


# Psychological Effects in the Relationship of Digital Human Resource Management to Employee Resilience: A Systematic Review

Santy Berliana Naibaho\*, Hendy Tannady, Lista Meria, Ferryal Abadi, Rojuaniah

Universitas Esa Unggul, Indonesia

[santyberlynaibaho@student.esaunggul.ac.id](mailto:santyberlynaibaho@student.esaunggul.ac.id)\*

<p><b>Revised:</b> 2025-09-20</p> <p><b>Published:</b> 2025-12-08</p> <p><b>Keywords:</b> Digital Human Resources Management, Employee Resilience, Psychological Mechanisms, Work Engagement, Organizational Behavior</p> <p><b>Copyright holder:</b> © Author/s (2025)</p> <p><b>This article is under:</b></p>  <p><b>How to cite:</b> Naibaho, S. B., Tannady, H., Meria, L., Abadi, F., &amp; Rojuaniah, R. (2025). Psychological Effects in the Relationship of Digital Human Resource Management to Employee Resilience: A Literature Review. <i>Bulletin of Counseling and Psychotherapy</i>, 7(3). <a href="https://doi.org/10.51214/002025071620000">https://doi.org/10.51214/002025071620000</a></p> <p><b>Published by:</b> Kuras Institute</p> <p><b>E-ISSN:</b> 2656-1050</p>	<p><b>ABSTRACT:</b> The COVID-19 pandemic has created rapid changes that led many companies to speed up digital transformation, particularly in the management of human resources. A key development in this process is the adoption of Digital Human Resource Management (DHRM), an approach that brings digital technologies into HR functions. This study aims to systematically review the literature linking DHRM to employee resilience, focusing on the psychological impact of the interaction between technology and individuals. Using a systematic literature review (SLR) method, 50 articles from Scopus and ProQuest were analyzed. The results show that DHRM contributes to employee psychological resilience by increasing self-efficacy, psychological safety, and agility and creating an emotionally supportive digital workspace. The study found that psychological aspects like coping strategies, emotions, and perceived support are essential in linking digital systems with employee resilience. The study suggests using an interdisciplinary perspective that brings together technology and psychology to develop effective DHRM systems while also addressing employees' psychological well-being.</p>
--	--

## INTRODUCTION

In modern organizations, employee resilience is not simply the result of training or efficient work systems, but rather a complex psychological process. The interaction between stress, perceived self-control, and work experience shapes the psychological resilience essential in the digital era. Therefore, the understanding of DHRM must be expanded from merely a technical management tool to a holistic psychological strengthening tool (Ahmić & Ćosić, 2025). Digital technology development has significantly impacted various aspects of organizational life, including human resource management (HRM) (Kraus et al., 2022). One form of response to the demands of this change is the birth of Digital Human Resource Management (DHRM), namely an HR (Jaklič et al., 2024) management approach that integrates digital technology in the entire cycle of Human Resources functions, from recruitment, training, performance development to employee retention, all of which can now be carried out digitally to increase efficiency, accuracy, and support data-based decision making (Ruiz et al., 2024; Strohmeier, 2020).

This transformation became even more important when the COVID-19 pandemic hit the world (Ahmić & Ćosić, 2025). The crisis forced organizations to accelerate digitalization, particularly in work systems and employee management (Stachová et al., 2024). HR functions such as selection, onboarding, training, and performance monitoring, which were previously carried out face-to-face,

must be immediately shifted to online platforms to maintain organizational continuity (Y. Liu et al., 2024; Nakash & Bouhnik, 2023). This situation indicates that digitalization is no longer an option but an urgent strategic necessity.

However, the shift in work systems towards digital also brings significant psychological challenges (Alamanda et al., 2024). Not all employees are mentally and emotionally prepared to face these sudden changes. The pressures of uncertainty, digital workloads, and limited face-to-face communication can lead to stress, anxiety, and decreased motivation (Hu & Lan, 2024). Therefore, organizations must focus not only on the technical aspects of digitalization but also on strengthening employees' psychological and social aspects, such as stress management, strengthening self-efficacy, and providing digital social support (J. Zhang & Chen, 2024). In this context, employee resilience refers to the adaptive and psychological capacity to recover from stress and maintain mental well-being amid rapid change.

Employee resilience refers to an individual's ability to remain resilient, adapt, and recover from stress or crises in the work environment (Anser et al., 2022). Previous research shows that employee resilience is influenced by various factors such as self-efficacy, organizational support, learning agility, and trust in the system used (Ojo et al., 2021; Park et al., 2022; Yu et al., 2022). When digital HR is designed with humanistic aspects in mind, for example, through a self-training system, transparent feedback, and open digital communication, DHRM can build resiliency (Do et al., 2025; Malik & Singh, 2024).

Several studies support the link between HR digitalization and increased resilience. Do et al. (2025) show that the Artificial Intelligence (AI) system in DHRM shows improved exploratory learning and adaptability. Park et al. (2022) emphasize learning agility as a mediator between digital HR practices and career resilience. Yu et al. (2022) found that technology-based SHRM practices contributed to increased self-efficacy, impacting employee resilience. Bouzakhem et al. (2023) state that empowerment through digital systems encourages post-pandemic psychological recovery and resilience. Research by Liu et al. (2024) also revealed that a company's digital orientation can strengthen organizational resilience, especially when combined with HR slack. Gul et al. (2025) prove that digitally transformed green HRM can strengthen sustainability by increasing individual and organizational resilience.

Although discussions about digital transformation in human resource management are plentiful, little research examines how Digital Human Resource Management (DHRM) can impact employee resilience. Yet, employees' ability to survive and adapt to stressful work conditions is crucial today, especially following the COVID-19 pandemic, which has accelerated changes in how work is conducted in many organizations. Digitalization in HRM, such as online training platforms, technology-based performance appraisal systems, and digital communication tools, is considered to help foster employee resilience. Previous studies have shown that well-designed digital HR systems can increase employee confidence, learning agility, and organizational engagement. However, most research still addresses these topics separately, with some focusing solely on the technological aspects and others on the psychological or organizational aspects.

To this end, this study aims to systematically review the literature discussing how DHRM relates to employee resilience. Furthermore, it aims to understand how individual, organizational, and digital system factors can work together to support employee resilience. This research is also expected to identify gaps in previous studies and provide direction for future research. Specifically, three main questions need to be answered: 1) What has been found in the literature regarding the relationship between Digital Human Resource Management (DHRM) and employee resilience?; 2) What factors most frequently appear in the literature as determining the success of DHRM in building employee resilience, both from the individual, organizational, and technological perspectives?; 3) What are the gaps in previous research that can be used as a basis for further research in the future?

## Study Aim and Hypothesis

This study aims to systematically review the scientific literature discussing the relationship between DHRM and employee resilience over the past five years, particularly since the COVID-19 pandemic, which has transformed many aspects of human resource management. The primary focus of this study is to explore the extent to which DHRM practices play a role in shaping, strengthening, and supporting employees' psychological resilience and adaptive abilities in the face of stress, changes in work systems, and high levels of work environment uncertainty. Through a systematic literature review, this study also aims to identify recurring patterns, theoretical approaches, and empirical contributions generated by various previous studies. This study attempts to present a comprehensive synthesis of published scientific evidence, while also identifying gaps in the literature that researchers rarely address, particularly those related to integrating digital technology into HR practices and its impact on employee resilience across various organizational contexts.

## METHODS

### Design

This study employed a Systematic Literature Review (SLR) approach guided by PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses). This method ensured the literature review process was conducted transparently, systematically, and replicable. SLR was chosen because it can combine and organize previous findings from various methodological approaches and contexts, thus providing a broader understanding of the topic under review.

### Participants

This study analyzed scientific journal articles published between 2020 and 2025. Data searches were conducted from two main databases, namely Scopus and ProQuest, with a publication time span between 2020 and 2025. The keywords used in the search process include a combination of "Digital Human Resource Management" OR "DHRM" OR "e-HRM" AND "Employee Resilience" OR "Resilient Employees". The initial search results from Scopus obtained 1,573 documents, which were then filtered to 379, and finally, 25 articles were selected that met the inclusion criteria. Meanwhile, from ProQuest, the initial search resulted in 15,577 documents, filtered to 2,899, and 25 relevant articles were selected. Thus, the final total articles analyzed in this study was 50 scientific articles.

Table 1. Article selection criteria.

Criteria	Inclusion	Exception
Type of Study	Qualitative Journal	Quantitative Journal
Keywords	"Digital Human Resource Management" OR "DHRM" OR "e-HRM" AND "Employee Resilience" OR "Resilient Employees"	Not included
Publication Year	2020-2025	Before 2020
Language	English	English
Subject Area	<i>Psychology, Business, Management and Accounting, Economics, Econometrics and Finance</i>	Not included

### PRISMA Flow Diagram

Based on procedures following the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines, 50 scientific articles were selected for in-depth analysis.

These articles resulted from a phased selection from two major databases, namely Scopus and ProQuest, with a publication range between 2020 and 2025. The screening process was carried out systematically, starting from the initial identification stage, which resulted in 1,573 articles from Scopus and 15,577 from ProQuest. The number of relevant articles was filtered to 379 documents from Scopus and 2,899 documents from ProQuest. The screening continued by reading the entire text and evaluating topic relevance and suitability with the research focus. The final selection process resulted in 25 articles from Scopus and 25 from ProQuest, bringing the total number of articles reviewed in-depth in this study to 50 scientific documents, as shown in Figure 1 PRISMA Diagram.

This template is the basis for compiling a literature analysis table and mapping the relationships between variables in studies addressing Digital Human Resource Management (DHRM) and employee resilience. This process is expected to provide a comprehensive mapping and identify trends, methodological patterns, and relevant research gaps for further development.

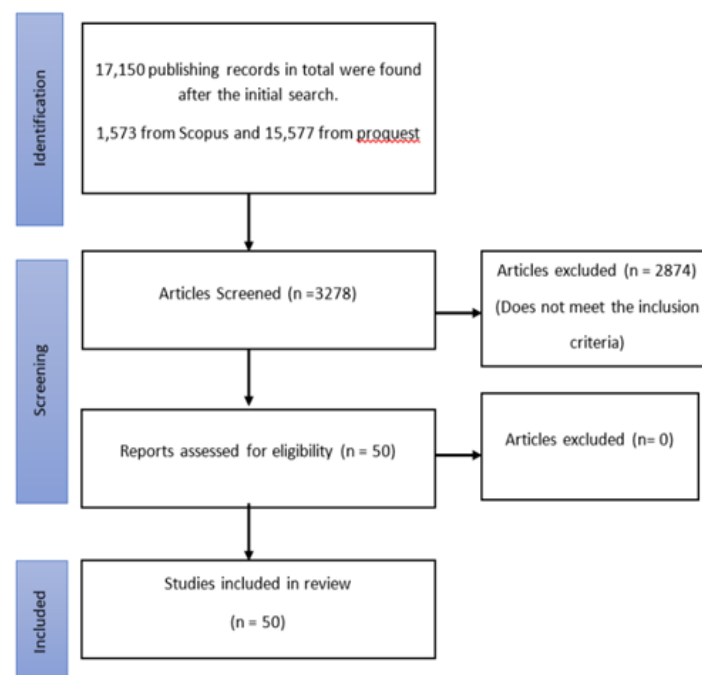


Figure 1. PRISMA

## RESULTS AND DISCUSSION

### Results

#### Keyword Co-Occurrence Analysis

Digital Human Resource Management (DHRM) is a strategic approach to human resource management that integrates digital technology to improve HR processes' accuracy, efficiency, and effectiveness. This transformation includes digitizing core HR activities such as selection processes, training and development, performance assessments, talent management, and internal communications through technology-based systems, automation, and data analytics (Strohmeier, 2020). Meanwhile, employee resilience refers to an individual's ability to remain resilient, adapt, and bounce back from stress and disruption in the workplace, while maintaining positive performance and engagement. This resilience encompasses psychological and behavioral aspects that help employees navigate difficult times and grow from them (Ojo et al., 2021; Yu et al., 2022).

In the digital era, employee resilience is closely associated with the capacity to adapt to technological systems. Therefore, DHRM plays a crucial role in providing digital systems and platforms that are technically efficient and enable employees to face modern work challenges with greater confidence and flexibility.

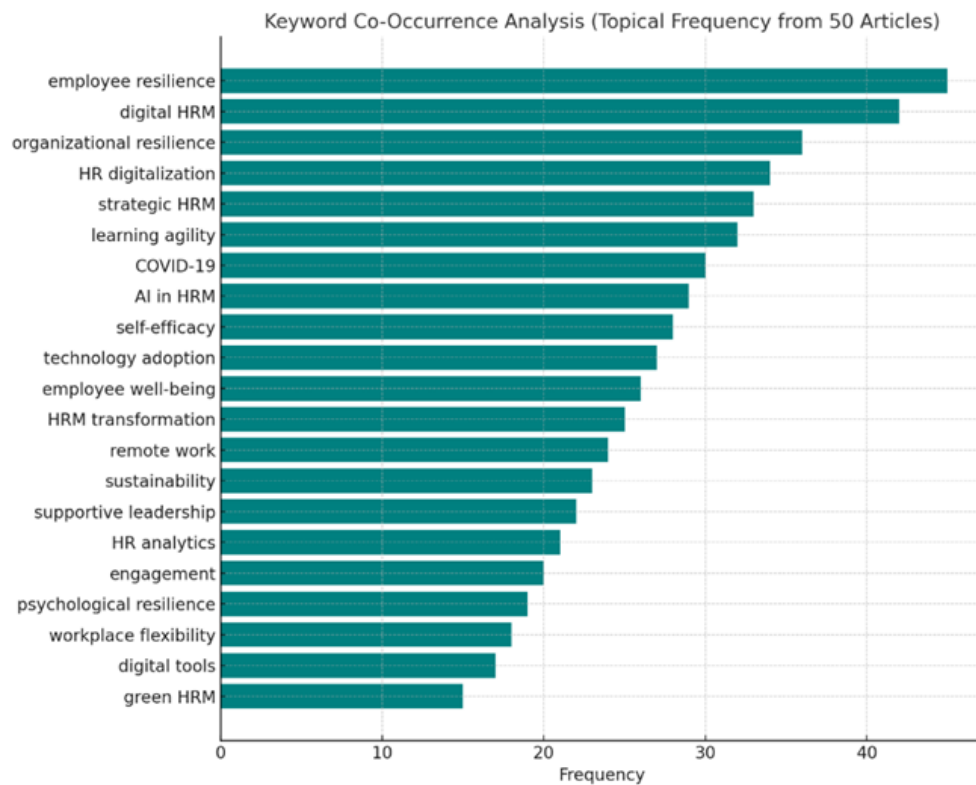


Figure 2. Keyword co-occurrence

Keyword co-occurrence analysis of the 50 journals reviewed shows that "employee resilience" and "digital HRM" are the two most dominant keywords, appearing 45 and 42 times, respectively. It indicates that most articles explicitly link employee psychological resilience and adaptability to digital-based HR management practices. Other keywords such as "organizational resilience," "HR digitalization," and "strategic HRM" also appear frequently, indicating a significant focus on comprehensive and strategic organizational transformation.

Furthermore, terms such as "learning agility," "self-efficacy," and "AI in HRM" occupy prominent positions in the literature, suggesting that employee resilience is closely linked to individual factors and technological support. The keyword "COVID-19," which appears 30 times, demonstrates that the global crisis is a dominant context driving change and reinforcing the need for workforce resilience.

These findings indicate that research in this area should not only focus on the efficiency of technology in HRM but also consider its impact on employees' psychological and social aspects. Therefore, effective DHRM strategies must consider the interrelationships between technology, organizational structure, and strengthening individual adaptive capacity.

### Unit of Analysis: Documents

In this study, the primary unit of analysis is scientific documents in the form of journal articles explicitly discussing the topic of DHRM and employee resilience. A total of 50 articles were selected through a rigorous PRISMA-based process from Scopus and ProQuest (2020–2025). Each article was analyzed in terms of theoretical framework, methodology, findings, and studied variables.

While the full dataset of 50 documents formed the basis of the systematic mapping and thematic synthesis, Table 2 presents ten representative articles that exemplify the most relevant conceptual intersections between digital HRM and employee resilience. These ten were selected based on their thematic richness, citation impact, and methodological quality.

Table 2. Relevant Combination Articles.

No	Article Title	Year	Journal	Author(s)	Relevance Notes
1	A Literature Review of the Concepts of Resilience and Sustainability in Group Decision-Making	2020	Psychology Research and Behavior Management	Ardebili & Padoano (2020)	Resilience, Sustainability, GDM Factors
2	Digital Human Resource Management: A Conceptual Clarification	2020	German Journal of Human Resource Management	Strohmeier (2020)	Digital HRM concepts
3	Examining the Predictors of Resilience and Work Engagement during the COVID-19 Pandemic	2021	International Journal of Environmental Research and Public Health	Ojo et al. (2021)	Self-efficacy, Social Support, Resilience, Engagement
4	Linking Employee Resilience with Organizational Resilience	2021	SAGE Open	Liang & Cao (2021)	Employee resilience, Coping mechanisms, Organizational resilience
5	Sustainability and Resilience Organizational Capabilities to Enhance Business Continuity Management: A Literature Review	2021	Sustainability	Corrales Estrada et al. (2021)	Sustainability, Resilience, Business Continuity
6	A Study of the Impact of Strategic Human Resource Management on Organizational Resilience	2022	Behavioral Sciences	Yu et al. (2022)	SHRM, Resilience, Self-efficacy, Self-management
7	Human Resource Management and Institutional Resilience during the COVID-19 Pandemic - A Case Study from the Westfjords of Iceland	2022	Sustainability	Jóhannsdóttir et al. (2022)	HRM, Resilience, Coping Strategies

No	Article Title	Year	Journal	Author(s)	Relevance Notes
8	Internal Marketability, External Marketability, and Career Resilience: The Mediating Role of Learning Agility	2022	Sustainability	Park et al. (2022)	Marketability, Learning Agility, Career Resilience
9	Managing Labor Sustainability in Digitalized Supply Chains: A Systematic Literature Review	2022	Sustainability	Chen et al. (2022)	Labor practices, Digitalization, SCM
10	The Mediating and Moderating Effect of Organizational Resilience on Competitive Advantage: Evidence from Chinese Companies	2022	Sustainability	Wang et al. (2022)	Organizational resilience; Organizational learning; Sustained competitive advantage; Environmental dynamics
11	Utilization of Knowledge Management as Business Resilience Strategy for Microentrepreneurs in Post-COVID-19 Economy	2022	Sustainability	Zayed et al. (2022)	Knowledge management (acquisition, Storage, Sharing, Utilization), Business resilience
12	Digital Transformation Adoption in Human Resources Management during COVID-19	2022	Arab Gulf Journal of Scientific Research	Alawi et al. (2023)	e-HRM adoption factors: funding, IT infrastructure, tech support, Culture, Digital skills
13	The Impact of Digital HRM on Employee Performance Through Employee Motivation	2022	International Journal of Digital Networks and Systems	Kharabsheh et al. (2023)	Digital training, performance appraisal, Employee motivation, Performance
14	The bright and dark side of smart working in the public sector: employees' experiences before	2023	Management Decision	Todisco et al. (2023)	Smart working, Organizational flexibility, public administration, Digital transformation,

No	Article Title	Year	Journal	Author(s)	Relevance Notes
	and during COVID-19				New forms of work
15	Artificial intelligence as an enabler for achieving human resource resiliency: past literature, present debate and future research directions	2023	International Journal of Industrial Engineering and Operations Management	Panda et al. (2024)	AI, HR resiliency, Employee engagement, Performance
16	Core Competence - As a Key Factor for a Sustainable, Innovative and Resilient Development Model Based on Industry 5.0	2023	Sustainability	Suciu et al. (2023)	Core competencies, digital skills, Industry 4.0 & 5.0, sustainability
17	Organizational Resilience in Public Sector Organizations: Destination Management Organizations	2023	Journal of Health and Human Services Administration	Roach et al. (2023)	Organizational resilience, Destination management, Positive work climate
18	Rebuilding the Workplace in the Post-Pandemic Age through Human Capital Development Programs: A Moderated Mediation Model	2023	Administrative Sciences	Bouzakhem et al. (2023)	Human capital development, Empowerment, Resilience, Mimetic isomorphism
19	Resilient leadership in hospitality and tourism enterprises: conceptualization and scale development	2023	International Journal of Contemporary Hospitality Management	Zhang et al. (2024)	Resilient leadership dimensions: Contingency planning, Improvisation, recovery, etc.
20	Developing ambidexterity and resilience: The predictive role of	2023	SA Journal of Human Resource Management	Hanu & Khumalo (2023)	High-performance Work systems, Ambidexterity,



No	Article Title	Year	Journal	Author(s)	Relevance Notes
	high-performance work system				Employee & org. resilience
21	How to leverage flexibility oriented HRM systems to build organizational resilience in the digital era: the mediating role of intellectual capital	2023	Journal of Intellectual Capital	Li & Lin (2024)	FHRM, Intellectual capital, Digital capability, Organizational resilience
22	Task Challenge and Employee Performance: A Moderated Mediation Model of Resilience and Digitalization	2023	Behavioral Sciences	Saleem et al. (2023)	Task challenge, Employee performance, Employee resilience, Digitalization
23	Human resource management (HRM) Strategies of Medical Staff During the COVID-19 Pandemic	2023	Heliyon	Mahdavi et al. (2023)	HRM strategies, COVID-19, Medical staff resilience
24	Artificial Intelligence-Driven Supply Chain Resilience in Vietnamese Manufacturing SMEs	2023	International Journal of Production Research	Dey et al. (2024)	AI adoption, Supply chain resilience, Leadership, Digital culture
25	Digital Design in the HRM System as a Component of the Sustainable Development Strategy	2023	EDP Sciences	Fokina et al. (2024)	Digital design, HRM system, Sustainability strategy
26	The Influence of COVID-19 on Employees' Use of Organizational Information Systems	2023	Interdisciplinary Journal of Information, Knowledge and Management	Nakash & Bouhnik (2023)	Information systems use, Digital transformation, Resilience, Remote work
27	The "Great Reset" and its implications on organizational theory	2024	Kubernetes	Roblek et al. (2024)	Great reset, Organizational changes, Complexity,

No	Article Title	Year	Journal	Author(s)	Relevance Notes
					Thematic network analysis
28	Effects of Digital Orientation on Organizational Resilience: A Dynamic Capabilities Perspective	2024	Journal of Manufacturing Technology Management	Liu et al. (2024)	Digital orientation, Organizational resilience, HR slack, Enterprise ownership
29	Enhancing Organizational Resilience: The Transformative Influence of Strategic Human Resource Management Practices and Organizational Culture	2024	Sustainability	Georgescu et al. (2024)	Organizational resilience; Strategic human resource management practices; Recruitment and selection; Employee training; Performance management; Work environment; Organizational culture
30	Fostering social sustainability: unveiling HR's power in HR's power in enhancing employee resilience via social exchange and broaden and build theories	2024	Employee Relations: The International Journal	Malik & Singh (2024)	Socially sustainable HRM, Well-being, Trust, Employee resilience
31	High-Involvement Human Resource Management Practices and Employee Resilience: The Mediating Role of Employee Technology Adaptation: A Case Study of South Sumatra	2024	Administrative Sciences	Cahyadi et al. (2024)	High-involvement human resource management practices; Employee technology adaptation; Employee resilience; post-COVID-19 era; small and

No	Article Title	Year	Journal	Author(s)	Relevance Notes
					medium enterprises
32	Human Resource Productivity: Integrating Resilience Engineering, Motivation, and Health Safety	2024	Production Engineering Archives	Putra et al. (2024)	HSE practices, Resilience engineering, Motivational work factors, Productivity, Paradigm shift in HSE.
33	Risk Management in MNEs during Global Crises: Subsidiary Control or Autonomy?	2024	School of Economics and Business University of Ljubljana	Andreja Jakli et al. (2024)	Subsidiary autonomy, Risk management, Resilience, Global crises
34	The Influence of Strategic Human Resource Management and Artificial Intelligence in Determining Supply Chain Agility and Supply Chain Resilience	2024	Sustainability	Yamin et al. (2024)	Strategic HR management; Artificial intelligence; Human capital development; Competitive intensity; Organizational flexibility; Supply chain agility; supply chain resilience
35	The Role of Digital Transformation and Digital Competencies in Organizational Sustainability: A Study of SMEs in Lima, Peru	2024	Sustainability	Espina Romero et al. (2024)	Digital transformation, digital competencies, HRM, Organizational culture
36	Digital human resource strategy: Conceptualization, theoretical development, and an empirical examination of its impact on firm performance	2024	Journal Information & Management	Ruiz et al. (2024)	Digital HR strategy, Digital HRM practices, Firm performance HR strategy, The business value of digital HR strategy,

No	Article Title	Year	Journal	Author(s)	Relevance Notes
					Sociotechnical theory
37	The Impact of Enterprise Resilience and HRM Practices on Performance: Findings from fsQCA	2024	Journal Frontiers in Psychology	Liu et al. (2023)	Enterprise resilience, Human resource management practice, Enterprise performance, Combination configuration, fuzzy set qualitative comparative analysis
38	Age Considerate Employee Engagement Strategies in SMEs: Analysis of Practices and Research Opportunities	2024	Problems and Perspectives in Management	Rašticová & Hinzmann (2024)	Employee engagement, age diversity, HRM practices
39	The dual path effect mechanism study of digital-HRM on employee innovative performance and cyberloafing	2024	Public Library of Science (PLOS)	Hu & Lan (2024b)	Digital HRM, innovative performance, cyberloafing, psychological mechanisms
40	Unraveling the Conceptual Ambiguity of Digital HRM: A State-of-the-Art Review	2024	Cogent Social Sciences	Fiaz & Qureshi (2024)	Digitalization; Digital Transformation; electronic; Human resource information system; state-of-the-art review
41	The Effect of Collectivism-Oriented HRM on Employee Resilience of Hospitality Employees	2024	Frontiers in Psychology	Chen et al. (2024)	Collectivism-oriented human resource management, the group engagement model, Perceived overall fairness, social identity,

No	Article Title	Year	Journal	Author(s)	Relevance Notes
					Employee resilience
42	Building Business Resilience Through Strategic Entrepreneurship: Evidence from Culinary Micro-Enterprises in Bandung During the COVID-19 Pandemic	2025	Sustainability	Charisma et al. (2025)	Knowledge management capability, Entrepreneurial finance, Marketing, Resilience
43	Digital Maturity in Transforming Human Resource Management in the Post-COVID Era: A Thematic Analysis	2025	Administrative Sciences	Shahiduzzaman (2025)	Digital maturity, HR strategy, COVID-19 adaptation, Innovation
44	Impact of Green Human Resources Management Practices on Sustainability Through Organizational Resilience and Organizational Learning in Pakistan's Banking Sector	2025	Sustainability	Gul et al. (2025b)	Green HRM; Organizational resilience; Organizational learning; Organizational sustainability; banking sector
45	How and When AI-driven HRM Promotes Employee Resilience and Adaptive Performance: A self-determination theory	2025	Journal of Business Research	Do et al. (2025)	AI-driven Human Resource Management, Trust in AI, Exploration, Resilience, Adaptive performance, Self-determination theory
46	Learning Organization and Organizational Agility in the Context of Organizational	2025	Journal of Information Systems Engineering and Management	Kurniawan & Aziz (2025)	E-HRM, Learning organization; Organizational agility, Organizational performance

No	Article Title	Year	Journal	Author(s)	Relevance Notes
	Performance: The Moderating Role of E-HRM Systems				
47	Resilience-Based Interventions in the Public Sector Workplace: A Systematic Review	2025	BMC Public Health	Hollaar et al., (2025)	Psychological resilience, Mental health, Health promotion, Occupational health, Intervention studies
48	A Conceptual Framework for Sustainable Human Resource Management: Integrating Ecological and Inclusive Perspectives	2025	Sustainability	Soekotjo et al. (2025)	Sustainable human resource management (SHRM), Green HRM, Diversity; Equity, and Inclusion (DEI), Ecological sustainability, social inclusivity, Organizational resilience, Sustainable Development Goals (SDGs)
49	Sustainable Human Resource Management in Emergencies: The Case of the Lithuanian Logistics Sector	2025	Sustainability	Čižiūnienė et al. (2025)	Human resource management; Emergency; Logistics sector; Sustainability
50	Digital human resource management influence on the organizational resilience	2025	Journal Organization Management	Ahmić & Ćosić (2025)	Digital HRM, Human resource management, Artificial intelligence, AI, Organizational resilience

The fifty journal articles were purposefully selected to represent the most explicit, conceptually rich, and methodologically diverse studies linking Digital HRM (DHRM) and employee resilience. This comprehensive dataset provides a balanced representation of organizational types, research contexts, and theoretical frameworks identified across the literature. The article by Do et al. (2025) became the most dominant because it provides a complete conceptual model of how

artificial intelligence (AI) in HRM drives resilience and performance. Meanwhile, Yu et al. (2022) and Bouza & Bouzakheml (2023) focus on psychological mechanisms such as self-efficacy and empowerment, which are important variables in much of the other literature.

All articles have also undergone a quality assessment process using the CASP (Critical Appraisal Skills Programme) approach. This critical evaluation framework helps assess methodological validity, theoretical contribution, and readability of research findings. This assessment's main focus includes the methods' openness, relevance to contemporary issues, and alignment with key keywords such as employee resilience, HRM digitalization, and COVID-19 adaptation. Therefore, these documents are considered the strongest representation of current research trends on HR management transformation and strengthening workforce resilience in a digital and disruptive context.

### Unit of Analysis: Sources

The source analysis unit in this study refers to the origins of scientific publications, namely the academic journals where the articles were published. This analysis is essential to identify each journal's scientific credibility, publishing trends, and contribution to developing Digital Human Resource Management (DHRM) and employee resilience.

Of the 50 selected documents that met the inclusion criteria (2020–2025), open access, topic relevance, and peer-reviewed, several key journals most frequently published articles in this field. It demonstrates that DHRM and employee resilience are multidisciplinary fields of study, spanning management, organizational psychology, sustainability, and digital transformation journals.

Table 3. Distribution of Publication Journals.

No	Journal Name	Number of Articles	Main Focus of the Journal
1	Sustainability	14	Multidisciplinary journal focusing on sustainability, environmental management, organizational resilience, and sustainable development
2	Administrative Sciences	3	Focus on public and private management, organizational behavior, and HRM practices
3	Behavioral Sciences	2	Psychological and behavioral studies on human performance, motivation, and workplace behavior
4	Psychology Research and Behavior Management	1	Psychology and management interface, particularly employee attitudes and behavior
5	German Journal of Human Resource Management	1	Human Resource Management theory, employee well-being, and labor relations
6	International Journal of Environmental Research and Public Health	1	Occupational health, mental health, and sustainable work environments

No	Journal Name	Number of Articles	Main Focus of the Journal
7	SAGE Open	1	Multidisciplinary open-access journal covering social science research, including HRM and organizational studies
8	Arab Gulf Journal of Scientific Research	1	General scientific journal focusing on management, innovation, and regional development
9	International Journal of Digital Networks and Systems	1	Digitalization, information systems, and digital transformation in organizations
10	Management Decision	1	Strategic management, organizational decision-making, and leadership
11	International Journal of Industrial Engineering and Operations Management	1	Industrial systems, operations, digital transformation, and productivity
12	Journal of Health and Human Services Administration	1	Management of health and human service organizations, employee resilience, and service quality
13	International Journal of Contemporary Hospitality Management	1	HRM and resilience in hospitality, tourism, and service industries
14	SA Journal of Human Resource Management	1	HRM practices, employee engagement, and organizational performance
15	Journal of Intellectual Capital	1	Knowledge management, digital HR, and innovation capability
16	Heliyon	1	Multidisciplinary scientific journal including organizational and psychological studies
17	International Journal of Production Research	1	Industrial engineering, digitalization, and workforce management
18	EDP Sciences	1	Covers applied sciences, management, and organizational innovation
19	Interdisciplinary Journal of Information, Knowledge and Management	1	Information systems, knowledge management, and digital HR
20	Kybernetes	1	Cybernetics, systems thinking, and digital management processes



No	Journal Name	Number of Articles	Main Focus of the Journal
21	Journal of Manufacturing Technology Management	1	Digital transformation, manufacturing innovation, and human capital
22	Employee Relations: The International Journal	1	Employee relations, workplace behavior, and HRM systems
23	Production Engineering Archives	1	Industrial engineering, innovation, and production system design
24	School of Economics and Business University of Ljubljana	1	Economics and business research, including HRM and organizational change
25	Journal Information & Management	1	Information systems, digital transformation, and organizational innovation
26	Journal Frontiers in Psychology	1	Psychology and organizational behavior, resilience, and motivation
27	Problems and Perspectives in Management	1	Business management, HRM, and organizational development
28	Public Library of Science (PLOS)	1	Multidisciplinary science with sections on behavioral and social research
29	Cogent Social Sciences	1	Social sciences, including work psychology and HRM
30	Frontiers in Psychology	1	Applied psychology, resilience, and workplace well-being
31	Journal of Business Research	1	Business strategy, innovation, HR, and sustainability
32	Journal of Information Systems Engineering and Management	1	Information systems, digital transformation, and HR digitalization
33	BMC Public Health	1	Public health and workplace well-being studies
34	Journal Organization Management	1	Organizational theory, HRM, and leadership studies

The Sustainability journal was the most dominant, contributing 14 articles, or approximately 28% of all documents analyzed. This aligns with current research trends that emphasize sustainability and the digital transformation of HRM as key components of modern organizational development. Articles published in this journal commonly address themes such as strategic HRM, green HRM, employee empowerment, and the influence of digitalization on employee resilience and organizational sustainability, as reflected in studies by Gul et al. (2025b), Malik & Singh (2024),

and Yu et al. (2022). In addition, journals such as Administrative Sciences and Behavioral Sciences serve as other significant outlets, each contributing multiple articles that focus on the intersection of management, psychology, and human resources. Research in these journals frequently examines topics like leadership, organizational behavior, and the role of digital HR practices in enhancing employee engagement and performance.

Moreover, journals such as the International Journal of Environmental Research and Public Health (IJERPH) and Psychology Research and Behavior Management (PRBM) have explored the psychological and health-related dimensions of HRM, including employee well-being, learning agility, and work engagement particularly within organizations adapting to digital transformation and post-pandemic changes. Overall, this distribution indicates that studies on Digital HRM (DHRM) and employee resilience are highly cross-disciplinary. They extend beyond traditional management perspectives to incorporate insights from occupational health, information systems, social sciences, and behavioral studies, illustrating the broad academic interest and integrative nature of this research field.

### Unit of Analysis: Organizations

In this systematic review, the organizational unit of analysis refers to the organization's type, sector, and context that serves as the empirical object of the 50 scientific articles reviewed. The various organizations studied reflect the diverse contexts of DHRM and employee resilience applications across the public, private, SME, and emerging digital sectors.

While most articles focus on business organizations and private companies, several studies in the public sector and educational organizations exist. It demonstrates that resilience and HRM digitalization are universal and of concern across sectors, particularly post-pandemic and technological disruption.

Table 4. Distribution of Organizations.

No	Types of Organizations	Article Frequency	Author(s), Year	Main Focus of Study
1	Micro, Small, and Medium Enterprises (MSMEs)	10	Liu et al., (2024); Wang et al., (2022); Yu et al., (2022); Zhang et al., (2023); Zayed et al., (2022); Soekotjo et al., (2025) etc.	Resilience, Engagement, SHRM, Resilience, Self-efficacy, Self-management, Organizational Learning, Competitive Advantage, Digital HRM
2	Educational Institutions	8	Park et al., (2022); Saleem et al., (2023); Jóhannsdóttir et al., (2022); Fiaz & Qureshi, (2024) etc	Learning Agility, Career Resilience, Academic resilience, Organizational Support, Teachers' resilience, HRM practices
3	Literature/ Conceptual Study	7	Panda et al., (2024); Ruiz et al., (2024); Strohmeier, (2020) etc	Digital HRM concepts, Sustainability, HRM System, Organizational Learning, HR Analytics and Digital Resilience, Sustainability and HR Resilience

No	Types of Organizations	Article Frequency	Author(s), Year	Main Focus of Study
4	Multinational Private Company	7	Ardebili & Padoano, (2020); Gul et al., (2025b); Ojo et al., (2021); Wang et al., (2022) etc.	Employee resilience, coping mechanisms, organizational performance, Digital HRM, Organizational Agility Strategic HRM, Dynamic Capability, Resilience, HR Practices, Retention
5	Public/Government Organizations	6	Park et al., (2022); Mavri, (2024) etc.	HRM, Resilience, Coping Strategies, Public Sector HRM, , Policy Adaptation, HR Digitalization
6	Financial and Banking Sector	6	Charisma et al., (2025); Gul et al., (2025b) etc.	Organizational Resilience, Service Quality, HRM, Organizational Adaptability, Emotional Intelligence, Employee Resilience, Employee Well-being
7	Technology Company	6	Corrales-Estrada et al., (2021); Liang & Cao, (2021); Shahiduzzaman, (2025) etc.	HR Analytics, Employee Resilience, Digital Transformation, Digital HRM, Employee Well-being, HR Digital Tools, Change Management, AI HRM, Organizational Flexibility, Digital HR, Innovation

Based on the articles analyzed, multinational organizations were the most frequently studied unit of analysis (18 studies). It is because multinational companies are considered to be most impacted by HR digitalization and organizational transformation and are the most active in adopting new technologies such as AI and cloud-based digital HR systems (Do et al., 2025; Y. Liu et al., 2024).

Studies on MSMEs (SMEs) also show significant trends in human resource empowerment and adaptive capacity development in the post-pandemic era. Charisma et al. (2025) highlight how digital HRM is important in increasing productivity and operational resilience in the MSME sector.

In several studies, public organizations and educational institutions appear to have a digital transformation mandate but face structural limitations. Research such as this by Yu et al. (2022) and Park et al. (2022) discusses strategies for building employee resilience through technology-based learning and HR management policies.

The financial and technology sectors are scrutinized due to their vital role in the digital economy and the higher complexity associated with HR risks. For example, Gul et al. (2025) explore the integration of Green HRM in a banking context.

### Units of Analysis: Countries and years

The distribution of publications' countries of origin reflects the diverse global focus on the integration of DHRM and employee resilience. China and India, two developing countries with rapid growth in HR digitalization, are leading the way in quantity. Research from Liu et al. (2024) and Yu

et al. (2022) emphasizes the role of digital orientation and strategic HRM in shaping organizational and employee resilience amidst technological disruption.

Meanwhile, developed countries such as the UK and the United States tend to highlight the strategic and managerial side of DHRM, as shown by studies, such as Georgescu et al. (2024), which explores the relationship between organizational culture, HR strategy, and resilience. Do et al. (2025) from the US even explicitly researched integrating artificial intelligence in HRM to boost employee resilience and organizational performance.

On the other hand, Indonesia and other Southeast Asian countries are starting to contribute significantly to this topic, with studies such as Charisma et al. (2025), which focuses on empowerment within SMEs through HR digitalization. This phenomenon reflects the relevance of local context in addressing global changes, particularly in the knowledge and technology-based economy.

Temporally, the increasing publication trend post-2020 aligns with the emergence of major challenges posed by the COVID-19 pandemic. Studies such as Ojo et al. (2021) and Bouzakhem et al. (2023) highlight the urgency of strengthening psychological and organizational resilience through adaptive, digital-based HR management innovations. The year 2025 saw the highest spike in publications, indicating that academic discourse on this topic is maturing and developing multidisciplinary.

In this context, the shift from traditional HRM to a digital approach demands attention to new challenges such as data security, HR's technology adaptation, and the role of transformative leadership in creating a resilient work environment. These themes are consistent with the thematic findings from the study. Malik & Singh (2024), Park et al. (2022), and Gul et al. (2025) underline the importance of integrating technology, individual competencies, and organizational strategy.

Table 5 presents the distribution of the articles analyzed in this study by country of origin and year of publication. This distribution illustrates how scientific contributions on DHRM and employee resilience are spread across different countries and periods. Such a pattern is important to capture both geographical and temporal research trends and to identify areas where studies on these topics remain limited.

Table 5. Distribution of Articles Across Countries and Years

No	Country	Number of Articles	Percentage	Author(s)
1	China	12	24%	Liang & Cao, (2021), Yu et al., (2022), Chen et al., (2022), Li & Lin, (2024), Liu et al., (2024)
2	Indonesia	5	10%	Cahyadi et al., (2024), Putra et al., (2024), Kurniawan & Aziz, (2025), Soekotjo et al., (2025), Charisma et al., (2025)
3	Pakistan	3	6%	Fiaz & Qureshi, (2024), Gul et al., (2025b), (2025a)
4	India	2	4%	Malik & Singh, (2024), Panda et al., (2024)
5	Netherland	2	4%	Hollaar et al., (2025), Ruiz et al., (2024)
6	European Union	2	4%	Rašticová & Hinzmann, (2024) Suciu et al., (2023)
7	Australia	1	2%	Shahiduzzaman (2025)
8	Italy	1	2%	Ardebili & Padoano, (2020)
9	Germany	1	2%	Strohmeier, (2020)
10	Malaysia	1	2%	Ojo et al., (2021)
11	Colombia	1	2%	Corrales-Estrada et al., (2021)

No	Country	Number of Articles	Percentage	Author(s)
12	Iceland	1	2%	Jóhannsdóttir et al., (2022)
13	South Korea	1	2%	Park et al., (2022)
14	Nigeria	1	2%	Zayed et al., (2022)
15	Bahrain	1	2%	Alawi et al., (2023)
16	Jordan	1	2%	Kharabsheh et al., (2023)
17	Caribbean	1	2%	Roach et al., (2023)
18	Lebanon	1	2%	Bouzakhem et al., (2023)
19	Ghana	1	2%	Hanu & Khumalo, (2023)
20	Oman	1	2%	Saleem et al., (2023)
21	Iran	1	2%	Mahdavi et al., (2023)
22	Vietnam	1	2%	Dey et al., (2024)
23	Russia	1	2%	Fokina et al., (2024)
25	Romania	1	2%	Georgescu et al., (2024)
26	Slovenia	1	2%	Mavri, (2024)
27	Saudi Arabia	1	2%	Yamin et al., (2024)
28	Peru	1	2%	Espina Romero et al., (2024)
29	USA	1	2%	Do et al., (2025)
30	Lithuania	1	2%	Čižiūnienė et al., (2025)
31	Bosnia & Herzegovina	1	2%	Ahmić & Ćosić (2025)

The analysis of 50 articles shows that China dominates the research landscape with 24% of total publications, followed by Indonesia (10%), Pakistan (6%), and India (4%), while other countries contribute less than 5% each.

This pattern highlights the growing academic interest in Asian countries, particularly in regions experiencing rapid digital transformation and workforce adaptation. The strong representation from China and Indonesia indicates that the discussion on Digital Human Resource Management (DHRM) and employee resilience has become a regional focus in Asia, aligning with broader shifts toward digitalization and organizational flexibility.

Meanwhile, studies from Europe, Australia, and the Middle East remain limited, suggesting potential avenues for future cross-country comparisons and theory-building in global digital HRM practices. The research from China in this study is dominated by quantitative approaches, particularly using Structural Equation Modelling (SEM), and fuzzy-set Qualitative Comparative Analysis (fsQCA). These studies consistently explore the relationship between digital orientation, strategic human resource management (SHRM), and employee resilience, reflecting the strong push by organizations in that country to adapt to digital transformation strategically. Meanwhile, countries such as the United Kingdom, the United States, and India focus on integrating technology with aspects of organizational psychology, such as self-efficacy, well-being, and work engagement, all positioned within the framework of digital HR sustainability. Indonesia, on the other hand, stands out through research emphasizing the context of Micro, Small, and Medium Enterprises (MSMEs), employee empowerment, and HR technology readiness in its unique local sector (Cahyadi et al., 2024; Charisma et al., 2025). Although some other countries contributed only one or two articles, their contributions are still important because they provide unique local perspectives, while enriching the diversity of geographic, cultural, and economic contexts in this systematic review.

Research contributions on DHRM and employee resilience are globally dominated by countries in the Asian region, with China leading the way as the most productive nation. This

dominance reflects the high need for organizations in Asia to manage the digital human resources transition, particularly in response to the long-term impact of the COVID-19 pandemic. On the other hand, Western Europe and North America tend to focus on strategic approaches and the use of cutting-edge technologies, such as artificial intelligence (AI) and HR analytics. It reflects a higher level of digital readiness in these countries to integrate technology into their HR management systems. Meanwhile, South Asia and Eastern Europe tend to integrate cultural values, spirituality, and institutional policies in shaping individual and organizational resilience. This approach reveals differences in conceptual frameworks that are more contextual and normative. Among middle-income countries, such as Indonesia and Pakistan, research provides significant perspectives on the challenges and opportunities for DHRM implementation, particularly in the MSME sector and organizations still facing limited digital infrastructure. This perspective contributes to understanding the diverse contexts of DHRM implementation globally.

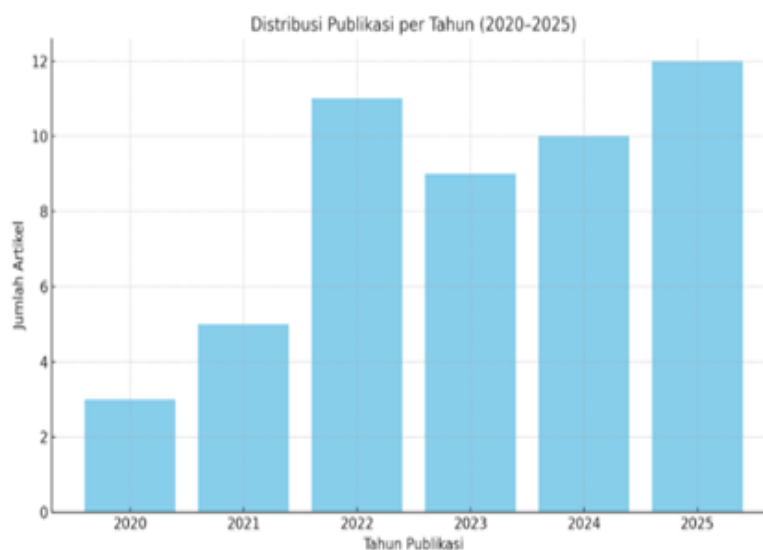


Figure 4. Year of publication

Based on the annual distribution of publications between 2020 and 2025, there is a consistent increase in scientific articles discussing DHRM and employee resilience. 2020 marked a relatively low start with only three publications, likely influenced by the initial impact of the COVID-19 pandemic and the still-divergent focus of academic literature on the global health crisis.

However, the trend improved significantly in subsequent years, with a sharp spike in 2022, with 11 publications. It reflects a shift in researchers' attention toward organizational and employee resilience issues in the face of post-pandemic digitalization challenges. 2023 saw a slight decrease to 9 articles, but continued to demonstrate steady academic interest in the topic.

The upward trend occurred again in 2024 and peaked in 2025 with 12 articles, indicating that DHRM and employee resilience are increasingly becoming a key focus in global academic discourse, along with the development of new technologies and the need for organizations to be more adaptive and sustainable. This trend also highlights the importance of digital HR transformation in the context of organizational recovery and rebuilding across various sectors and regions.

## Discussion

Key findings from the 50 articles analyzed indicate that DHRM practices play a dual role: They improve work efficiency and serve as a means of psychological transformation. Employee resilience is driven by psychological factors such as an increased sense of meaningfulness, self-control, psychological capital, and emotional safety. DHRM is designed with a humanistic approach, which

can create psychological conditions that support individuals in thriving, adapting, and evolving under the pressures of digitalization and workplace uncertainty.

First, extensive literature confirms that DHRM plays a pivotal role in fostering positive psychological mechanisms that strengthen employee resilience, particularly during digital disruption and organizational crises. Digital technology improves HR management efficiency and creates an adaptive and emotionally supportive work environment. Studies show that DHRM enhances resilience by increasing self-efficacy, a sense of control, and psychological safety, which are essential foundations for developing psychological resilience in the era of virtual work.(Bouzakhem et al., 2023; Do et al., 2025; Park et al., 2022; Yu et al., 2022).

Furthermore, the analysis identified three main clusters of factors influencing the success of DHRM in building employee psychological resilience: individual, organizational, and technological factors. At the individual level, digital competence, learning agility, and psychological capital (optimism, hope, resilience, and self-efficacy) are key (Ojo et al., 2021; Park et al., 2022). Employees with self-leadership and a tendency towards self-directed learning can better utilize digital technology to strengthen their psychological resilience (Y. Liu et al., 2024). From an organizational perspective, a supportive work culture, open communication, and transformational leadership have proven effective in creating an emotionally safe work environment (Georgescu et al., 2024; Malik & Singh, 2024). Trust in digital systems, participation in decision-making, and data transparency also reduce anxiety and increase employees' sense of control and mental well-being. Meanwhile, technological factors such as adaptive e-learning platforms, empathetic feedback features, and HRIS that address psychological well-being have been linked to improved emotional regulation, mindfulness, and post-crisis self-confidence recovery (Charisma et al., 2025; He et al., 2024).

However, several gaps in the literature remain that require further attention. Much research still focuses on the technical aspects of DHRM, while deeper psychological mechanisms such as cognitive reframing, meaning-making, and emotion-focused coping remain under-researched. Furthermore, the impact of DHRM features such as anonymous reporting systems, mental health tracking, and digital coaching on creating sustainable psychologically safe spaces remains rarely empirically studied. Research generally fails to distinguish between individual and collective resilience and rarely links DHRM to comprehensive positive psychology approaches, such as Appreciative Inquiry or Strengths-Based HRM.

Overall, the results of this study confirm that DHRM should not be considered merely a management tool to support business processes, but rather as a strategic tool for building and strengthening employee psychological resilience in the digital transformation era. Further research is needed to develop digital psychological interventions that sustainably promote employee well-being and psychological resilience, especially in an increasingly digitalized and uncertain work environment.

## Implications

The results of this study have important implications, both in the realm of digital HR management theory and in managing employee resilience in the digital transformation era. Theoretically, these findings strengthen the position of DHRM not merely as an administrative tool or process efficiency, but as a strategic mechanism capable of influencing individual psychological dimensions such as self-efficacy, psychological capital, emotional stability, and adaptive mindset.

From a psychological perspective, DHRM can be seen as an enabler that helps create an emotionally safe digital work environment (digital psychological safety), where employees feel heard, supported, and empowered in the face of uncertainty. For example, a responsive and transparent digital feedback system can strengthen a sense of control, which, according to positive psychology literature, plays a crucial role in building resilience.

Organizations need to recognize that resilience is shaped by individual character and significantly influenced by organizational structure and culture, transformed through HRM digitalization. Therefore, developing digital features such as personalized e-learning, psychological self-assessment, mental well-being training (digital well-being tools), and data-driven employee support systems is crucial.

Furthermore, technology-based psychological interventions, such as digital mindfulness apps, AI coaching platforms, and adaptive skill-building gamification, have significantly increased engagement and psychological resilience (Bouzakhem et al., 2023; Do et al., 2025). Therefore, a DHRM system's design must consider employees' affective and cognitive dimensions, not just technical functionality.

On the other hand, in the context of developing countries such as Indonesia and Pakistan, the implementation of DHRM must take into account technological maturity, collective work culture, and spiritual values, as these factors have been shown to moderate the effectiveness of digital interventions in building psychological resilience (Charisma et al., 2025).

### **Limitations and Further Research**

This research was conducted using a Systematic Literature Review (SLR) approach, which allowed the authors to comprehensively examine thematic trends and developments in the relationship between DHRM and employee resilience. However, there are several limitations worth noting. One is the tendency of most previous studies to use quantitative methods, such as SEM and PLS, which, while powerful in analyzing relationships between variables, lack a thorough depiction of the psychological experiences experienced by individuals. Furthermore, the geographical scope of the reviewed articles is limited, with developed countries and East Asia dominating the study. It leaves a gap in understanding the context of developing countries, particularly where levels of digital maturity and organizational structures differ significantly. Work environments with collectivist values, hierarchical leadership, and limited technological infrastructure likely affect DHRM implementation differently.

Another limitation lies in the approach of most studies, which positions resilience as a static outcome, rather than a continuously evolving psychological process. This view risks overlooking the gradual transformations crucial in shaping an individual's resilience over the long term. Given the limitations above, future research should strongly emphasize exploratory and contextual approaches. Qualitative or mixed-methods studies can provide a deeper understanding of how individuals internalize and respond to their interactions with digital HR systems and how these experiences shape their feelings, values, and personal meanings. Cross-national research is also crucial, particularly in regions with economic conditions and work cultures that differ from those in developed countries. Such contexts allow for a richer understanding of the role of culture, religion, and local values in mediating the influence of technology on the psychological resilience of the workforce. Longitudinal studies are also urgently needed to capture how resilience and adaptability develop over time, in response to the continued use of HR technology. This approach will provide a more nuanced understanding of psychological dynamics often overlooked in single-point research designs. Furthermore, concepts from positive psychology and digital work experiences will be explored, such as digital fatigue, techno-stress, meaningfulness in work, and employee empowerment. Research combining these psychological perspectives with a human-centered technology approach will further enrich the development of sustainable DHRM strategies oriented toward long-term well-being.

### **CONCLUSION**

The results of this study confirm that Digital Human Resource Management (DHRM) not only helps speed up administrative processes but also significantly impacts building and strengthening



employee resilience in the digital era. A systematic review of 50 scientific articles found that DHRM can create a work environment that promotes psychological well-being through various psychological mechanisms, such as increasing self-efficacy, self-control, and psychological safety. Various digital features, from online training to technology-based psychological support systems and transparent access to information, help strengthen coping strategies, stress management, and a sense of connectedness to the organization, especially in uncertain work situations. Psychologically, the appropriate use of DHRM can increase employees' positive feelings, such as competence, appreciation, and motivation, all of which are essential for mental resilience. This study also highlights the importance of digital psychological interventions, such as digital coaching, mindfulness training, and anonymous reporting systems, in supporting employees' adjustment and emotional recovery in a virtual work environment.

However, the success of DHRM in building employee resilience depends not only on technological sophistication but also heavily on psychological and social factors, such as a supportive corporate culture, empathetic leadership, and individual willingness to embrace change. Employee resilience is formed through the interaction between humanistic digital systems, a psychologically healthy work environment, and the employee's internal psychological strengths. Therefore, organizations must focus on digitizing work processes and actively integrate positive psychology and measures to promote mental health into every DHRM implementation. By balancing technological advancements with mental health, DHRM can be a strategic tool for creating a resilient and adaptive workplace that supports the holistic growth of employees, both professionally and psychologically.

## ACKNOWLEDGMENTS

The authors thank Universitas Esa Unggul for providing an academic environment that supported this study. This research was conducted independently without external funding.

## AUTHOR CONTRIBUTIONS STATEMENT

The study was conceptualized and drafted by Santy Berliana Naibaho. All authors contributed to the refinement of the manuscript and approved the final version.

## REFERENCES

- Ahmić, A., & Ćosić, M. (2025). Digital human resource management influence on the organizational resilience. *Organization Management Journal*, 22(2), 111–125. <https://doi.org/10.1108/OMJ-09-2024-2299>
- Al-Alawi, A. I., Messaadia, M., Mehrotra, A., Sanosi, S. K., Elias, H., & Althawadi, A. H. (2023). Digital transformation adoption in human resources management during COVID-19. *Arab Gulf Journal of Scientific Research*, 41(4), 446–461. <https://doi.org/10.1108/AGJSR-05-2022-0069>
- Al-Kharabsheh, S. A., Attiany, M. S., Alshawabkeh, R. O. K., Hamadneh, S., & Alshurideh, M. T. (2023). The impact of digital HRM on employee performance through employee motivation. *International Journal of Data and Network Science*, 7(1), 275–282. <https://doi.org/10.5267/j.ijdns.2022.10.006>
- Alamanda, D. T., Ahmed, A., Kurniady, D. A., Rahayu, A., Ahmad, I., & Hashim, N. A. A. N. (2024). Linking Gender To Creativity: Role of Risk Taking and Support For Creativity Towards Creative Potential of Employees. *Journal of Intercultural Communication*, 24(1), 1–17. <https://doi.org/10.36923/jicc.v24i1.219>
- Anser, M. K., Yousaf, Z., Sharif, M., Yijun, W., Majid, A., & Yasir, M. (2022). Investigating employee creativity through employee polychronicity and employee resilience: a glimpse of nurses working in the health-care sector. *European Journal of Innovation Management*, 25(1), 39–54. <https://doi.org/10.1108/EJIM-05-2020-0176>
- Ardebili, A. A., & Padoano, E. (2020). A literature review of the concepts of resilience and

- sustainability in group decision-making. *Sustainability (Switzerland)*, 12(7). <https://doi.org/10.3390/su12072602>
- Bouzakhem, N., Farmanesh, P., Zargar, P., Ramadan, M., Baydoun, H., Daouk, A., & Mouazen, A. (2023). Rebuilding the Workplace in the Post-Pandemic Age through Human Capital Development Programs: A Moderated Mediation Model. *Administrative Sciences*, 13(7). <https://doi.org/10.3390/admsci13070164>
- Cahyadi, A., Marwa, T., Poór, J., Maulana, A., & Szabó, K. (2024). High-Involvement Human Resource Management Practices and Employee Resilience: The Mediating Role of Employee Technology Adaptation—A Case Study of South Sumatra. *Administrative Sciences*, 14(11). <https://doi.org/10.3390/admsci14110292>
- Charisma, D., Hermanto, B., Purnomo, M., & Herawati, T. (2025). Building Business Resilience Through Strategic Entrepreneurship: Evidence from Culinary Micro-Enterprises in Bandung During the COVID-19 Pandemic. *Sustainability (Switzerland)*, 17(6), 1–26. <https://doi.org/10.3390/su17062578>
- Chen, C., Feng, Y., & Shen, B. (2022). Managing Labor Sustainability in Digitalized Supply Chains: A Systematic Literature Review. *Sustainability (Switzerland)*, 14(7). <https://doi.org/10.3390/su14073895>
- Chen, S., Hu, X., Xue, Y., & Wang, Y. (2024). The effect of collectivism-oriented human resource management on employee resilience of hospitality employees. *Frontiers in Psychology*, 15(May), 1–16. <https://doi.org/10.3389/fpsyg.2024.1342318>
- Čižiūnienė, K., Voronavičiūtė, G., Marinkovic, D., & Matijošius, J. (2025). Sustainable Human Resource Management in Emergencies: The Case of the Lithuanian Logistics Sector. *Sustainability (Switzerland)*, 17(6), 1–31. <https://doi.org/10.3390/su17062591>
- Corrales-Estrada, A. M., Gómez-Santos, L. L., Bernal-Torres, C. A., & Rodríguez-López, J. E. (2021). Sustainability and resilience organizational capabilities to enhance business continuity management: A literature review. *Sustainability (Switzerland)*, 13(15). <https://doi.org/10.3390/su13158196>
- Dey, P. K., Chowdhury, S., Abadie, A., Vann Yaroson, E., & Sarkar, S. (2024). Artificial intelligence-driven supply chain resilience in Vietnamese manufacturing small- and medium-sized enterprises. *International Journal of Production Research*, 62(15), 5417–5456. <https://doi.org/10.1080/00207543.2023.2179859>
- Do, H., Chu, L. X., & Shipton, H. (2025). How and when AI-driven HRM promotes employee resilience and adaptive performance: A self-determination theory. *Journal of Business Research*, 192(February 2024), 115279. <https://doi.org/10.1016/j.jbusres.2025.115279>
- Espina-Romero, L., Ríos Parra, D., Gutiérrez Hurtado, H., Peixoto Rodriguez, E., Arias-Montoya, F., Noroño-Sánchez, J. G., Talavera-Aguirre, R., Ramírez Corzo, J., & Vilchez Pirela, R. A. (2024). The Role of Digital Transformation and Digital Competencies in Organizational Sustainability: A Study of SMEs in Lima, Peru. *Sustainability (Switzerland)*, 16(16), 1–24. <https://doi.org/10.3390/su16166993>
- Fiaz, S., & Qureshi, M. A. (2024). Unraveling the conceptual ambiguity of digital human resource management: a state-of-the-art review. *Cogent Social Sciences*, 10(1). <https://doi.org/10.1080/23311886.2024.2395101>
- Fokina, O., Goncharenko, L., Sobol, T., Mottaeva, A., & Mottaeva, A. (2024). Digital design in the HRM system as a component of the sustainable development strategy. *BIO Web of Conferences*, 93. <https://doi.org/10.1051/bioconf/20249305013>
- García-Fernández, L., Ortiz-de-Urbina-Criado, M., & García-López, M. J. (2024). Mapping the main research themes in digital human resources. *Humanities and Social Sciences Communications*, 11(1). <https://doi.org/10.1057/s41599-024-03795-8>
- Georgescu, I., Bocean, C. G., Vărzaru, A. A., Rotea, C. C., Mangra, M. G., & Mangra, G. I. (2024).

- Enhancing Organizational Resilience: The Transformative Influence of Strategic Human Resource Management Practices and Organizational Culture. *Sustainability (Switzerland)*, 16(10). <https://doi.org/10.3390/su16104315>
- Gul, T., Karaatmaca, A. G., & Raza, A. (2025). Impact of Green Human Resources Management Practices on Sustainability Through Organizational Resilience and Organizational Learning in Pakistan's Banking Sector. *Sustainability (Switzerland)*, 17(5), 1–22. <https://doi.org/10.3390/su17052087>
- Hanu, C., & Khumalo, N. (2023). Developing ambidexterity and resilience: The predictive role of high-performance work systems. *SA Journal of Human Resource Management*, 21, 1–12. <https://doi.org/10.4102/sajhrm.v21i0.2226>
- He, X., Zheng, Y., & Wei, Y. (2024). The Double-Edged Sword Effect of Illegitimate Tasks on Employee Creativity: Positive and Negative Coping Perspectives. *Psychology Research and Behavior Management*, 17(February), 485–500. <https://doi.org/10.2147/PRBM.S444960>
- Hollaar, M. H. L., Kemmere, B., Kocken, P. L., & Denktas, S. (2025). Resilience-based interventions in the public sector workplace: a systematic review. *BMC Public Health*, 25(1). <https://doi.org/10.1186/s12889-024-21177-2>
- Hu, D., & Lan, Y. (2024). The dual path effect mechanism study of digital-HRM on employee innovative performance and cyberloafing. In *PLoS ONE* (Vol. 19, Issue 8 August). <https://doi.org/10.1371/journal.pone.0307195>
- Jaklič, A., Koleša, I., Mavri, G., & Burger, A. (2024). Risk Management in MNEs during Global Crises: Subsidiary Control or Autonomy? *Economic and Business Review*, 26(4), 246–264. <https://doi.org/10.15458/2335-4216.1347>
- Jóhannsdóttir, L., Cook, D., Kendall, S., Latapí, M., & Chambers, C. (2022). Human Resource Management and Institutional Resilience during the COVID-19 Pandemic—A Case Study from the Westfjords of Iceland. *Sustainability (Switzerland)*, 14(24). <https://doi.org/10.3390/su142416988>
- Kraus, S., Durst, S., Ferreira, J. J., Veiga, P., Kailer, N., & Weinmann, A. (2022). Digital transformation in business and management research: An overview of the current status quo. *International Journal of Information Management*, 63(August 2020). <https://doi.org/10.1016/j.ijinfomgt.2021.102466>
- Kurniawan, D., & Aziz, A. (2025). Learning Organization and Organizational Agility in the Context of Organizational Performance: The Moderating Role of E-HRM Systems. *Journal of Information Systems Engineering and Management*, 10, 415–426. <https://doi.org/10.52783/jisem.v10i10s.1405>
- Li, X., & Lin, H. (2024). How to leverage flexibility-oriented HRM systems to build organizational resilience in the digital era: the mediating role of intellectual capital. *Journal of Intellectual Capital*, 25(1), 1–22. <https://doi.org/10.1108/JIC-03-2023-0038>
- Liang, F., & Cao, L. (2021). Linking employee resilience with organizational resilience: The roles of coping mechanism and managerial resilience. *Psychology Research and Behavior Management*, 14, 1063–1075. <https://doi.org/10.2147/PRBM.S318632>
- Liu, B., Li, Y., Tang, L. H., Zhao, Y., & Chang, H. (2023). The impact of enterprise resilience and HRM practices on performance: Findings from fsQCA. *Frontiers in Psychology*, 14(February), 1–11. <https://doi.org/10.3389/fpsyg.2023.1114087>
- Liu, Y., Guo, M., Han, Z., Gavurova, B., Bresciani, S., & Wang, T. (2024). Effects of digital orientation on organizational resilience: a dynamic capabilities perspective. *Journal of Manufacturing Technology Management*, 35(2), 268–290. <https://doi.org/10.1108/JMTM-06-2023-0224>
- Liu, Z., Huang, Y., Kim, T. Y., & Yang, J. (2024). Perceived overqualification and employee outcomes: The dual pathways and the moderating effects of dual-focused transformational leadership. *Human Resource Management*, 63(4), 653–671. <https://doi.org/10.1002/hrm.22221>

- Mahdavi, A., Atlasi, R., Ebrahimi, M., Azimian, E., & Naemi, R. (2023). Human resource management (HRM) strategies of medical staff during the COVID-19 pandemic. *Heliyon*, 9(10), e20355. <https://doi.org/10.1016/j.heliyon.2023.e20355>
- Malik, G., & Singh, P. (2024). Fostering social sustainability: unveiling HR's power in enhancing employee resilience via social exchange and broaden-and-build theories. *Employee Relations*, 46(3), 675–701. <https://doi.org/10.1108/ER-08-2023-0427>
- Nakash, M., & Bouhnik, D. (2023). the Influence of Covid-19 on Employees' Use of Organizational Information Systems. *Interdisciplinary Journal of Information, Knowledge, and Management*, 18, 353–368. <https://doi.org/10.28945/5164>
- Ojo, A. O., Fawehinmi, O., & Yusliza, M. Y. (2021). Examining the predictors of resilience and work engagement during the covid-19 pandemic. *Sustainability (Switzerland)*, 13(5). <https://doi.org/10.3390/su13052902>
- Panda, G., Dash, M. K., Samadhiya, A., Kumar, A., & Mulat-weldemeskel, E. (2024). Artificial intelligence as an enabler for achieving human resource resiliency: past literature, present debate and future research directions. *International Journal of Industrial Engineering and Operations Management*, 6(4), 326–347. <https://doi.org/10.1108/IJIEOM-05-2023-0047>
- Park, Y., Lim, D. H., & Lee, J. Y. (2022). Internal Marketability, External Marketability, and Career Resilience: The Mediating Role of Learning Agility. *Sustainability (Switzerland)*, 14(24). <https://doi.org/10.3390/su142416447>
- Putra, I. B. U., Kot, S., Ibrahim, A. H. H., & Rajiani, I. (2024). Human Resource Productivity: Integrating Resilience Engineering, Motivation, and Health Safety. *Production Engineering Archives*, 30(1), 105–114. <https://doi.org/10.30657/pea.2024.30.10>
- Rašticová, M., & Hinzmann, R. A. (2024). Age-Considerate Employee Engagement Strategies in Smes: Analysis of Practices and Research Opportunities. *Problems and Perspectives in Management*, 22(3), 27–38. [https://doi.org/10.21511/ppm.22\(3\).2024.03](https://doi.org/10.21511/ppm.22(3).2024.03)
- Roach, C. M. L., Lewis-Cameron, A., & Brown-Williams, T. (2023). Organizational Resilience In Public Sector Organizations: Destination Management Organizations. *Journal of Health and Human Services Administration*, 46(1), 26–49. <https://doi.org/10.37808/jhhsa.46.1.2>
- Roblek, V., Dimovski, V., Colnar, S., Meško, M., & Peterlin, J. (2024). The “Great Reset” and its implications on organisational theory. *Kybernetes*. <https://doi.org/10.1108/K-06-2024-1453>
- Ruiz, L., Benitez, J., Castillo, A., & Braojos, J. (2024). Digital human resource strategy: Conceptualization, theoretical development, and an empirical examination of its impact on firm performance. *Information and Management*, 61(4), 103966. <https://doi.org/10.1016/j.im.2024.103966>
- Saleem, I., Qureshi, T. M., & Verma, A. (2023). Task Challenge and Employee Performance: A Moderated Mediation Model of Resilience and Digitalization. *Behavioral Sciences*, 13(2). <https://doi.org/10.3390/bs13020119>
- Shahiduzzaman, M. (2025). Digital Maturity in Transforming Human Resource Management in the Post-COVID Era: A Thematic Analysis. *Administrative Sciences*, 15(2). <https://doi.org/10.3390/admsci15020051>
- Soekotjo, S., Sosidah, Kuswanto, H., Setyadi, A., & Pawirosumarto, S. (2025). A Conceptual Framework for Sustainable Human Resource Management: Integrating Ecological and Inclusive Perspectives. *Sustainability (Switzerland)*, 17(3), 1–29. <https://doi.org/10.3390/su17031241>
- Stachová, K., Stacho, Z., Šamalík, P., & Sekan, F. (2024). The Impact of E-HRM Tools on Employee Engagement. *Administrative Sciences*, 14(11), 1–15. <https://doi.org/10.3390/admsci14110303>
- Strohmeier, S. (2020). Digital human resource management: A conceptual clarification. *German*

*Journal of Human Resource Management*, 34(3), 345–365.  
<https://doi.org/10.1177/2397002220921131>

- Suciu, M. C., Plesea, D. A., Petre, A., Simion, A., Mituca, M. O., Dumitrescu, D., Bocaneala, A. M., Moroianu, R. M., & Nasulea, D. F. (2023). Core Competence—As a Key Factor for a Sustainable, Innovative and Resilient Development Model Based on Industry 5.0. *Sustainability (Switzerland)*, 15(9). <https://doi.org/10.3390/su15097472>
- Todisco, L., Tomo, A., Canonico, P., & Mangia, G. (2023). The bright and dark side of smart working in the public sector: employees' experiences before and during COVID-19. *Management Decision*, 61(13), 85–102. <https://doi.org/10.1108/MD-02-2022-0164>
- Wang, H., Zhang, H., Chen, Z., Zhu, J., & Zhang, Y. (2022). Influence of Artificial Intelligence and Robotics Awareness on Employee Creativity in the Hotel Industry. *Frontiers in Psychology*, 13(March), 1–12. <https://doi.org/10.3389/fpsyg.2022.834160>
- Wang, J., Chen, R., & Zhang, S. (2022). The Mediating and Moderating Effect of Organizational Resilience on Competitive Advantage: Evidence from Chinese Companies. *Sustainability (Switzerland)*, 14(21). <https://doi.org/10.3390/su142113797>
- Yamin, M. A., Almuteri, S. D., Bogari, K. J., & Ashi, A. K. (2024). The Influence of Strategic Human Resource Management and Artificial Intelligence in Determining Supply Chain Agility and Supply Chain Resilience. *Sustainability (Switzerland)*, 16(7). <https://doi.org/10.3390/su16072688>
- Yu, J., Yuan, L., Han, G., Li, H., & Li, P. (2022). A Study of the Impact of Strategic Human Resource Management on Organizational Resilience. *Behavioral Sciences*, 12(12). <https://doi.org/10.3390/bs12120508>
- Zayed, N. M., Edeh, F. O., Islam, K. M. A., Nitsenko, V., Polova, O., & Khaietska, O. (2022). Utilization of Knowledge Management as Business Resilience Strategy for Microentrepreneurs in Post-COVID-19 Economy. *Sustainability (Switzerland)*, 14(23), 1–17. <https://doi.org/10.3390/su142315789>
- Zhang, H., Wang, M., & Chen, A. (2023). Empirical Investigation of How Social Media Usage Enhances Employee Creativity: The Role of Knowledge Management Behavior. *Behavioral Sciences*, 13(7). <https://doi.org/10.3390/bs13070601>
- Zhang, J., & Chen, Z. (2024). Exploring Human Resource Management Digital Transformation in the Digital Age. *Journal of the Knowledge Economy*, 15(1), 1482–1498. <https://doi.org/10.1007/s13132-023-01214-y>
- Zhang, J., Xie, C., & Huang, S. (Sam). (2024). Resilient leadership in hospitality and tourism enterprises: conceptualization and scale development. *International Journal of Contemporary Hospitality Management*, 36(4), 1299–1326. <https://doi.org/10.1108/IJCHM-10-2022-1274>