

**JOURNAL OF INFORMATION
SYSTEM AND TECHNOLOGY
MANAGEMENT
(JISTM)**www.gaexcellence.com/jistm**DIGITAL TOOLS AND EMPLOYEE WELL-BEING IN THE
MODERN WORKFORCE: A THEMATIC REVIEW**Norhafizah Abdul Halim^{1*}, Mohd Shahid Azim Mohd Saufi², Suheil Che Sobry³¹Department of Business Studies, Universiti Teknologi MARA, Cawangan Kedah, Malaysia hafizahhalim@uitm.edu.my <https://orcid.org/0009-0005-3695-9162>²Department of Finance, Universiti Teknologi MARA, Cawangan Kedah, Malaysia azimsaufi@uitm.edu.my <https://orcid.org/0009-0003-5528-475X>³Department of Business Studies, Universiti Teknologi MARA, Cawangan Kedah, Malaysia suheil@uitm.edu.my <https://orcid.org/0009-0000-4404-0555>

*Corresponding Author

Article Info:**Article history:**

Received date: 03.08.2026

Revised date: 24.08.2026

Accepted date: 09.09.2026

Published date: 28.09.2026

To cite this document:

Halim, N. A., Saufi, M. S. A. M., & Sobry, S. C. (2026). Digital Tools and Employee Well-Being in The Modern Workforce: A Thematic Review. *Journal of Information System and Technology Management*, 11 (44), 470-480.

Abstract:

The increasing use of digital technologies has changed how work is organized, communicated, and experienced. Although digital tools can support employee well-being, their use may also create new sources of psychological strain. This review examines how digital tools shape employee well-being by synthesizing the literature around three interrelated themes: digital tools as resources for well-being, digital tools as sources of psychological strain, and the management of well-being in an AI-enabled workplace. The review draws on literature retrieved through Scopus and examined using Scopus AI as an analytical support tool as of 25 September 2025. The review process combined database searching, Scopus AI-generated summaries and concept mapping, and thematic interpretation of relevant studies. The synthesis indicates that digital tools can strengthen communication, collaboration, flexibility, engagement, and access to work resources. At the same time, excessive connectivity, technology-related demands, blurred work-life boundaries, and insufficient digital support can contribute to technostress and reduced well-being. The literature further indicates that artificial intelligence introduces a more complex set of opportunities and concerns because automation, monitoring, and decision-support systems can alter employee autonomy, workload, privacy, and perceptions of control. Overall, employee well-being appears to depend less on the presence of technology itself than on how digital tools are designed, introduced, and supported within organizations. The review highlights the importance of human-centred implementation, appropriate organizational support, digital capability development, and clear boundaries around technology use.

DOI: 10.35631/JISTM.1144028 **Keywords:**Digital Tools, Employee Well-Being, Digital Workplace,
Technostress

© The authors (2026). This is an Open Access article distributed under the terms of the Creative Commons Attribution (CC BY NC) (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits non-commercial re-use, distribution, and reproduction in any medium, provided the original work is properly cited. For commercial re-use, please contact jistm@gaexcellence.com.

Introduction

Digital technologies are now taking place into many aspects of modern working activities. The way employees perform their work and communicate with other employees has been transformed by communication platforms, collaborative applications, artificial intelligence (AI), digital monitoring systems and other technology-enabled tools. These developments have opened the door to quicker communication, increased flexibility and access to information. Meanwhile, technology has also created a need for things that were not so much of a factor in traditional work environments. Staff may be required to work on several platforms but to embrace rapid change in technology and to be available outside of working hours (Bondanini et al., 2025; Mdhluli, 2025).

These changes bring significant impact to employee well-being where it should be given special consideration. Well-being isn't just a result of having access to technology. It is shaped by the changing demands and resources of employees due to technology. Technological systems can be viewed as job resources that enable employees to work or as job demands that drain employees' physical and psychological resources, and this relationship can be understood through the Job Demands–Resources (JD-R) model (Bakker & Demerouti, 2007). Likewise, Self-Determination Theory indicates that opportunities for autonomy, competence and relatedness are crucial to positive work experiences (Deci & Ryan, 2000).

Individual components of this relationship have been studied previously. Digital connectivity has been linked to increased flexibility and productivity, but over-connectedness can also be a source of stress and work-life balance issues (Bondanini et al., 2025; Mdhluli, 2025).. Other studies have explored the potential of gamification, digital workplace design, remote work, and AI-driven interventions as potential levers that technology can impact. However, these studies tend to address particular technologies or individual outcomes (Catoira, 2023; Pusch et al., 2024). The literature is thus spread out in information systems, organizational behavior, occupational health and human resource management.

This fragmentation constitutes an important research gap. While there is a wealth of existing research on individual benefits or risks of workplace digitalization, there are fewer reviews that integrate these strands around employee well-being as the central outcome. Specifically, it is important to grasp the fact that the same technological context can be a source of resources for employees and also create new demands. As AI and algorithmic systems make their way into daily work, this is a growing concern (Koşar, 2025; Stangl et al., 2025).

This review therefore concentrates specifically on the impact of digital tools on employee wellbeing. The review does not try to encompass the overall shift in the nature of the workforce, but rather categorizes the literature into three themes. The first view is that digital tools are resources that can support positive work experiences. The second looks at technology-related demands, specifically technostress and boundary-related pressures. The third focuses on AI in the workplace and the organizational conditions necessary to safeguard employee well-being in times of technological change.

The review adds by bringing together these strands in a focused thematic framework. It also offers a more nuanced understanding of digitalization, as it integrates the benefits and risks into the same analytical framework, instead of analyzing them separately.

Methodology

The study used a focused thematic review of literature on the topic of digital tools and employee well-being. The literature database used was Scopus and the analytical support tool was Scopus AI, which was used to identify the recurring concepts and relationships in the retrieved literature. The analysis was carried out based on the information available on 25 September 2025.

The search terms included digital technology, employee well-being, workforce, psychological health and work–life experiences. The original review search string was:

((("technology" OR "digital" OR "innovation" OR "tools") AND ("well-being" OR "wellness" OR "health" OR "quality of life") AND ("workforce" OR "employees" OR "workers" OR "staff") AND ("productivity" OR "engagement" OR "satisfaction" OR "motivation") AND ("mental health" OR "psychological" OR "stress" OR "burnout") AND ("remote work" OR "telecommuting" OR "flexible work" OR "work-life balance"))).

Only peer-reviewed journal articles, book chapters, and conference proceedings were included; editorials and non-scholarly articles were not included. The literature retrieved was analyzed for its relevance to the central relationship between digital tools and employee well-being.

The literature was initially organized with the help of Scopus AI's summary, expanded summary, and concept-mapping capabilities. The initial analysis highlighted recurrent themes related to digital workplace design, mental health and technostress, AI and automation, work–life balance, leadership, and employee engagement. These themes were then further grouped into three overarching themes for the current review. The literature was consolidated based on conceptual similarity, not on the basis of each cluster being a distinct theme.

The thematic synthesis was thus carried out in three phases. The first set of studies that described positive effects of technology on employees clustered around the concept of technology as a resource. Second, the studies that describe stress, overload, constant connectivity and boundary problems were classified as digital tools in the psychological demands. Third, literature on AI, monitoring, automation, digital capability and organizational responses was synthesized under the management of well-being in an AI-enabled workplace. This way, the review can capture the scope of literature retrieved and still focus on the analytical aspect of employee well-being.

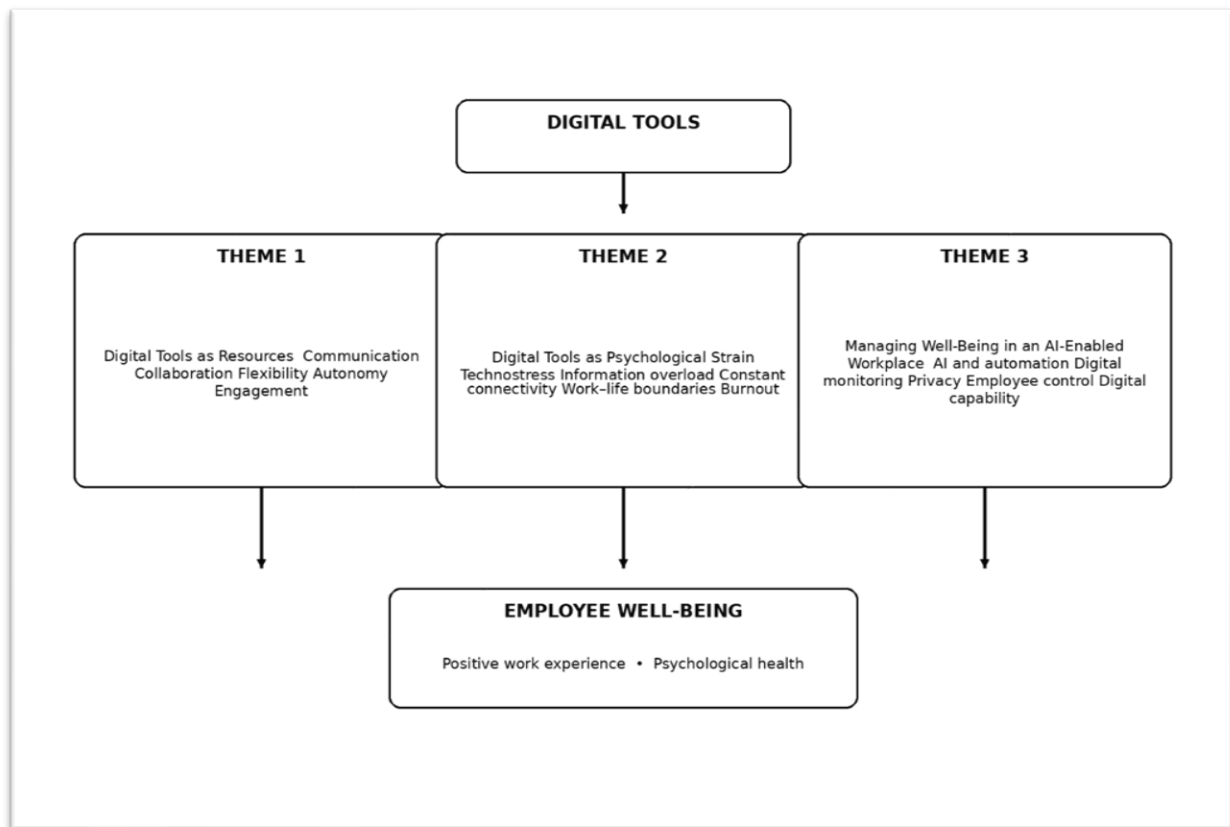


Figure 1. Thematic Framework of Digital Tools and Employee Well-Being

Findings and Thematic Discussions

Digital Tools as Resources for Employee Well-Being

The first theme is about how much digital tools can offer resources that enhance employees' working experience. The literature reviewed suggests that communication technologies, collaborative platforms and other digital systems can help to overcome some of the practical challenges of traditional work arrangements. Staff can share information with each other faster, get information from other workplaces and organise tasks without having to be in the same workplace. These functions can help to foster a more flexible and controlled work experience (Catoira, 2023; Pusch et al., 2024).

This resource perspective is consistent with the JD-R model. If technology eliminates needless work or provides employees with more information and assistance, it can be a job resource, not a job demand (Bakker & Demerouti, 2007). Digital tools can also help to promote autonomy if employees can decide how, when or where certain tasks are carried out. This is especially important for hybrid and remote work options (Catoira, 2023).

The literature also highlights the significance of engagement. Digital platforms can be used to enable interaction and knowledge sharing, and technology-enabled approaches like gamification can help to promote participation and engagement in certain work settings. Communication, collaboration, engagement and autonomy were found to be common positive aspects of digital technology use in the original review. The results indicate that the role

technology plays in well-being depends on how employees perceive the technology as a means to do meaningful work, not just more work or more work faster (Deci & Ryan, 2000).

Digital tools can also help to facilitate employee learning and access to work-related information. In this regard, technology can reinforce employees' perceived competence, another important psychological resource. Technological change can be perceived as an opportunity to learn new skills, if employees are provided with sufficient training and know how to use new systems (Jandrić & Randelović, 2018).

However, the positive impact of digital tools is not to be seen as an automatic result of the adoption of technology. One technology that enhances communication for one employee can cause other interruptions for another. Likewise, flexible working can give some workers more autonomy, and for others, isolation or boundary issues (Catoira, 2023). The value of the technology is thus dependent on the design of the system, the type of task, and the organizational context in which the technology is implemented.

This distinction is relevant because when people talk about digitalisation in the workplace, they tend to think of digitalisation as a way to improve the outcomes of their employees. The literature, however, indicates a more conditional relationship. Technology is most likely to support well-being when it offers meaningful resources, eliminates unnecessary effort, and empowers employees to have enough control over their work (Bakker & Demerouti, 2007; Deci & Ryan, 2000).

Digital Tools as Sources of Psychological Strain

The second theme is related to the less visible costs of digital work. While technology can simplify work, it can also raise the demands on employees, both in terms of quantity and intensity. Technostress is particularly important in this respect. Staff can feel stressed when they are required to learn new systems, answer to several platforms, deal with a lot of information, or being constantly connected (Mdhluli, 2025; Stangl et al., 2025).

The literature reviewed highlights a number of problems that are related to this, such as technology overload, constant connectivity, blurred boundaries between work and life, and problems with disengagement from work. It is not always the case that these problems are caused by a single technology. Instead, they can arise from the sum of several digital systems becoming part of everyday work. If an employee receives messages via email, collaboration tools, mobile apps, and other means, it can be hard to know when work is truly over (Mdhluli, 2025).

This is a closely related topic to “always on” working culture. While continuous accessibility may be convenient and make things more responsive, it may also make the psychological distinction between working time and non-working time less clear. The flexibility of digital working can be a pressure when employees think that messages must be responded to immediately. Constant connectivity was also linked to work–life boundary issues and psychological stress in the literature from the original review.

Technostress can also be caused by the speed of technological change, which is faster than the ability of employees to change. Staff may be required to use new applications or systems without adequate training. In such cases, technology can be a drain, not a source of

psychological resources. Research based on the JD-R approach has correlated technology-related demands with feelings of exhaustion and lower levels of work well-being, especially when workers are not provided with sufficient resources to cope with the demands.

Work-life balance is thus not just about working from home. Digital boundaries are also of quality. While remote and hybrid work can offer flexibility to employees, they can also be a way for employees to work outside of their personal time if communication expectations are not communicated. The question is therefore not so much one of good or bad in digital work, but one of the ways in which organizational practices create an experience of connectivity for employees.

Organizational support is also a key theme of this. The burden of digital systems can be mitigated through training, technical assistance, manageable workloads and realistic expectations of communication. Having access to support and understanding of the purpose of a technology may help employees to manage technological demands.

The evidence thus suggests a central tension. Digital tools can eliminate physical and administrative barriers and add cognitive and emotional challenges. This explains why productivity improvements and well-being difficulties can occur at the same time. An efficiency-based assessment that focuses solely on the efficiency of the process can fail to consider the psychological impact of the process.

Managing Employee Well-Being in an AI-Enabled Workplace

The third theme is the growing adoption of AI, automation and digital monitoring. These technologies are not the same as traditional communication or productivity tools because they have the potential to impact the allocation, assessment, monitoring, and execution of work. This means that their impact on employee health goes beyond convenience and usability (Koşar, 2025; Stangl et al., 2025).

AI can minimize repetitive tasks and offer decision support, freeing up time for employees to focus on more complex or meaningful tasks. Automation can also help to alleviate some workloads and enhance access to information (Pusch et al., 2024). These possibilities are in line with the overall resource perspective outlined in the first theme.

But at the same time, AI can generate uncertainty. Staff might be worried about the way their work is assessed by the automated system, the decision-making process, or the loss of autonomy in their work (Pusch et al., 2024). Digital monitoring can generate the same tensions. Monitoring systems can be implemented for safety, productivity, or employee support reasons, but employees may feel that too much monitoring is an invasion of privacy if the reason for monitoring and boundaries of data collection is not clearly defined (Koşar, 2025; Stangl et al., 2025).

In an AI-driven workplace, privacy and autonomy are thus crucial aspects of employee health. It's not just about the "should" or "should not" of using AI in organizations. Instead, organizations must think about the employee's experience of the AI system and the balance between technological control and transparency, participation, and human oversight.

The literature further indicates that employee capability is becoming more critical. Some jobs will require different knowledge and skills as a result of the use of AI. If not properly prepared, staff members can feel insecure or inadequate with technological change. On the other hand, training and opportunities to acquire digital competence can enhance employees' capacity to work with new systems and can minimize uncertainty.

The care of AI well-being therefore extends beyond the technical aspect. Social and psychological implications of technological change should be taken into account in organizations. Staff need to be aware of the rationale for a system, the information it utilises, how decisions are made and the role of human judgement.

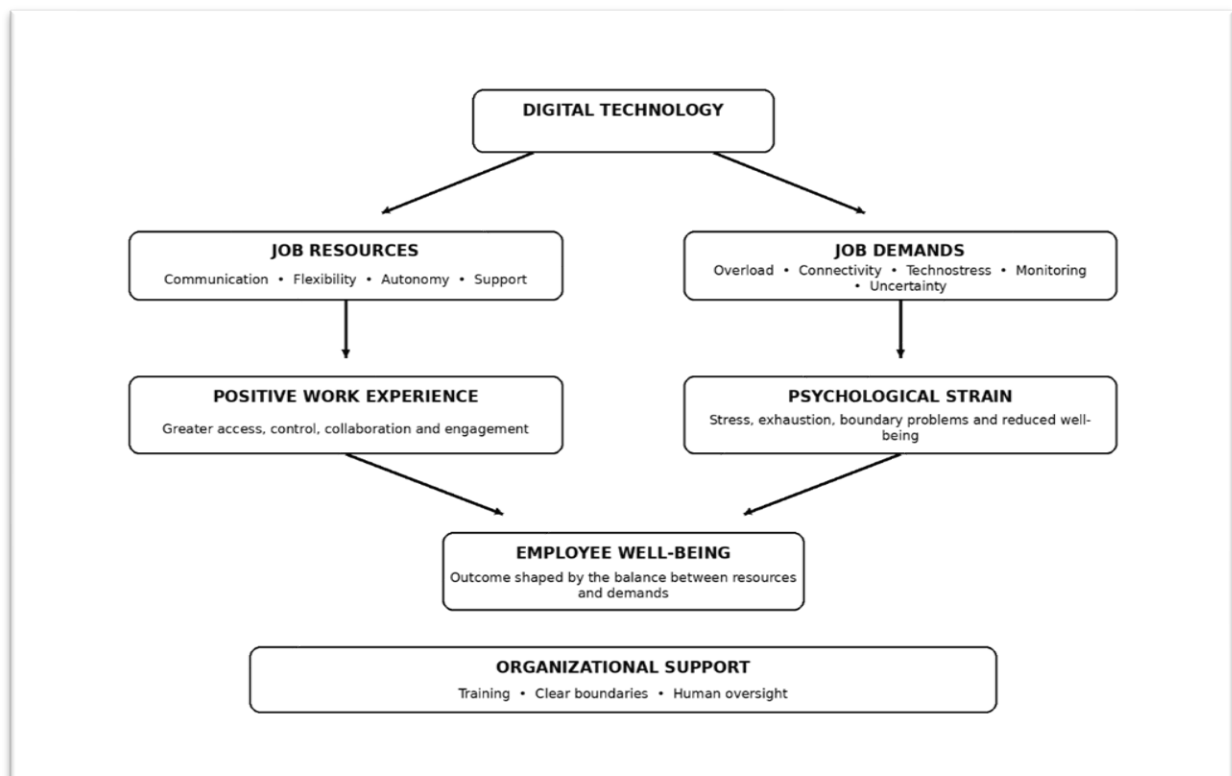


Figure 2: Dual Pathway of Digital Tools and Employee Well-Being

The third theme is thus a linking theme between the first two. While AI and other cutting-edge digital tools can create valuable resources, they can also present new demands. The path that becomes more prominent is to a large extent determined by organizational practices. This is another reason why employee wellness needs to be part of the technology rollout from the start instead of being thought of as an afterthought when issues arise.

Integrative Discussion

The three themes show that digital tools and employee wellbeing are not always good and bad. Rather, it is based on the dynamics of technology's resource and demand. The first theme illustrates how digital tools can enhance the working environment of employees. Work can be more manageable and meaningful if you communicate, collaborate, are flexible and have access to information. The benefits are aligned with the resource pathway of the JD-R model (Bakker & Demerouti, 2007).

The second theme demonstrates that the same technological environment can create further demands. Employees may be overusing their psychological resources due to constant connectivity, information overload, technological uncertainty and blurred boundaries. Recent publications on technostress also highlight the significance of the technology-related demands and their implications for employee well-being.

The third theme takes this argument one step further to AI-powered workplaces. The added layer of complexity with AI is that it can simultaneously automate work, assist in decision making, track work, and alter employee perceptions of autonomy and security. Therefore, the impact of AI on wellbeing cannot be measured solely by productivity measures.

The themes together indicate that the technology is not the only factor that impacts employee well-being. Organizational context matters. Training can transform technological uncertainty into competence. Clear communication boundaries can help minimize the downside of connectivity. Acceptance of technological change can be enhanced by employee participation. Autonomy can be maintained with the introduction of automated systems with human oversight (Bakker & Demerouti, 2007; Deci & Ryan, 2000; Stangl et al., 2025).

This interpretation also provides a more focused application of the JD-R model to digital work. Digital tools can be used as job resources if they enhance autonomy, enable collaboration and eliminate unneeded effort. They can turn into job demands if they add workload, complexity, monitoring pressure or expectations of constant availability. Depending on its implementation, the same technology can be used in both positions.

The results have thus implications for organizations. First, indicators of employee well-being should be incorporated into the implementation of technology, in addition to productivity indicators. Second, organizations need to offer the right digital training, not take it for granted that staff will simply figure it out. Third, communication expectations need to be clearly stated to avoid the flexibility of availability becoming an expectation. Last but not least, AI and monitoring systems must be used transparently, while ensuring privacy, autonomy, and human judgment.

The review identifies a number of opportunities for researchers. Future research should focus on the long-term impact of digital tools, instead of mainly cross-sectional evidence. Comparative studies of occupations and industries would also help to shed light on why the same technologies yield varying experiences. Furthermore, further research is required on the well-being aspects of AI, as AI not only affects the way tasks are carried out but also the perception of control, security and responsibility of employees.

Conclusion

This thematic review explored the link between digital tools and employee well-being in three interrelated themes. The first theme demonstrated how digital technologies can be used as a resource, to enhance communication, collaboration, flexibility and autonomy, and to provide access to work-related information. The second showed that technology can also be a source of psychological strain, such as technostress, information overload, constant connectivity, and blurred work-life boundaries. The third highlighted the increasing importance of managing well-being in AI-enabled workplaces, where automation, monitoring, and algorithmic systems introduce new questions concerning autonomy, privacy, capability, and employee control.

The main point is that digitalization should not be evaluated based on technological potential or productivity increases. The impact on staff is dependent on the circumstances when it is implemented. The likelihood of technology supporting well-being is higher if employees are supported with proper resources, training, autonomy, and organizational support. On the other hand, digitalization, if not managed well, can exacerbate work pressures and mental stress.

The review also underscores the continued importance of the JD-R approach in understanding today's digital work. Digital tools can be used as both resources and demands, and the proportion of these two pathways will likely influence employee well-being. Future studies should therefore go beyond technology adoption to explore the organizational factors that affect whether technological change enhances or diminishes the quality of employees' work experiences.

A new and employee-focused digital transformation approach is therefore required. Future research and practice should not only focus on the question of whether or not an organization can be adapted to a specific technology, but also on whether the employees can be equipped with the resources, skills, autonomy and organizational protection necessary to work effectively with the technology. This can lead to technological innovation without compromising employee wellbeing as a side-benefit.

-
- Acknowledgements:** The authors would like to express their sincere gratitude to the Kedah State Research Committee, UiTM Kedah Branch, for the generous funding provided under the Tabung Penyelidikan Am. This support was crucial in facilitating the research and ensuring the successful publication of this article. Special appreciation is extended to colleagues and peers who contributed valuable insights and constructive feedback, which greatly enhanced the quality of this paper.
- Funding Statement:** No Funding
- Conflict of Interest Statement:** The authors declare that there is no conflict of interest regarding the publication of this paper. All authors have contributed to this work and approved the final version of the manuscript for submission to the Journal of Information System and Technology Management (JISTM).
- Ethics Statement:** This study did not involve any human participants, animals, or sensitive data requiring ethical approval. The authors confirm that the research was conducted in accordance with accepted academic integrity and ethical publishing standards.
- Author Contribution Statement:** All authors contributed significantly to the development of this manuscript. Norhafizah Abdul Halim led the research effort and authored the sections on the introduction and discussion. Suheil Che Sobry contributed by developing the literature review and writing the conclusion. Mohd Shahid Azim Mohd Saufi provided critical revisions, conducted a comprehensive review of the manuscript, and approved it for final submission. All authors read and approved the final version of the manuscript before submission.
-

References

- Bakker, A. B., & Demerouti, E. (2007). The job demands-resources model: State of the art. *Journal of Managerial Psychology*, 22(3), 309–328. <https://doi.org/10.1108/02683940710733115>
- Bondanini, G., Giovanelli, C., Mucci, N., & Giorgi, G. (2025). The dual impact of digital connectivity: Balancing productivity and well-being in the modern workplace. *International Journal of Environmental Research and Public Health*, 22(6), 845. <https://doi.org/10.3390/ijerph22060845>
- Catoira, S. O. (2023). Transforming learning and remote work: Benefits of technology tools for loyalty and productivity. In *Emerging technologies and digital transformation in the manufacturing industry* (pp. 224–283). IGI Global. <https://doi.org/10.4018/978-1-6684-8088-5.ch014>
- Choudhury, P., Foroughi, C., & Larson, B. (2020). Work-from-anywhere: The productivity effects of geographic flexibility. *Strategic Management Journal*, 42(4), 655–683.
- Deci, E. L., & Ryan, R. M. (2000). The “what” and “why” of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, 11(4), 227–268. https://doi.org/10.1207/S15327965PLI1104_01
- Grawitch, M. J., Ballard, D. W., & Erb, K. R. (2021). To be or not to be (stressed): The critical role of organizational context in employee well-being. *International Journal of Environmental Research and Public Health*, 18(18), 9722.
- Hobfoll, S. E. (1989). Conservation of resources: A new attempt at conceptualizing stress. *American Psychologist*, 44(3), 513–524. <https://doi.org/10.1037/0003-066X.44.3.513>
- Jandrić, M., & Randelović, S. (2018). Adaptability of the workforce in Europe: Changing skills in the digital era. *Zbornik Radova Ekonomskog Fakulteta u Rijeci*, 36(2), 757–776. <https://doi.org/10.18045/zbefri.2018.2.757>
- Kotek, M., & Vranjes, I. (2025). When do employees perceive technology as stressful? A meta-analysis of work-related technostress antecedents. *Information & Management*, 62(8), 104203. <https://doi.org/10.1016/j.im.2025.104203>
- Marsh, E., Perez Vallejos, E., & Spence, A. (2022). The digital workplace and its dark side: An integrative review. *Computers in Human Behavior*, 128, 107118. <https://doi.org/10.1016/j.chb.2021.107118>
- Mdhluli, N. I. (2025). Perils of perpetual connectivity: Navigating the “always-on” culture in the modern workplace. *SA Journal of Human Resource Management*, 23, a3019. <https://doi.org/10.4102/sajhrm.v23i0.3019>
- Stangl, F. J., Seiler, V., & Riedl, R. (2025). Revealing the benefits and burdens of workplace digitalization: Preliminary insights from a qualitative study. In *Lecture Notes in Computer Science* (Vol. 15805, pp. 219–235). Springer. https://doi.org/10.1007/978-3-031-92826-0_14
- Tarafdar, M., Cooper, C. L., & Stich, J.-F. (2019). The technostress trifecta—Techno eustress, techno distress and design: Theoretical directions and an agenda for research. *Information Systems Journal*, 29(1), 6–42.
- Ter Hoeven, C. L., van Zoonen, W., & Fonner, K. L. (2016). The practical paradox of technology: The influence of communication technology use on employee well-being. *Communication Monographs*, 83(4), 429–451.
- Wang, B., Liu, Y., Qian, J., & Parker, S. K. (2021). Achieving effective remote working during the COVID-19 pandemic: A work design perspective. *Applied Psychology*, 70(1), 16–59.