

Original Article

Remote Work and Telecommuting: A Comprehensive Bibliometric Analysis of HRM Practices Post-Pandemic

Abukar Mohamed Sahal^{1*}, Mohamed Omar Abdullahi², Ibrahim Hassan Mohamud¹, Ahmed Abdi Elmi²

¹Faculty of Management Sciences, SIMAD University, Mogadishu, Somalia.

²Faculty of Computing, SIMAD University, Mogadishu Somalia.

*Corresponding Author : asahal@simad.edu.so

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Abstract - This study employs bibliometric analysis to examine the progression of HR practices in remote work from the beginning of the epidemic till now. The investigation employs VOSviewer and R software as analytical tools to examine scholarly articles from 2020 to 2024. It tracks the changes in HR strategies, policies, and technologies as organizations adjust to a geographically scattered workforce. The findings demonstrate a significant change in HR practices, as traditional methods are being replaced by new frameworks prioritizing digital tools, employee well-being, and flexible work arrangements. Notable trends encompass the incorporation of artificial intelligence, the emphasis on mental health, and the creation of hybrid work models that blend remote and in-office labor. The study emphasizes the need for a robust organizational culture and sustaining productivity in remote environments. This bibliometric analysis offers valuable insights into the changing landscape of HR management, providing recommendations for future research and practical applications in the era following the epidemic. The study emphasizes the necessity of constant innovation in HR strategies to effectively tackle remote employment's persistent obstacles and potential advantages.

Keywords - Remote work, HR practices, COVID-19, Bibliometric analysis.

1. Introduction

The COVID-19 pandemic has significantly influenced the practices in organizations irrespective of their locations, with HR management not being exempted. When organizations found strategies to address the new challenges, working remotely became one of the most relevant and sometimes the only solutions for many businesses (Kniffin et al., 2020; Venkatesh, 2020). This has led to reconsidering its practices, policies, and strategies to adapt to the new landscape of a dispersed worker population (Carnevale & Hatak, 2020). Using bibliometric analysis, this paper aims to map out the development of HR practices for remote work since the start of COVID-19 to the current times to establish the changes and trends in the field. New human resource management methods are required due to the shift to working remotely. Essential practices established for physical work contexts usually require enhancement in tackling issues with virtual work arrangements (Hamouche, 2023). The use of technology, virtual communications, and the importance of the employees' health were essential as HR departments aimed at keeping the productivity and staff motivation amongst remote workers (Galanti et al., 2021; Xiao et al., 2021). Therefore, the novel approaches and models focus on agility, adaptability, and technological adoption throughout the HR processes (Gigauri, 2020; Jamal et al., 2021).

Among the numerous shifts in HR practices that have taken place after the pandemic, one of the most apparent is the focus on the psychological well-being of employees. Lack of social interactions during remote work has emphasised the importance of HR interventions for mental health (Becker et al., 2022). Leaders and managers have become aware of the fact that the social and mental health of workers has a direct positive impact on business performance, and thus, have been implementing and supporting various organizational policies, such as work-life balance, mental support, and flexible hours of work (Haque, 2023; Spurk & Straub, 2020).

The pandemic has also seen an increase in the adoption of tools and technologies in sharing digital technology activity. Employees and HR departments also use Artificial Intelligence (AI), machine learning, and big data to work successfully with remote teams (Chatterjee et al., 2022; Mer & Virdi, 2023). These technologies have supported different forms of employee experience, the optimization of HR processes, and the collection of data on employee performance and engagement, contributing to better decision-making and innovative solutions for human resource management (Abu Orabi et al., 2024; Sahut & Lissillour, 2023; Wang et al., 2021).



Moreover, the pandemic has also provided evidence that others can achieve a favorable organizational climate with people working from home across the globe. Organizational culture management has also become even more conscious and intentional as the HR practices are aligned to ensure that organizational culture is well maintained though teams are spread across geographical locations (de Lucas Ancillo et al., 2023; Olatoye et al., 2024). Aspects like team-building activities, daily or weekly touch points, and supportive leadership help sustain organizational culture and cohesion among workers who may be situated in different remoteness levels (Chamakiotis et al., 2021; Olatoye et al., 2024).

As the world transitions to a post-pandemic era, it is evident that many HR practices developed in response to remote work are here to stay. Hybrid work models, which combine remote and in-office work, are becoming the norm, necessitating further adaptation of HR strategies to ensure they are sustainable and effective in the long term (Verma et al., 2023; Zapata et al., 2024). This bibliometric analysis aims to capture the evolution of these HR practices, providing insights into the trends, challenges, and opportunities that have shaped HR management in remote work over the past few years.

This study aims to conduct a comprehensive bibliometric analysis of the evolution of HR practices related to remote work post-pandemic. The study aims to identify critical trends, emerging themes, and the Impact of remote work on HR management by analyzing scholarly publications from 2020 to 2024. This analysis will provide valuable insights into how HR practices have adapted to the changing work environment and what these changes imply for the future of HR management. The significance of this study lies in its ability to offer a structured and data-driven understanding of the rapid evolution of HR practices, providing valuable insights for HR professionals, policymakers, and scholars by informing future HR strategies, guiding policy formulation, and contributing to the academic discourse on remote work and HR management.

2. Methodology

Exploring the state of knowledge of remote work and telecommuting in terms of future research trends, including the impact of COVID-19 on post-pandemic HRM practices, necessitates a comprehensive approach to systematising the available information. Since the COVID-19 pandemic, organisations have experienced significant shifts, and to guide the strategy for future research, it is vital to pinpoint trends and topics in the research domain. However, systematic literature reviews and meta-analysis, which are the frequently used conventional methods, might sometimes have limitations in their study scope (Kafi et al., 2023). To overcome this challenge, this study uses bibliometric analysis to explore this research question. This somewhat rigorous approach uses counts like citations, keywords, and author co-citation to provide a detailed picture of a given field or speciality.

Publication analysis is one of the common systematic review methods that help a researcher conduct a quantitative assessment of a set of publications and objectively identify trends, connections, and patterns in the literature (van Eck & Waltman, 2014).

In remote work and telecommuting, this approach is valuable for identifying and comparing publication and citation patterns, co-authorship networks among writers, and the areas most investigated in HRM practices after the COVID-19 crisis. Furthermore, bibliometric analysis can assist in determining important authors and the connections between them and their knowledge hubs in specific regions of interest within this subject. In this way, the current state of developments in scientific research, topics of controversy, and future trends in applying HRM practices to remote working and telecommuting can be understood comprehensively.

The bibliographic analysis is a valuable tool for understanding the research landscape and trends in HRM practices related to remote work and telecommuting, providing a foundation for future research endeavors. Through this approach, we aim to unveil the dominant research themes, emerging trends, and key players shaping the future of this field. The study utilizes the Scopus database, the world's most extensive citation and abstract database of scholarly works from international publishers, providing a one-stop platform for academic researchers (Herrera-Franco et al., 2020). In this study, the researchers utilized VOSviewer and the R package, both bibliometric analysis tools, to visualize bibliometric maps and networks (Abu Orabi et al., 2024). Furthermore, the data obtained from VOSviewer was used to generate graphs using Microsoft Excel, offering a visual representation of the findings. This approach aims to provide a comprehensive and insightful analysis of remote work and telecommuting in HRM practices post-pandemic, laying the groundwork for future research and facilitating the responsible development of HRM practices in the evolving landscape of remote work.

The bibliometric analysis is an informative approach to mapping out the areas of research interest and considerations for future research concerning exploring HRM practices and telework/telecommuting systems. By this approach, we seek to identify the current trend, new perspectives, and major stakeholders that determine the further development of this area of study. The study uses the Scopus database, the largest abstract and citation database of peer-reviewed, full-text articles and information gained from international publishers with features tailored for academic researchers (Herrera-Franco et al., 2020). In this study, the researchers used two bibliometric analysis software, VOSviewer and R, to map and analyse bibliometric maps and networks (Abu Orabi et al., 2024). In addition, the data extracted from VOSviewer was used to create graphs with the help of Microsoft Excel, which allowed visualizing the results. This approach will seek to offer a systematic and understanding review of remote work

and telecommuting in post-COVID-19 HRM practice for future research and the proper future practice of HRM in the growing sphere of remote work.

2.1. Data Source

The indexing and comprehensive nature of the Scopus database are used as the backbone of this study. Several search queries were applied to narrow down the publications related to remote work and telecommuting in the context of HRM practices post-pandemic. Some of the keywords used in the queries included "remote work", "telecommuting", "teleworking", "work from home", "flexible work", "HRM", "human resource management", "employee management", "work practices", "post-pandemic", "COVID-19", "coronavirus," and "pandemic impact". The keywords were combined in such a way as to limit the search to articles, conference papers, and reviews in English. The time period range for this analysis is chosen from 2020 to 2024, as it reveals the turning HRM practices in a post-pandemic era. The period was selected to reflect the onrush of the COVID-19 pandemic and its consequent impacts on work practices, provide information on evolution, and present research in this area. This may include a year-on-year trend in publication, the co-citation patterns, and the prominence of keywords, which will help investigate further temporal dynamics and the field's evolution.

2.2. Data Cleansing

The data cleansing and preprocessing of the retrieved publications was done using the following four steps before the analysis. First, any two documents that shared some similarity to the topic sought out were excluded to minimize the risk of bias. Subsequently, the rest of the journals were carefully scrutinized against the backdrop of the study goals to filter out only the most relevant information. The extracted data were then cleaned and normalized by making all entries follow a standardized format to counteract variations or omissions. Lastly, to ensure consistency, a validation step was done to help align the preprocessed data against the sources where necessary. This multifaceted data cleaning and preprocessing activities produced a clean and usable dataset comprising 269 publications for further analysis. Figure 1 explains the study's search strategy.

3. Results and Discussion

3.1. Main Information

The study analyses the temporal dynamics and research cooperation in remote work and telecommuting concerning HRM practices after the COVID-19 outbreak. Table 1 below shows the period study covered from 2020 to 2024; the analysis shows scholars' interest in the subject, where 269 documents were collected from 182 journals and books. A high annual growth rate of 50.59% are concerned with dynamically developing fields, with the relatively young average age of documents at 1.72. This has given it apparent current relevance despite being written 72 years ago—the

average citation rate of 12.55 per document. The 55 per document indicates necessary research with sufficient reference support (13,288).

A broad set of research themes is indicated by the high number of keywords used (Keywords Plus: Figures from Google Scholar – 1296 and author's keywords – 908. This is made even more tangible because 911 of the documents are authored or co-authored by critical academics and scholars, with 26 being single-authored. However, cooperative initiatives are more typical, as observed by an average of 3.5 co-authors per document and 25.65% international co-authorship. The most significant number of documents are articles (189), followed by conference papers (71) and a small number of review articles (9), suggesting that researchers are actively sharing and summarizing their results. This shows that the field of study is developing dynamically and has a highly active collaboration, including various viewpoints to focus on the multifaceted aspects of remote work and telecommuting in the context of HRM practices. This goes a long way to show the need to continuously explore and innovate to address the challenges and opportunities of the world after the pandemic.

3.2. Publication and Citation Trends

The information highlighted in Figure 2 outlines the rate of publications and citations from 2020 to 2024 regarding the HRM practices concerning remote work and telecommuting. This information explains how scholars have approached the subject over the years. There were only 7 publications in 2020, which can be explained by the fact that during the COVID-19 pandemic, the best remote working practices were still under investigation. However, the number of publications for that year was still low, although the citations were relatively high, 367, which means that the little published research was widely cited in future literature.

As for the trend of yearly publications, the increase was recorded in 2021, with 66 publications, 78 publications in 2022, and 82 in 2023. Such an upward trend is evidence of increased scholarly attention and research focused on HRM practices regarding remote work and telecommuting as organizations and scholars shifted towards new work models brought by the pandemic. The number of citations increased from 2021 to 1851 and may indicate that the current year's output is highly influential and valuable for other researchers. However, the citation counts declined in the following years, with 689 citations in 2022 and 454 citations in 2023, which can be attributed to either seminal work reaching maturity or changing research interest in the domain. In 2024, there is a decrease in the number of publications and citations to 36 and 14, indicating that there could be a stabilizing or maturing phase of the research on this particular area. Nevertheless, this could be because it is only halfway through the year, and these statistics might rise as the year progresses.

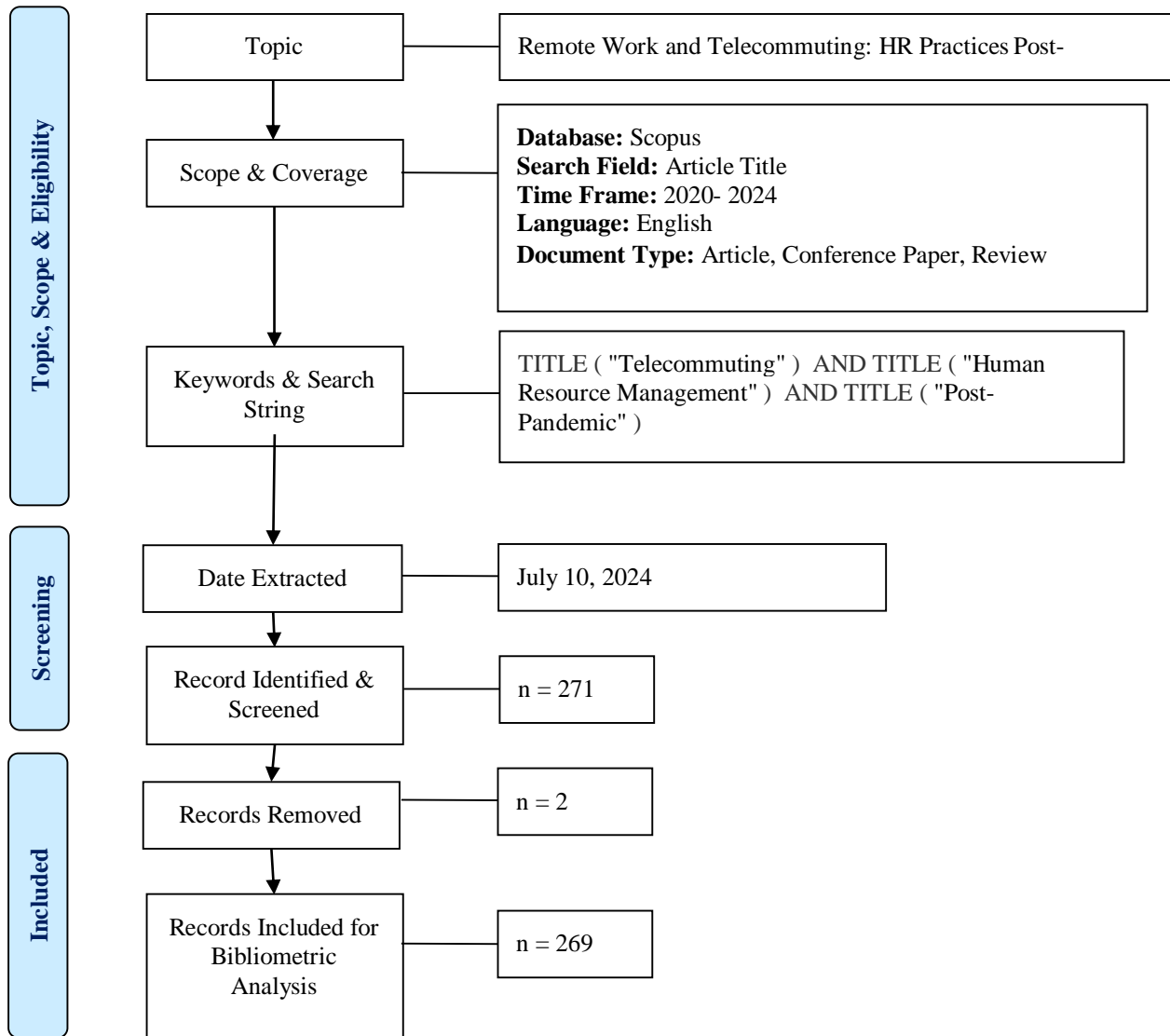


Fig. 1 Selection process

Table 1. Main information

Description	Results
Main Information about Data	
Timespan	2020:2024
Sources (Journals, Books, etc)	182
Documents	269
Annual Growth Rate %	50.59
Document Average Age	1.72
Average citations per doc	12.55
References	13288
Document Contents	
Keywords Plus (ID)	1296
Author's Keywords (DE)	908

Authors	
Authors	911
Authors of single-authored docs	26
Authors Collaboration	
Single-authored docs	27
Co-Authors per Doc	3.5
International co-authorships %	25.65
Document Types	
Article	189
conference paper	71
Review	9

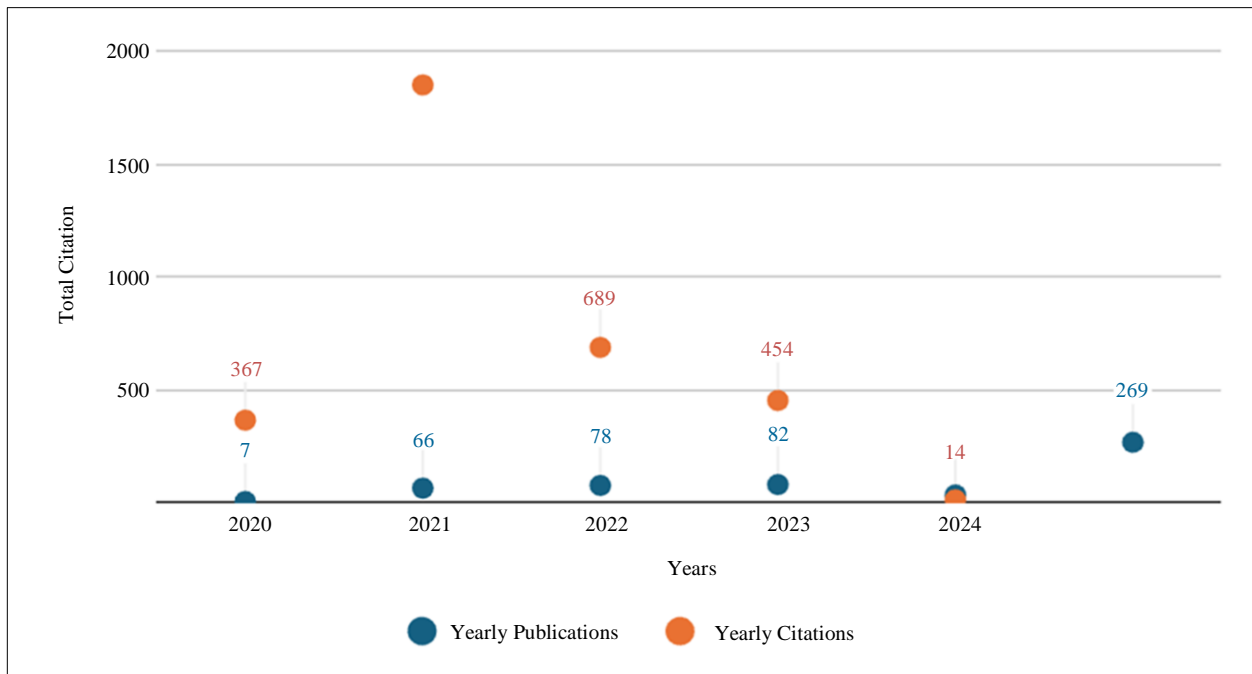


Fig. 2 Publication and citation trends

3.3. Contributing Countries

Table 2 and Figure 3 describe the frequency of research publications concerning the HRM practices of remote work and telecommuting by regions and countries. The USA has the highest number of publications on the subject, with 144, which points towards a clear focus and depth of research in the country. Australia and India come next at 69 and 68, which means there is also much academic focus on these countries. Other EU Member States include Portugal, which has 39; the UK, which has 38; Germany, which has 35; Norway, which has 27; and Italy, which has 25. This distribution can be attributed to the current global focus on the effects of telecommuting and remote work, with a high research activity observed in North America, Europe, and parts of Asia.

When comparing the regions, North America (USA and Canada) occupies a dominant position, especially when looking at the USA alone. However, although the European countries collectively produce a large number of publications, none of the countries can compare with the USA on an individual basis. The top European countries are Portugal, with 39 entries, and the United Kingdom, with 37. The Asian countries present a reasonable contribution but not as impressive as Europe, with India alone contributing 68 publications. In contrast, other Asian countries like Japan, China, and Malaysia have publication frequencies of 19, 16, and 16, respectively. Australia has the highest representation within the Oceania region, contributing 69 articles.

The data also shows a broader spread of research activity in Europe and Asia compared to the significantly concentrated research effort in the USA, which suggests different levels of focus, priorities, and capabilities in different regions. Perhaps most strikingly, Africa must be represented in this list, suggesting that little research activity or publication output is focused on this particular subject area in African nations. Their absence can indicate gaps in research on remote work and telecommuting practices in Africa.

3.4. Productive or Engaging Authors

The data presented in Table 3 signifies a bibliometric view of the authors' research on HRM practices concerning remote work and telecommuting. Scholars like RAPUANO V and VOIDA S published articles with good h-index and g-index scores and numerous citations. On the other hand, scholars that have published less frequently, like AKINSOMI O, have demonstrated highly impactful recent articles, reflected by a perfect m-index of 1. When comparing authors like HAMOUCHE S with a total citation of 156 but fewer publications, it shows highly cited works.

On the other hand, authors such as ABOARD GD have moderate citation rates and h-index in the long run but have a consistent impact with comparatively lower citation rates. These authors include PARENT-LAMARCHE A and SINGH S, who have made consistent, relatively recent contributions based on the m-index. Taken together, the data demonstrates the broad spectrum of research productivity and influence of the authors, where some of them deliver notable impacts through a few landmark publications, while others are more consistently contributing over several years.

Table 2. Productive countries

Region/Country	Publication Frequency
USA	144
Australia	69
India	68
Portugal	39
UK	37
Germany	29
Norway	27
Italy	25
Canada	19
Japan	19
Spain	19
Brazil	18
Lithuania	17
China	16
Malaysia	16
France	14
Poland	14
United arab emirates	14
Finland	13
Ireland	13

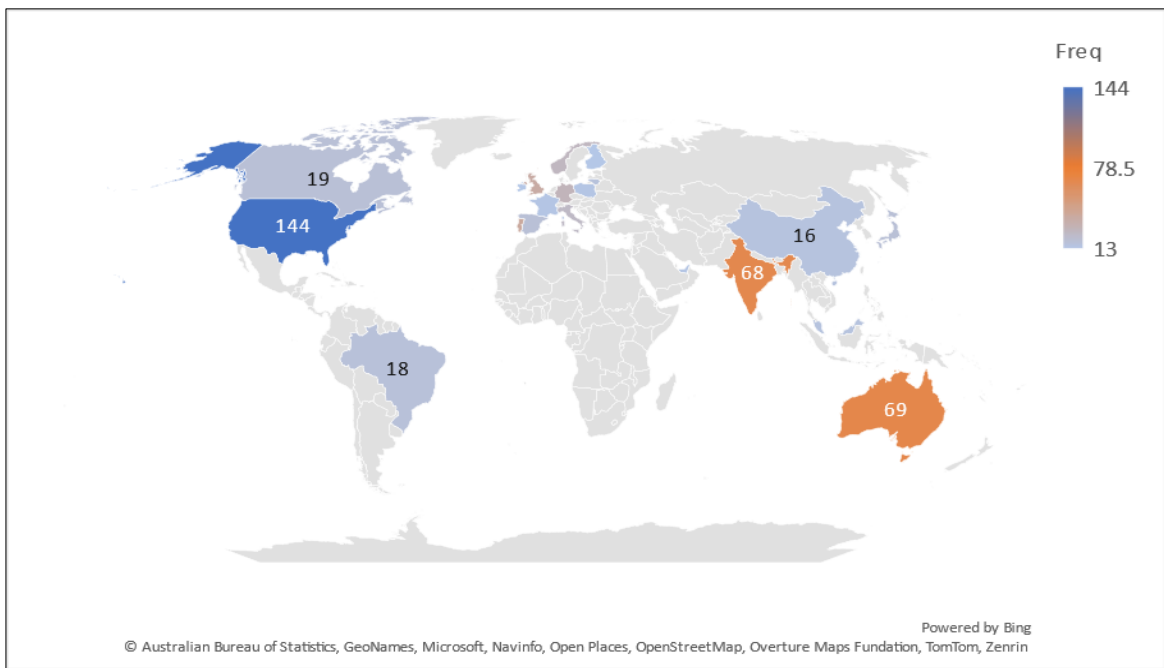


Fig. 3 Productive countries

Table 3. Most productive authors

Element	h_index	g_index	m_index	TC	NP	PY_start
Rapuno V	3	3	0.75	46	3	2021
Chen Z	2	2	0.5	45	2	2021
Hamouche S	2	2	0.5	156	2	2021
Lee J	2	2	0.667	32	2	2022
Parent-Lamarche A	2	2	0.667	20	2	2022
Raiã Ienã– AG	2	2	0.5	40	2	2021
Singh S	2	2	0.667	9	2	2022
Varkuleviãcciãtã K	2	2	0.5	40	2	2021
Voida S	2	3	0.5	31	3	2021
Wiener L	2	2	0.5	26	2	2021
Abowd GD	1	1	0.2	30	1	2020
Achat HM	1	1	0.5	2	1	2023
Acheson J	1	1	0.25	3	1	2021
Agrawal KP	1	1	0.2	4	1	2020
Ahn D	1	1	0.5	26	1	2023
Ajmeri N	1	1	0.333	3	1	2022
Akinsomi O	1	1	1	1	1	2024
Al Khayat A	1	1	0.5	1	1	2023
Alam MS	1	1	0.333	3	1	2022
Alcover C-M	1	1	0.25	7	1	2021

3.5. Thematic Evolution

The thematic evolution Figure 4 compares the changes in research themes from 2020-2021 to 2022-2024 in terms of the focus of the immediate response and integrated themes. The major trends in 2020-2021 were human resource management, crisis management, digital collaborations, digital transformation, digital whiteboard, coronaviruses and COVID-19.

The themes depict the early stages of the pandemic, where there is much focus on crisis management, using tools during the crisis, and the effects of Covid 19 on work and management. The themes that emerged in 2022-2024 are more general and are grouped under "Covid-19" and "Pandemic."

This shift reflects the transition from narrowly focused, operational-level solutions to strategic changes related to the Impact of the pandemic on HRM and remote work practices. The fact that "COVID-19" still appears as a focus indicates its enduring Impact while focusing on the term "pandemic" as a main topic points to a broader reflection on changes due to the global crisis. This shift from specific, timely issues to more strategic general themes demonstrates how the focus has evolved, considering the unfolding responses to the COVID-19 crisis.

3.6. Thematic Map

The thematic map depicted in Figure 5 categorizes themes into four quadrants: Niche themes, motor themes, emerging or declining themes, and primary themes, which are about centrality and density. In the Basic Themes quadrant, words such as "COVID-19", "human resource management", and "remote work" suggest high relevance but less development, reflecting the primary and general nature of these themes in the research. These terms highlight the pandemic's importance in shaping HRM practices toward telecommuting and remote work. In the Niche Themes quadrant, concepts like "students," "engineering education," and "virtual reality" are high on development but low on relevance, implying that they are well-developed but peripheral subareas of the general focus of the research. The medium relevancy and development of the middle terms, such as "pandemic," "human," and "humans," are also significant for the study but not as critical as the central terms. The lack of terms in the Motor Themes quadrant (high relevance and high development) and the Emerging or Declining Themes quadrant (low relevance and low development) highlight COVID-19's focus on HRM practices and the more nuanced themes requiring further development. This visualization does an excellent job of capturing the general categories and sub-topics within the research domain.

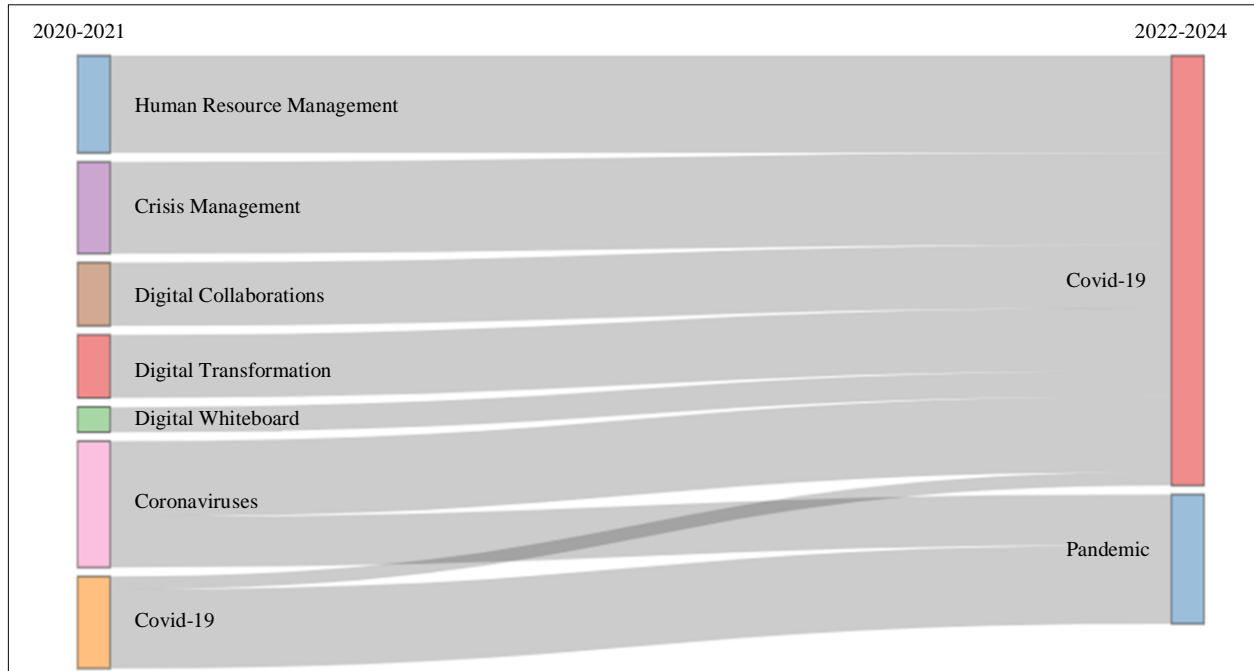


Fig. 4 Thematic evolution

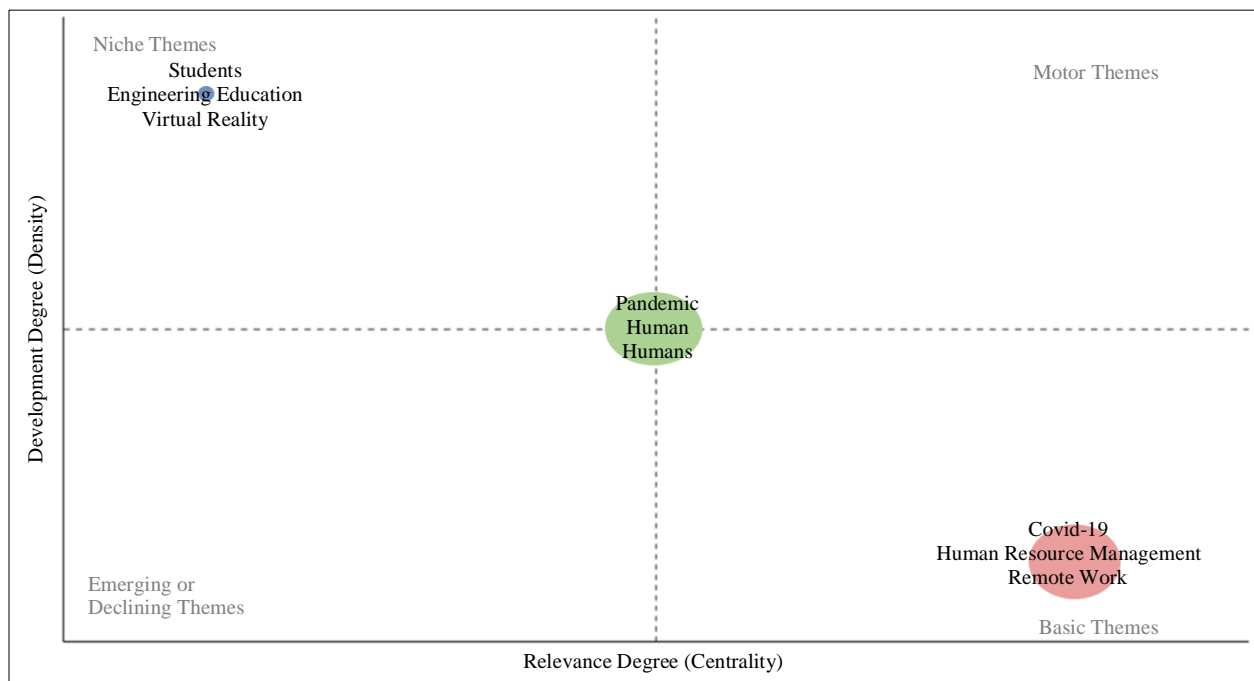


Fig. 5 Thematic map

3.7. Source-Impact

The data in Table 4 provides a bibliometric analysis of various academic journals, focusing on their Impact on the study of "Remote Work and Telecommuting: Some of the journals that are influential according to h-index and g-index in the context of post-pandemic HRM practices include "Frontiers in Psychology," "Proceedings of the ACM on Human-Computer Interaction," and "Sustainability

(Switzerland)," which includes numerous highly cited papers. For instance, "Frontiers in Psychology" and "Proceedings of the ACM on Human-Computer Interaction" have a similar h-index of 4 and, thus, a total citation number over 100, which underlines their importance in enhancing the knowledge of HRM practices in the context of telework. However, some journals like "Human Systems Management" and "International Journal of Workplace Health Management"

possess fewer h-index and g-index, suggesting that they have contributed less to the advancement of the field. Even though they have fewer citations and papers, they still provide essential information and knowledge. The International Journal of Human Resource Management has the highest m-index of 1.5, which still indicates that the database is relatively young but is experiencing a rapid increase in the number of citations per year since its first relevant publication

in 2023. As seen in Table 4, these analyses capture the full range of scholarly output in the field, ranging from top-tier mainstream journals with hundreds of highly cited publications to burgeoning outlets that are quickly gaining credibility, demonstrating the constant evolution in the communication of research after the pandemic in the context of remote work and telecommuting.

Table 4. Source-impact

Element	h_index	g_index	m_index	TC	NP	PY_start
Frontiers in Psychology	4	9	1	112	9	2021
Proceedings of the ACM on Human-Computer Interaction	4	6	1	109	6	2021
Sustainability (Switzerland)	4	7	0.8	278	7	2020
Human Systems Management	3	3	0.6	19	3	2020
International Journal of Environmental Research and Public Health	3	3	0.75	20	3	2021
International Journal of Human Resource Management	3	4	1.5	74	4	2023
Journal of Occupational and Environmental Medicine	3	3	1	14	3	2022
Personnel Review	3	5	1	30	5	2022
PLOS One	3	3	0.75	52	3	2021
Work	3	4	0.75	22	4	2021
ACM International Conference Proceeding Series	2	3	0.5	9	4	2021
Administrative Sciences	2	4	0.5	23	4	2021
Benchmarking	2	2	0.5	82	2	2021
Communications in Computer and Information Science	2	3	0.5	21	3	2021
Entrepreneurial Business and Economics Review	2	2	0.5	30	2	2021
Human Factors	2	2	0.667	41	2	2022
International Journal of Workplace Health Management	2	2	1	4	2	2023
Journal of Management and Organization	2	2	0.5	151	2	2021
Journal OF Organizational Effectiveness	2	2	0.5	119	2	2021
Journal OF Psychosocial Oncology	2	2	0.5	26	2	2021
Kybernetes	2	3	0.667	79	3	2022
Lecture Notes in Civil Engineering	2	2	0.667	5	2	2022
Lecture Notes in Computer Science (Including Subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics)	2	2	0.667	5	2	2022
Management Research Review	2	4	0.667	19	4	2022
Technology In Society	2	2	0.5	48	2	2021

3.8. World Collaboration Map

As depicted in Figure 6, several trends can be inferred from the international collaborations in remote work and telecommuting. The top three countries include the United States, the United Kingdom, and Australia, all exhibiting

relatively strong relations with the other countries. This is followed by the U. S, which has made the highest number of collaborations, especially with Canada, Singapore, and the United Kingdom, which confirm that the United States is a critical player in advanced discourse on remote working.

Australia also demonstrates noteworthy activity, especially with the United Kingdom, Singapore, and Canada, since the country has many connections related to remote work environment requirements. However, some nations, including Brazil, Greece, and Portugal, show fewer collaborations, indicating more regional outcomes in remote work discourse. The frequency of interactions exposes a bias, with countries such as the United States and the United Kingdom having more extensive and diverse networks than the rest. This illustrates that a few countries set most global trends and standards about remote working, and others are either regional players or adherent to those standards.

3.9. Most Frequent Words/World Cloud

The facts from Figure 7 strongly emphasize the pandemic's effect on remote paintings and human resource control. The period "COVID-19" leads with ninety-six mentions, reflecting its dominant position in the studies and its valuable effect on the shift in painting practices. "Human resource control" follows with 86 mentions, highlighting the importance of HRM in adapting to new faraway work paradigms. Phrases like "pandemic" (34), "faraway work" (31), and "human" (30) are also prominent, indicating a targeted exam of the way the pandemic has reshaped faraway paintings dynamics and HR practices, with considerable interest given to the human components worried.

Relatively, terms associated with the broader effect of remote work and its implementation, consisting of "telecommuting" (15), "work at home" (18), and "teleworking" (14), illustrate specific areas of interest in how far away work has been operationalized. In contrast, phrases like "qualitative studies" (thirteen) and "information control" (10) are less often stated, suggesting they may be secondary to the number one focus on pandemic-associated modifications and far-off work practices. This comparison highlights the principal cognizance of the pandemic's direct impact on far-

flung paintings and HRM as opposed to detailed methodological or theoretical components. For that reason, the records underscore a main hobby in the know-how of the immediate impacts and variations driven by the pandemic rather than exploring broader studies topics or control strategies.

3.10. Co-Citations Network

The data at the Co-citation network Figure 8 exhibits critical insights into the effect and interconnectedness of various authors and their contributions. Significantly, Allen T.D. (2021) and Felstead A. (2017) grow to be sizeable nodes with high betweenness and PageRank scores, indicating their essential function in the community and widespread effect on the sector. Allen T.D. has a betweenness of 83. ninety-three and a PageRank of 0.032, at the same time as Felstead A., has a betweenness of seventy-five. Eighty-five and a PageRank of 0.024, suggesting their influential and vital positions in shaping the discourse on far-flung paintings and telecommuting. Their excessive rankings in these metrics imply that their work is often referred to and is essential in connecting various research threads to take a look at.

In evaluation, other authors like Ashforth B.E. (2000) and Bloom N. (2015) have decreased betweenness and PageRank rankings, indicating a much less principal function inside the community notwithstanding their contributions. Ashforth B.E. has a betweenness of 0 and a PageRank of 0.034, even as Bloom N. has a betweenness of zero and a PageRank of 0.021. This shows that while their paintings are applicable, they are less pivotal in connecting one-of-a-kind research areas within the field because of the work of Allen T.D. and Felstead A. The evaluation highlights a clear difference between quite influential authors who substantially shape the research network and people whose contributions, though vital, have an extra localized impact.

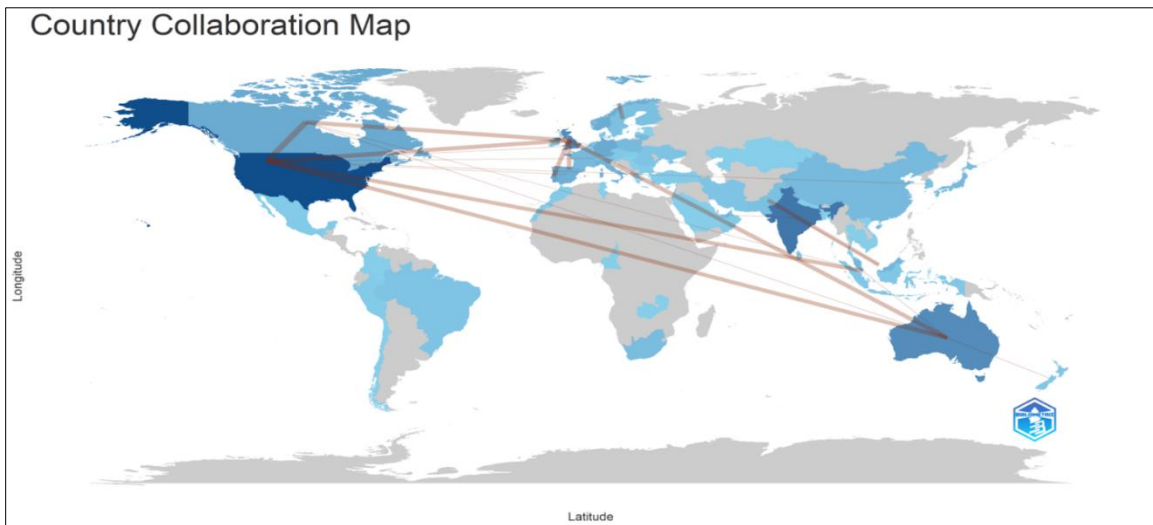


Fig. 6 World collaboration map

Table 5. Author impact

Element	h_index	g_index	m_index	TC	NP	PY_start
Rapuano V	3	3	0.75	46	3	2021
Chen Z	2	2	0.5	45	2	2021
Hamouche S	2	2	0.5	156	2	2021
Lee J	2	2	0.667	32	2	2022
Parent-Lamarche A	2	2	0.667	20	2	2022
Raiienfñ AG	2	2	0.5	40	2	2021
Singh S	2	2	0.667	9	2	2022
Varkuleviäœiätä K	2	2	0.5	40	2	2021
Voida S	2	3	0.5	31	3	2021
Wiener L	2	2	0.5	26	2	2021
Abowd GD	1	1	0.2	30	1	2020
Achat HM	1	1	0.5	2	1	2023
Acheson J	1	1	0.25	3	1	2021
Agrawal KP	1	1	0.2	4	1	2020
Ahn D	1	1	0.5	26	1	2023
Ajmeri N	1	1	0.333	3	1	2022
Akinsomi O	1	1	1	1	1	2024
Al Khayat A	1	1	0.5	1	1	2023
Alam MS	1	1	0.333	3	1	2022
Alcover C-M	1	1	0.25	7	1	2021
Aleem M	1	1	0.5	28	1	2023
Ali K	1	1	1	1	1	2024
Almeida A	1	1	1	1	1	2024
Alshibly HH	1	1	0.333	6	1	2022
Alzaabi A	1	1	0.5	1	1	2023

4. Conclusion

This study offered a comprehensive exploration of what has been learned and published about the academic theme of remote work and telecommuting, with a special focus on HRM during the COVID-19 pandemic. The analysis shows considerable research activity, an annual growth rate, and a relatively young age of the documents, pointing to their contemporary relevance and significance. The findings indicate a strong scientific interest, reflected in the number of documents, citations, and topics addressed by the sources. This research area appears to have had much international participation, as evidenced by a significant number of documents with cross-border co-authors, demonstrating a global interest in examining the prospects and predicaments of telework.

Regional variation in the study is also evident concerning the research contributions whereby the United States was seen to have published most of the articles, followed by other countries such as Australia, India, and some European countries. Such distribution suggests that North America and a few regions of Europe and Asia invested considerably in instigating research in this field.

At the same time, African nations may be more involved in this discipline. The bibliographic analysis of the authors' contributions also reveals more. The general picture of the impact of authors is that some specific authors become essential via highly influencing publications while others are still gaining authority in their field. The thematic progression and thematic map analysis indicate the shift from crisis response and digitalization themes to more general,

interconnected themes concerning the COVID-19 Impact on HRM practices.

4.1. Limitations and Future Research

Although this study contributes to important insight into the academic landscape of remote work and telecommuting in HRM, it is not without limitations. The evaluation relies quite heavily on bibliometric data published in journals and sources that are subject to the problem of potential bias if they do not report beyond contributions made in less conspicuous outlets or in alternative languages than English.

Moreover, the study primarily applies quantitative metrics such as the number of citations or the frequency of

publication, which may reflect only critically on the qualitative impact of individual research contributions. Future research could develop the present study by involving a broader range of sources, considering qualitative analyses, and researching the impact of remote work on organizational levels and cultural contexts. What is more, as this literature develops, the need for longitudinal studies to test remote work practices' long-term implications on changes in the HRM and employee well-being is increasingly critical in a post-pandemic world.

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