. Of the 64 records initially identified in Scopus, 11 records were removed before screening, leaving 53 records for title and abstract screening. Thirty-eight reports were not retrieved in full text, while 15 reports were assessed for eligibility and all 15 were included in the final synthesis. No additional studies were identified from other sources.

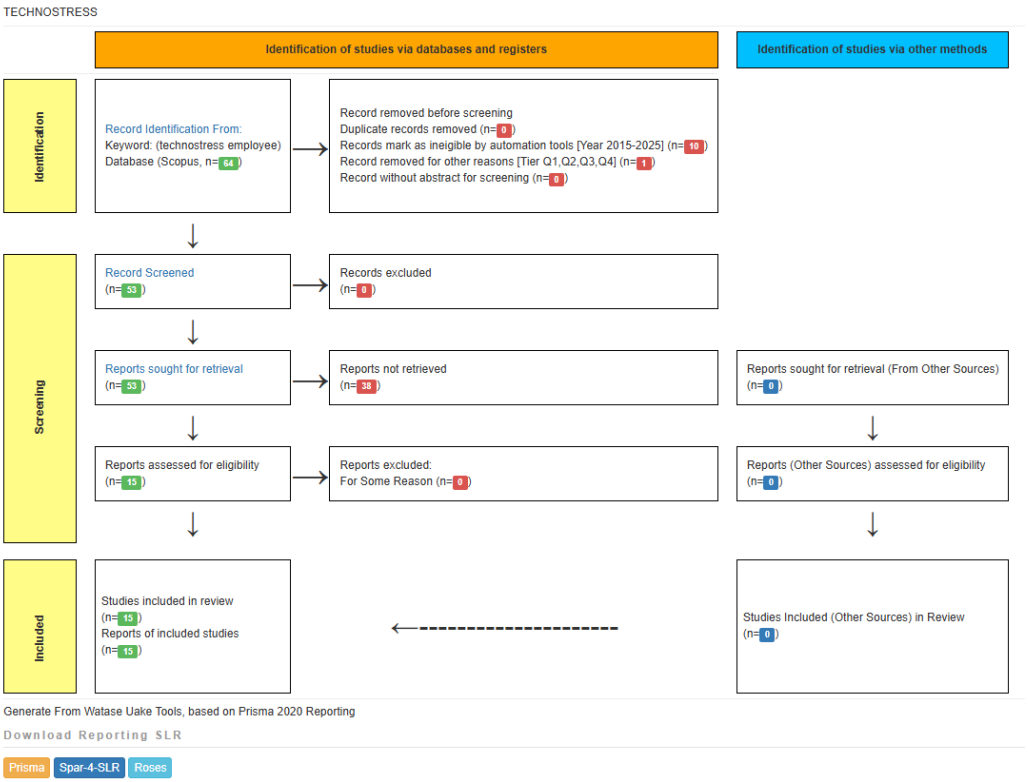

Figure 1. PRISMA 2020 flow diagram of study selection.

Data were synthesized narratively. Each included study was examined to identify recurring antecedents, outcomes, inhibitors, and theoretical explanations of technostress. The synthesis was then organized thematically to provide a concise account of how technostress emerges, what consequences it generates, and which organizational practices appear most relevant for mitigation.

Table 2 summarizes the geographic distribution derived from the descriptive output. The visible entries indicate that the evidence base is concentrated in a limited set of countries, suggesting that the current literature remains geographically uneven and that broader cross-country comparison is still needed.

Table 2. Country distribution of the included studies.

No	Country	Count
1	Other / not legible in source visual	5
2	Germany	4
3	China	2
4	Pakistan	2

5	United Kingdom	1

Table 3 presents the most-cited articles extracted from the bibliographic Excel file. This overview helps indicate which publications have the highest visibility within the dataset and shows that influential contributions are spread across psychology, management, information systems, and technology-focused journals.

Table 3. Top-cited articles.

Rank	Journal	Year	Cites	Title
1	Psychology Research and Behavior Management	2024	108	Does AI-Driven Technostress Promote or Hinder Employees' Artificial Intelligence Adoption Intention? A Moderated Mediation Model of Affective Reactions and Technical Self-Efficacy
2	International Journal of Manpower	2023	99	Understanding technostress and employee well-being in digital work: the roles of work exhaustion and workplace knowledge diversity
3	Journal of Business Research	2020	75	The impact of service employees' technostress on customer satisfaction and delight: A dyadic analysis
4	International Journal of Occupational Safety and Ergonomics	2022	65	When and why telepressure and technostress creators impair employee well-being
5	Computers in Human Behavior	2023	45	How new ways of working during COVID-19 affect employee well-being via technostress, need for recovery, and work engagement
6	Frontiers in Psychology	2022	45	The Moderating Effects of Technostress Inhibitors on Techno-Stressors and Employee`s Well-Being
7	International Journal of Manpower	2024	42	Teleworking: role of psychological well-being and technostress in the relationship between trust in management and employee performance
8	Business Horizons	2024	31	The role of digital leaders' emotional intelligence in mitigating employee technostress
9	Technological Forecasting and Social Change	2023	25	How technostress may affect employee performance in educational work environments
10	Acta Psychologica	2024	20	Countering technostress in virtual work environments: The role of work-based learning and digital leadership in enhancing employee well-being

3.2. Antecedents of Employee Technostress

The most frequently reported antecedents were techno-overload, techno-invasion, techno-complexity, techno-insecurity, and techno-uncertainty. These dimensions are consistent with the mainstream technostress framework in organizational information systems research [2] [3]. Employees experience techno-overload when digital tools force them to work faster or process more information than they can comfortably manage. Techno-invasion occurs when connectivity extends work into private time through e-mail, messaging applications, or collaboration platforms.

Techno-complexity arises when employees perceive new systems as difficult to learn or use, while techno-insecurity reflects anxiety related to skill obsolescence or replacement. Techno-uncertainty refers to stress generated by frequent updates, changing procedures, and unstable digital routines [3] [4]. Recent reviews confirm that these stress creators remain highly relevant in post-pandemic and hybrid work settings, where employees must continuously adapt to collaborative platforms, remote workflows, and data-driven monitoring [6]

3.3. Outcomes of Technostress

Most reviewed studies report negative consequences of technostress for employee well-being. The dominant outcomes include burnout, emotional exhaustion, psychological strain, fatigue, reduced job satisfaction, and lower overall well-being [6] [5] [7]. Several studies also indicate that technostress weakens organizational commitment

and strengthens turnover intention, especially when employees feel permanently connected yet insufficiently supported.

From a performance perspective, the literature suggests that technostress may reduce concentration, increase frustration, weaken task quality, and encourage withdrawal or non-compliant work behavior [2] [8]. In service settings, technostress can also spill over into customer outcomes by reducing the quality of frontline interaction and customer satisfaction. Collectively, these findings indicate that technostress is not only a health-related issue but also a managerial and operational concern.

3.4. Inhibitors and Organizational Responses

The reviewed studies identify several inhibitors that can reduce the negative effects of technostress. These include literacy facilitation, technical support provision, user involvement in technology implementation, supportive leadership, opportunities for work-based learning, and organizational norms that protect boundaries between work and private life [3] [9] [10] [11]. These inhibitors do not eliminate digital demands, but they appear to strengthen employees' capacity to cope with them.

This finding is important because it shifts the discussion away from blaming employees for poor adaptation. Instead, technostress is increasingly understood as a consequence of digital work design. In practical terms, organizations that introduce new technologies without adequate communication, training, support, or role clarity are more likely to create harmful stress conditions for employees.

Table 4. Thematic synthesis of the reviewed studies.

Theme	Main patterns in the literature	Illustrative implications
Antecedents	Techno-overload, invasion, complexity, insecurity, and uncertainty are repeatedly identified as the main sources of stress.	Digital work intensification and unstable systems are core sources of stress.
Well-being outcomes	Burnout, emotional exhaustion, strain, and lower job satisfaction are dominant themes in the reviewed evidence.	Employee well-being should be monitored alongside digital transformation.
Performance outcomes	Lower concentration, reduced performance, frustration, and withdrawal behavior are commonly reported.	Technology adoption may fail when human factors are neglected.
Inhibitors	Training, technical support, user participation, supportive leadership, and boundary management reduce harmful effects.	Technology adoption may fail when human factors are neglected.
Research Gap	Cross-country comparison, longitudinal designs, and intervention studies remain limited.	Future research should test what mitigation strategies work best over time.

3.5. Theoretical Perspectives and Emerging Themes

Beyond identifying antecedents and outcomes, the reviewed studies show that technostress research is increasingly theory-driven. The most dominant perspective is Job Demands-Resources (JD-R) theory, which conceptualizes technostress as a job demand and explains how resources such as support, learning opportunities, or leadership can buffer its harmful effects. This perspective is particularly visible in studies of employee well-being, virtual work, and digital work design [12].

A second important lens is the transactional theory of stress and coping. From this perspective, technostress does not arise solely from technology itself, but from how employees appraise technological demands relative to their coping resources. This view helps explain why similar technologies may generate different stress responses across individuals and organizational settings [8] [13].

The reviewed studies also reflect Conservation of Resources (COR) theory and related resource-depletion arguments. In service and digital work settings, technostress drains employees' cognitive and emotional resources, which in turn weakens well-being, engagement, and interaction quality. This resource-based interpretation is especially

useful for explaining why technostress often affects both health-related and performance-related outcomes.

More recent studies introduce a dualistic perspective by combining affective and stressor-based explanations. In particular, research on AI-driven technostress distinguishes between challenge technology stressors and hindrance technology stressors. Challenge stressors may stimulate positive affect and support artificial intelligence adoption intention, whereas hindrance stressors trigger anxiety and inhibit adoption [14]. This suggests that technostress should not always be treated as uniformly harmful. Under certain conditions, digital demands may also be interpreted as developmental challenges, provided that employees possess adequate technical self-efficacy and organizational support.

Another notable development is the move from direct-effect models toward mediated and moderated explanations. Work exhaustion, detachment, need for recovery, affective reactions, and defensive routines are increasingly used to explain how technostress influences outcomes. At the same time, technostress inhibitors, workplace knowledge diversity, digital leadership, and work-based learning are examined as contextual buffers.

One of the most interesting emerging themes is leadership. Several recent studies suggest that leadership is not merely a generic organizational factor, but may directly shape how technostress is experienced and managed. Evidence indicates that leadership style, digital leadership capability, and leaders' emotional intelligence can reduce technostress by improving communication, trust, support, and clarity during digital transformation.

Overall, the theoretical development of the field suggests that technostress research is evolving from a narrow focus on technology-related strain toward a broader explanation of digital work systems. Current studies increasingly connect stressors, resources, appraisal, leadership, and organizational context, which makes the literature more useful for both theory development and managerial intervention.

4. Conclusions

This systematic literature review shows that technostress among employees is primarily driven by overload, invasion, complexity, insecurity, and uncertainty associated with digital work environments. Across the reviewed studies, these stressors are consistently linked to burnout, exhaustion, reduced job satisfaction, weaker well-being, and impaired work performance.

The review also highlights that technostress should not be framed solely as an individual weakness. Organizational support, digital capability development, participative implementation, and clear boundary-management practices repeatedly appear as important inhibitors. Leadership and learning-oriented work design also emerge as promising levers for reducing the harmful consequences of digital strain.

Future research should strengthen intervention-oriented and longitudinal designs, compare sectors and countries more systematically, and examine emerging sources of digital stress related to algorithmic management, artificial intelligence, and hybrid work systems. Overall, the evidence suggests that healthier digital work requires not only better technologies but also better organizational design.

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