DIGITAL TRANSFORMATION AND TECHNOSTRESS IN THE BANKING SECTOR: A PRISMA-BASED SYSTEMATIC LITERATURE REVIEW ON EMPLOYEE WELL-BEING

Dr Vijaykumar Dhannur
Assistant Professor, Email.ID: vijaykumar.d@vtu.ac.in
ORCID: 0000-0001-6541-1220

Bhagyashree M.Tontapur
Research Scholar
Email.ID: bchavhan01@gmail.com
Deptt,of Management Studies
Visvesvaraya Technological University
Belagavi Karnataka

ABSTRACT
Although digital transformation has changed the banking industry by streamlining its operations and customer interactions, it has also created a lot of psychological issues, the most evident of which is technostress. This paper is a systematic examination of the interconnection between digital evolution and the well-being of employees in financial institutions. Following a Systematic Literature Review (SLR) approach and using the PRISMA framework, the study summarizes 80 peer-reviewed articles published in the years 2005-2025 identified using Scopus, Web of Science, ScienceDirect and Google Scholar.

The thematic analysis shows that the four dimensions are critical as the infrastructures of digital banking proliferate, the creators of technostress (overload, complexity, and invasion) exist, the resultant damage to the well-being of the employees, and the effectiveness of organizational interventions. The results indicate that digital integration is the condition of competitiveness, but it often provokes burnout and low job satisfaction. Nevertheless, the research determines organizational support mechanisms, namely targeted digital literacy training and encouraging leadership, as critical players that reduce such negative impacts. The study has added value to the discipline as it provides a mapping of recent research trends and the critical gaps in the public sector banking and the emerging economies, which provides a strategic roadmap to the human resource management in the digital age.

Key words: Digital Transformation, Technostress, Banking Sector, Employee Well-Being, Systematic Literature Review, PRISMA.

INTRODUCTION

Banking industry has experienced major change in the last 20 years with an astronomical development of digital technologies. The introduction of new technologies, including online banking interfaces, mobile banking apps, automated customer service software, artificial intelligence, and data-driven financial techs, have completely changed the way banking is conducted. Through these technological advances, efficiency, accessibility of services and accessibility of money have been increased. Nevertheless, in addition to these advantages, digital transformation has come with new challenges to employees who have to be in a constant adjustment to new technological systems and digital workplaces.

Digital transformation is especially complicated in the context of the public sector banks because of the presence of the legacy systems, bureaucracy, and workforce demographic diversity. The employees must acquire and use advanced digital platforms and keep the quality of their services high and respond to growing performance demands. This technological pressure usually leads to technostress that is a phenomenon that occurs when employees feel that technological demands are beyond their coping capacities.

The concept of technostress has become a burning topic in the area of research of organizations due to its possible effects on the well-being of employees, their job satisfaction, and performance of the organization in general. Studies have suggested that the overdependence on information and communication technologies (ICTs) can lead to cognitive overload, the lack of work-life boundaries, and the pressure of constant connectivity. These issues are particularly acute in the service industry including banking where employees have to work with digital systems and people at the same time.

Theoretically, the influence of the technological demands on the employee's well-being can be described with references to the Job Demands Resources Model that postulates that when the job demands are too high and when the organizational resources are insufficient, the employee will suffer exhaustion and burnout. In the same way, the Conservation of Resources Theory is used to explain that people become stressed when they feel that they are losing some of their personal resources in form of time, energy or psychological stability.

Though the phenomenon of technostress has gained more and more attention in the field of organizational studies, the current literature has been more concentrated on the context of the private sector organizations and information technology specialists. Several researchers have focused little on the banking institutions in the public sector and especially in developing nations where digital transformation is taking place at an alarming rate. Therefore, the emerging evidence needs to be systematically reviewed to get an idea of what technostress is like in the public sector banking environments and what areas need to be investigated further.

LITERATURE REVIEW

The digital transformation has emerged as one of the biggest agents of change in the world banking. It is described as the process of integrating digital technologies in an organizational process to enhance efficiency, customer experience, and business performance (Vial, 2019). Digital transformation in the banking industry can be described as the use of mobile banking, online banking platforms, artificial intelligence, cloud computing, and big data analytics among others.

According to Verhoff et al. (2021), digital transformation transforms the traditional business models, as it helps the organization develop new digital value propositions. This has changed the banking institutions such that financial institutions become able to deliver faster services, efficient services and services that are more accessible to the customer. The implementation of

online payment systems, automated teller machines, and mobile banking applications has enhanced a lot in delivering financial services.

In the same vein, Bharadwaj et al. (2013) state that digital technologies have revolutionized the organizational strategies because they have allowed firms to incorporate the use of digital abilities into the core operations. Digital technologies are being applied more often in banking to automatize processes which include loan processing, customer verification, and fraud detection.

Although these are the benefits, there is also the requirement of the employees to constantly change with new technology due to digital transformation. Kane et al. (2015) state that employee adaptation and skill development may be a problem issue in organizations that embrace the use of digital technologies. Workers are forced to acquire new systems and modernize their digital competencies, which may bring additional pressure and stress in the workplace.

Within the context of the banking industry, digital transformation has enhanced the use of information and communication technologies (ICTs), which has fundamentally changed the working environment of the employees. This has led to the psychological consequences of technology adoption becoming a significant research issue.

Concept of Technostress

Brod (1984) was the first one who introduced the concept of technostress and defined it as a modern disease that results due to inability to cope with new computer technologies in a healthy way. Brod underlined that a quick change in technologies might impose pressure on the people who are not quick to adopt new specifications in the digital world.

Subsequent studies broadened this idea and incorporated a wider scope of technology-related stressors. In a study by Tarafdar et al. (2007), the conceptual notion about technostress was a multidimensional effect of overindulgence in the use of technology in the organizational context. They found five key creators of technostresses:

1. Techno-overload - technology compels the employees to work quicker and to process more.
2. Techno-invasion- technology causes a distinction between work and personal life to become ambiguous.
3. Techno -Complexity- employees struggle with technology which they struggle to comprehend or operate.
4. Techno-insecurity - workers are afraid because of technological innovations that will render them jobless.
5. Techno-uncertainty - there is constant technological change that generates uncertainty within the employees.

Ragu-Nathan et al. (2008) also designed measurement scales to measure technostress and established that technostress does bring about a significant effect on the productivity and job satisfaction of the employees. According to their findings, overdependence on technology may cause psychological strain and low performance on work.

In another study by Ayyagari et al. (2011), it was also established that the stress levels of employees are high in the event of technology-related demands. Their research revealed the attributes of technology to be very stressful like being complex and having a constant connection that leads to lower employee satisfaction.

Banking sector Technostress

The concept of technostress has gained more topicality in the banking industry as a result of the high pace of digitalization of financial services. Banking staff is obliged to work with a variety of digital systems, with online transactions and digital customer service.

In a systematic review of technostress by La Torre et al. (2019), the author indicated that the effects of technology-related stress include negative results including burnout, fatigue, and poor productivity. Their research indicated that organizations needed to come up with ways of alleviating technostress.

On the same note, Molino et al. (2020) established that technostress has an adverse impact on job satisfaction and employee engagement. Their study indicates that high levels of technology demands may decrease the motivation of employees and their general well-being.

Digital banking platforms and automated systems are usually linked to technostress in the banking industry. The working personnel need to learn and acquire new knowledge all the time to suit the changing technologies. This continuous adaptation may add cognitive load and pressure to the psyche.

It has also been revealed that digital transformation can make the workload of employees heavier. With the growth of digital banking services, staff members have to deal with both the traditional banking services and digital duties, which result in higher work demands.

Technostress Theoretical Perspectives

Technostress has been explained using a number of theoretical frameworks in the organization context.

Job Demands lots of Resources (JD-R) Model

The job demands-resources (JD-R) model is the theory that was created by Bakker and Demerouti (2017) to explain the impact of job demands and resources on the well-being of employees. This model states that workload, time pressure, and technological complexity are job demands that are associated with stress and burnout.

Technical demands may be viewed as job demands in the context of the digital workplaces and it demands the employee to put extra effort. Nevertheless, the adverse impact of such demands can be minimized by using organizational resources like training programs, managerial support, and technological assistance.

Conservation of Resources (COR) Theory

Theories on the stresses of conservation indicate that people get stressed when they lose access to resources that they perceive valuable or when their resources are under threat (Conservation of Resources; COR) theory formulated by Hobfoll (1989). In an online working environment, employees can be stressed due to a reason where technological change forces them to spend more time and energy to get acquainted with new systems.

Employees are likely to suffer technostress and burnout in case they feel that they do not have enough resources to handle the technological needs.

Person Environment Fit Theory

The Person-Environment Fit is used to explain stress as an occurrence when there is a lack of fit between the abilities of the individuals and the requirements of their work environment. The employees can get stressed in a digital transformation environment when they cannot cope with digital technologies due to the lack of relevant skills.

This congruence may lower the confidence of employees and cause mental stress.

Support and Technostress Mitigation of the Organization

Even though digital transformation may present employees with problems, a number of studies have identified the importance of organizational support in alleviating technostress.

One of the best strategies of alleviating technostress is training programs. With proper training of employees, there is increased understanding of and the ability to use digital systems, thus technological complexity and anxiety is minimized.

Tarafdar et al. (2015) discovered that the technologies can be trained to reduce the level of technostress significantly, and organizational support like technical support, employee participation, and training can be introduced. On the same note, Srivastava et al. (2015) found that employees adjust to technological changes through supportive leadership and digital literacy programs.

The other consideration is organizational culture. Companies that embrace learning and innovation provide a welcoming environment where the employees become more relaxed enough to embrace technological changes.

RESEARCH GAP

Regardless of the increasing amount of literature on digital transformation and technostress, there are some gaps in research.

First, the majority of the studies are on the technological and operational advantages of the digital transformation instead of its psychological effects on employees. Second, the study of technostress has mainly been done in the information technology industry with comparatively lower studies in the banking industry.

Third, the literature available is concentrated on the organizations of the private sector, and the banks of the public sector have not been fully investigated yet. Lastly, the weakness in integrating theoretical models of banking research, including the Job Demands Resources model and the Conservation of Resources theory exists.

The need to address these gaps can give a better understanding of the impact of digital transformation on the well-being of employees in the banking industry..

Gap Type	Description of Research Gap	Implication for Future Research
Contextual Gap	Most technostress studies focus on IT professionals or private sector organizations, while research on public sector banks remains limited.	More studies are required to understand technology-related stress among employees in public banking institutions.
Geographical Gap	Existing research is largely concentrated in developed economies, with limited empirical evidence from developing countries such as India.	Regional studies are necessary to understand contextual differences in technological adaptation and employee stress.
Sector-Specific Gap	Comparative studies often examine banking sectors broadly without distinguishing between public and private banks.	Future studies should specifically investigate technostress in public sector banks where organizational structures differ significantly.
Psychological Outcome Gap	Many studies focus on job performance and productivity outcomes rather than deeper mental health indicators such as anxiety, depression, and emotional exhaustion.	Future research should incorporate validated psychological measurement scales to assess mental health impacts.
Organizational Support Gap	Limited research explores how organizational support, training, and leadership influence employees' ability to cope with technostress.	Studies should examine organizational interventions that can reduce technostress in digital workplaces.
Methodological Gap	Most existing research relies on cross-sectional survey designs.	Longitudinal and mixed-method research designs are required to better understand the evolution of technostress over time.
Technological Evolution Gap	Rapid technological advancements such as artificial intelligence and	Future research should explore emerging technological stressors

Gap Type	Description of Research Gap	Implication for Future Research
	digital surveillance have not been extensively studied in technostress literature.	associated with advanced digital systems.

OBJECTIVES

The objectives of this study are:

1. To examine the role of digital transformation in the banking sector.
2. To analyse the concept and dimensions of technostress among banking employees.
3. To synthesize existing literature on the relationship between digital transformation and technostress.
4. To identify research gaps and propose future research directions.

METHODOLOGY

RESEARCH DESIGN

This paper uses a Systematic Literature Review (SLR) to explore an entangled intersection of the digital transformation and technostress in banking sector. SLR method was chosen due to its ability to form a coherent, transparent, and replicable synthesis of the existing body of scholarship and enable one to identify the prevailing theoretical themes and research gaps (Tranfield et al., 2003). The review procedure was also strictly adhered to the Preferred Reporting Items of systematic reviews and meta-analyses (PRISMA) framework to ensure rigor and reduce biasness in the study approach (Moher et al., 2009). This hierarchical procedure helped to make an identification, screening, and final selection of high-quality secondary data and made sure that the analysis will represent a solid picture of the influence of digital evolution on the psychological well-being of the employees in financial institutions.

Sources of Data and Search Strategy

To guarantee the high academic validity, a search has been performed in 4 major bibliographic systems including Scopus, Web of Science, ScienceDirect, and Google Scholar. These sources were selected because they cover a wide range of peer-reviewed literature on the topics of information systems, organizational psychology, and management. A combination of natural language and controlled vocabulary keywords, such as digital transformation, technostress, banking sector, digital banking, and employee well-being, were used as the search strategy. The use of the Boolean operators was planned (e.g., Digital transformation AND technostress AND banking) to narrow down the search results and make them contextually relevant. The time frame of the search had a limit set to the years 2005-2025 because it is the period when the banking industry has developed, transforming into a place where AI financial services play a major role.

Selection Criteria and Synthesis of the Study

A predetermined set of inclusion and exclusion criteria ruled out the final choice of literature that was to maintain the quality of the evidence base. The inclusion criterion was that the studies had to be peer-reviewed journal articles written in English that were published between 2005 and 2025 and were related to the nexus of digital transformation, technostress, and organizational behavior in service-oriented or financial industries. On the other hand, the research was limited to the exclusion of non-academic gray literature, including blog entries, trade reports and conference abstracts that were not available in the full-text, and research that did not specifically focus on the use of technology in an organizational setting. A total of 80 high-impact articles that were thoroughly screened on the basis of title screening and then the full-text were found to be suitable on all the eligibility criteria and were entered into the final phase of thematic analysis and synthesis.

Table 1: Inclusion and Exclusion Criteria for Study Selection

Criteria	Inclusion Criteria	Exclusion Criteria
Study Type	Peer-reviewed journal articles	Conference abstracts (without full papers), non-academic reports, and blog articles
Thematic Focus	Digital transformation, technostress, and digital banking	General technology studies not related to organizational use
Target Sector	Banking sector, service industries, or general organizational settings	Studies focused solely on individual consumer behavior outside of employment
Timeframe	Articles published between **2010 and 2025**	Articles published prior to 2005
Language	English language only	Non-English publications
Data Quality	Full-text availability and methodological transparency	Studies with insufficient data or unclear methodology

PRISMA ANALYSIS

The selection process of research articles followed the four stages of the PRISMA framework**:**

1. Identification
2. Screening
3. Eligibility
4. Inclusion

Initially, 152 articles were identified through database searches. After removing duplicate records and irrelevant articles, 120 articles remained for screening. During the screening stage, titles and abstracts were reviewed to assess relevance to the research topic.

Subsequently, 90 articles were selected for full-text evaluation. After assessing the eligibility of these studies, 80 articles were included in the final review.

The PRISMA flow diagram visually illustrates the step-by-step process used to identify and select the articles included in the study.

Figure 1. PRISMA Flow Diagram for Study Selection
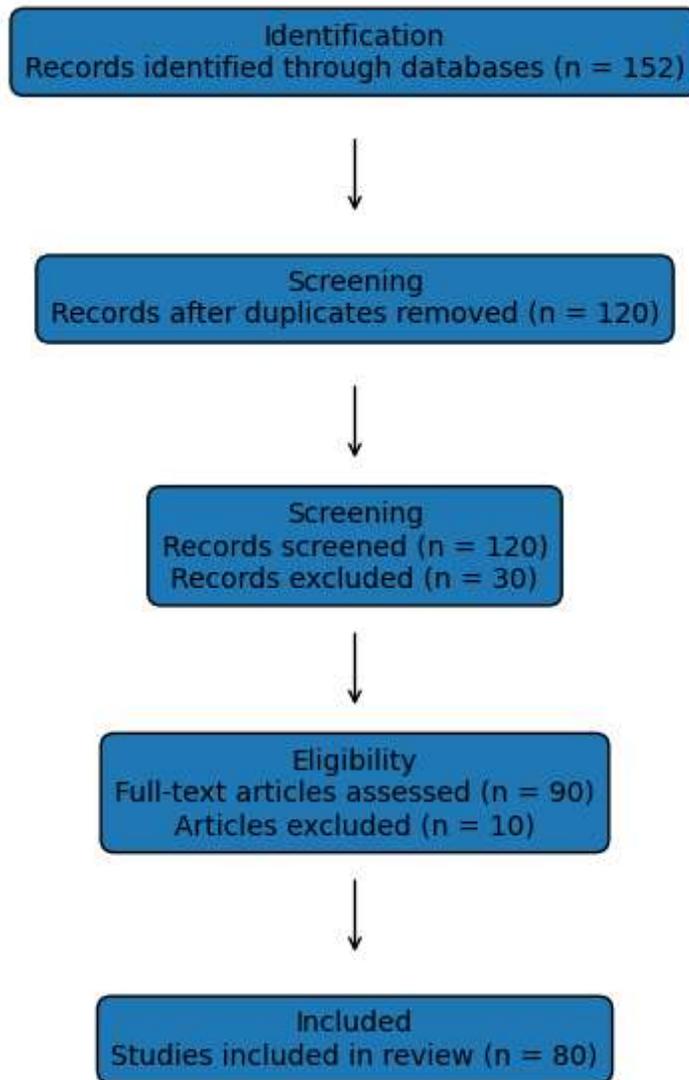
DATA ANALYSIS
Thematic Analysis Approach

The selected studies were analyzed using **thematic analysis**, which is a qualitative method used to identify patterns and themes within a dataset (Braun & Clarke, 2006). Thematic analysis allows researchers to systematically organize and interpret large volumes of textual information.

The thematic analysis process followed six stages:

1. Familiarization with the data
2. Generating initial codes
3. Searching for themes
4. Reviewing themes
5. Defining and naming themes
6. Producing the final report

During the first stage, all selected articles were carefully read to understand the main findings and theoretical perspectives. In the second stage, key concepts related to digital transformation, technostress, and employee well-being were coded.

In the third stage, similar codes were grouped into broader themes. These themes were then reviewed and refined to ensure consistency and relevance to the research objectives.

Theme Identification Process

The thematic analysis of the selected studies resulted in the identification of **four major themes**.

Theme 1: Digital Banking Technologies

Many studies highlight the increasing adoption of digital technologies in the banking sector. These technologies include mobile banking applications, artificial intelligence, cloud computing, and fintech platforms. Researchers argue that these technologies improve efficiency and customer service but also increase employees' dependence on digital systems.

Theme 2: Technostress Creators

The literature identifies several factors that contribute to technostress. According to Tarafdar et al. (2007), technostress arises from five major sources:

- techno-overload
- techno-invasion
- techno-complexity
- techno-insecurity
- techno-uncertainty

These stressors increase employees' workload and psychological pressure.

Theme 3: Employee Well-Being

Many studies indicate that technostress negatively affects employee well-being. Employees experiencing technostress often report higher levels of burnout, reduced job satisfaction, and lower productivity.

Theme 4: Organizational Support

Organizational support mechanisms such as training programs, technical support, and supportive leadership can help employees cope with technological changes.

The thematic analysis framework illustrates the relationships between digital transformation, technostress creators, employee well-being, and organizational support.

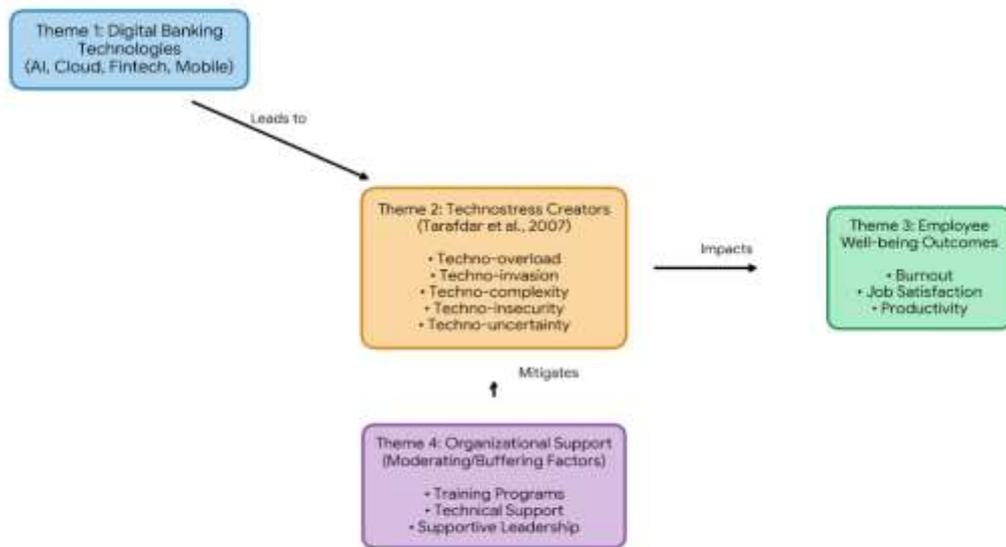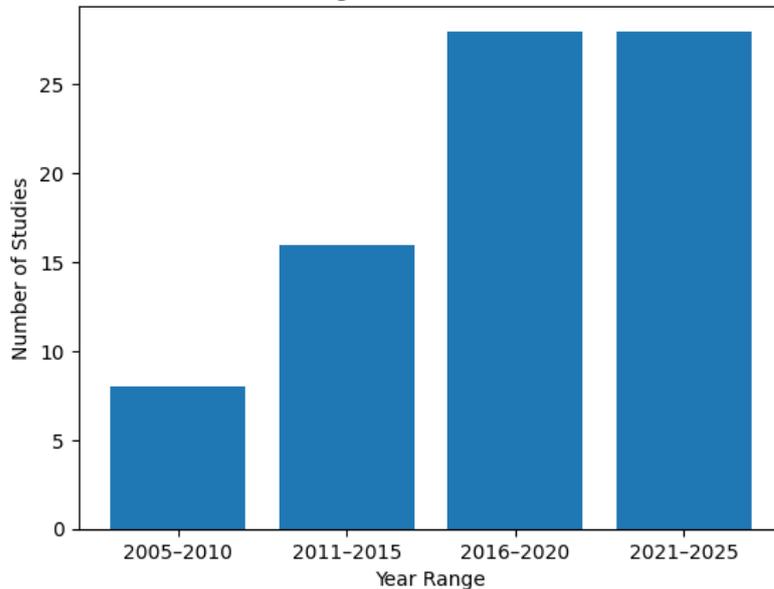Thematic Framework: Digital Transformation and Technostress in Banking

Figure 3. Publication Trend in Digital Transformation and Technostress Research

RESULTS AND DISCUSSION

This systematic literature review offered its results based on the use of PRISMA framework and thematic analysis. Following the screening and assessment of the articles that have been chosen, there were several common themes found which elaborate on the connection between digital transformation and technostress in the banking industry. The thematic analysis showed that there are four key themes, including the digital transformation of the banking work, those who create technostress, how well the employees work and feel, and the importance of organizational support in alleviating technostress.

Banking Operations Digital Transformation

The results suggest that the digital transformation has largely transformed banking activities across the world. Online banking systems, mobile banking, artificial intelligence, automated teller machines, and cloud-based financial services have become the new digital technologies that banks are embracing. Such technological innovations have increased the efficiency of the operations, minimized the time of transaction, and pleased the customers.

Nevertheless, the introduction of modern technologies in the banking business has also made the work of employees more complicated. Numerous staff members must also learn to change fast towards new digital platforms, software upgrades, and technological systems. The literature reviewed indicates that the employees who are not adequately trained or are not

digital literate can have problems with adapting to these changes. The digital transformation has the potential to cause more cognitive and psychological stress on the banking staff, especially on the staff of the state banks, where technological adopting may happen faster without the support of the training.

Technostress Creators

The review of the studies reveals that there are a number of aspects contributing to technostress among the employees in the banking industry. Technology overload is one of the most commonly mentioned factors and it appears when the employees are forced to complete numerous tasks with the help of digital systems within a constrained time interval. This tends to add work load and time pressure.

Technology complexity is another important factor that has been found in the literature. Digital transaction platforms, cybersecurity system tools, automated customer service tools are all banking technologies that may be hard to comprehend and use without appropriate training. The employees who are not able to cope with the sophisticated systems might get frustrated and stressed.

Moreover, the ever-present connectivity due to digital communication technologies and banking systems is also a cause of technostress as it erases the boundaries between the work and personal life. Employees can be pressurized to be at their disposal even after working hours, which is a negative impact on work-life balance. Moreover, the constant need to update the system and technologies means that employees have to be constantly learning and adjusting, which may add additional pressure to the state of stress.

Influence on Worker Well-Being and Work

The literature continuously notes the adverse effects of technostress on the well-being of employees. Workers who are faced with high technostress tend to complain of anxiety, exhaustion, and job discontent. Such psychological impacts could lower motivation and productivity of employees.

Technostress can also enhance the risks of making mistakes and lowering the overall job performance in the banking sector because accuracy and efficiency are essential factors in the field. The employees overwhelmed by the technological demands might find it difficult to perform at high levels.

Nonetheless, certain studies indicate that employees that are well trained and provided with the necessary technological support adjust more easily to digital transformation. Such employees are more confident in working with digital systems and they feel less stressed. This observation implies that technostress cannot be negative and can be reduced by using effective organizational strategies.

Organizational Support Role

Organizational support is an important factor in alleviating technostress in the employees of the banking sector. The papers under consideration highlight the significance of training schemes, technical support systems and the role of leadership in assisting workers to change with new technological advances.

Digital skill development training programs can help employees with effective management of technological systems to a great extent. With proper training, the employees learn to be much more confident in their use of digital platforms and less likely to be technostressed.

Another significant variable that was found in the literature is leadership support. Managers that are clear, provide guidance, and encouragement to employees in the process of technological transformations, can assist the employees in overcoming the challenges of the digital transformation. Moreover, the firms that foster work-life balance and flexible work policies have a greater success in reducing the adverse impacts of the omnipresence.

In general, the findings indicate that the digital transformation may bring new challenges to the workplace, but the effective organizational support systems may greatly decrease the technostress and positively influence the well-being of employees.

CONCLUSION

This paper has undertaken a systematic review of the literature to discuss the association between digital transformation and technostress in banks. With the use of the PRISMA framework and the thematic analysis, the study summarized the results of current researches to determine major trends and themes in the given field.

The results show that digital transformation has become an obligatory part of contemporary banking performance. Mobile banking, artificial intelligence, and automation are some of these technologies that have enhanced operational efficiency and delivery of customer services. Nevertheless, the rapid adoption of digital technologies has also led to emerging challenges on the part of the employees and especially in technostress.

The review points out that the main effects that make technostress are overload, complexity, and constant connectivity of technology. These aspects may have an adverse impact on the well-being of employees, job satisfaction, and productivity. Those workers who find it hard to adjust to new technologies might be affected with increased stress levels and lack of work performance.

In spite of these obstacles, the literature purports that organizational support can go a long way in alleviating the adverse impacts of technostress. The digital skill development programs, training programs, and supportive leadership practices can enable employees to adjust towards the changes in technology in a better way. Companies that invest in their employees and offer them the necessary technological support have greater chances to decrease technostress and enhance the outcomes in the workplace.

Finally, as much as the digital transformation is needed to support the growth and competitiveness of the banking institutions, it should be realized to accompany human resource strategies to guarantee organizational performance and sustainability as well as the well-being of the employees.

FUTURE RESEARCH DIRECTION

Despite the fact that this research offers meaningful information on the occurrence of digital transformation and technostress in the banking industry, a number of aspects need to be explored.

On the one hand, the future research potential may involve the activities of empirical research with the primary data collection of banking employees to learn more about their experiences of digital transformation and technostress. These studies would give more information on how employees adapt to technological change at actual organizational level.

Second, scholars can investigate cross-national comparison to study the cultural and banking system differences in the way technostress is expressed. This would assist in determining whether the organizational practices and technological environment have different impacts on technostress in different regions.

REFERNCES

Ayyagari, R., Grover, V., & Purvis, R. (2011). Technostress: Technological antecedents and implications. *MIS Quarterly, 35*(4), 831–858. https://doi.org/10.2307/41409963

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

Brod, C. (1984). Technostress: The human cost of the computer revolution. Reading, MA: Addison-Wesley.

Califf, C. B., Sarker, S., & Sarker, S. (2020). The bright and dark sides of technostress: A mixed-methods study involving healthcare IT. *MIS Quarterly, 44*(2), 809–856.

Davis, F. D. (1989). Perceived usefulness, perceived ease of use, and user acceptance of information technology. *MIS Quarterly, 13*(3), 319–340. https://doi.org/10.2307/249008

Fischer, T., Pehböck, A., & Riedl, R. (2019). Is there a relationship between technostress and performance? *Journal of Organizational Computing and Electronic Commerce, 29*(3), 1–21.

La Torre, G., Esposito, A., Sciarra, I., & Chiappetta, M. (2019). Definition, symptoms, and risk of technostress: A systematic review. *International Journal of Environmental Research and Public Health, 16*(3), 1–15. https://doi.org/10.3390/ijerph16030599

Ragu-Nathan, T. S., Tarafdar, M., Ragu-Nathan, B. S., & Tu, Q. (2008). The consequences of technostress for end users in organizations: Conceptual development and empirical validation. *Information Systems Research, 19*(4), 417–433. https://doi.org/10.1287/isre.1070.0165

Tarafdar, M., Tu, Q., Ragu-Nathan, T. S., & Ragu-Nathan, B. S. (2007). The impact of technostress on role stress and productivity. *Journal of Management Information Systems, 24*(1), 301–328.

Tarafdar, M., Cooper, C. L., & Stich, J. F. (2019). The technostress trifecta: Techno eustress, techno distress, and design. *Information Systems Journal, 29*(1), 6–42. https://doi.org/10.1111/isj.12169

Vial, G. (2019). Understanding digital transformation: A review and a research agenda. *Journal of Strategic Information Systems, 28*(2), 118–144. https://doi.org/10.1016/j.jsis.2019.01.003

Weiss, M., & Leimeister, J. M. (2012). IT-enabled business models: New approaches to digital transformation. *Electronic Markets, 22*(3), 141–146.