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Article

A bibliometric analysis of academic trends in human resource management practice from 2000 to 2023

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MANAGEMENT | RESEARCH ARTICLE



A bibliometric analysis of academic trends in human resource management practice from 2000 to 2023

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ABSTRACT

This study aims to provide a literature evaluation of studies that examine human resources management practices using the bibliometric analysis approach. This study used bibliometric analytic techniques to conduct scientific mapping and performance analysis. The research used the Scopus database and included open-access studies. The bibliometric study revealed a total of 1133 publications and 25,456 citations during the period spanning 2000 to 2023. The number of publications on human resource management practices has steadily risen, reaching its highest point in 2020 with 110 articles and 2278 citations. However, citation counts noticeably declined in the subsequent years. A collective of ten countries has contributed to this field, with America being the most prolific, with 127 publications and 5157. Southwestern University of Finance and Economics is the most productive university, with two publications and 493 citations. The International Journal of Human Resource Management is a highly regarded publication focusing on HRM practices. It has published 52 articles and received 3459 citations. The most often used keywords are "Human Resource Management," "Human resource management practices," "Human resource," and "Resource allocation." The study identified the existing status and made recommendations for further research.

ARTICLE HISTORY

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Business, Management and Accounting; Industry & Industrial Studies; History of Education

1. Introduction

Human resource management (HRM) practices have been extensively studied by researchers over the years, revealing diverse practices with different contexts (Aslam et al., 2014). Historically, academic research has focused on examining the effects of various factors on employee performance, with HRM practices being the prevailing idea claiming significant influence on employee behavioral outcomes (Aktar & Pangil, 2018). Over the past two decades, HRM practices have evolved from treating employees as commodities to recognizing them as vital assets. The rise in global economic competitiveness since 1991 has created more complex and unpredictable workplaces, necessitating organizations to adopt new HRM practices to retain skilled and experienced staff for optimal performance. African nations, while primarily independent, continue to struggle with the repercussions of colonial governance in their management of human resources practices (Hack-Polay et al., 2022). Researchers discovered a need for more English literature on the historical development of HRM practices in most countries, except the USA and Great Britain. France, Germany, and Japan have some reports related to HRM practices, but there is still ongoing research to identify the empirical evidence of long-term development in this field (Kaufman, 2014).

Effective HRM practices are essential for successful organizations, demonstrating solid organizational support. How workers perceive HRM practices may impact the human relations environment and the results of employees, which in turn affects the firm's overall performance (Aslam et al., 2014; Li et al., 2019). Effective HRM practices require strong employer-employee interactions, which promote positive attitudes and motivation among workers. These practices enable organizations to cultivate and mold people's skills, talents, and behavior, effectively achieving corporate objectives (Aktar & Pangil, 2018). HRM practices are crucial for companies to manage and enhance their employees' skills, knowledge, and behavior to achieve organizational goals, fostering positive employee behavior and utilizing their abilities, competencies, and capabilities to enhance production and performance (Otoo, 2020). Supervisors are essential in implementing thoughtful HR practices that enhance worker performance (Muqedi et al., 2023). Research indicates that HRM practices significantly impact organizational performance, innovation, and productivity, with empirical evidence supporting their positive effects in developed nations like the United States (Dang et al., 2018). The literature extensively examines the correlation between HRM practices and performance, primarily emphasizing Western nations and multinational organizations. Nevertheless, there needs to be more comprehensive knowledge about the influence of HRM practices on performance in developing countries, specifically in terms of productivity, employee turnover, profitability, sales growth, return on investment, and corporate innovation (Li et al., 2019).

Studies indicate that HRM practices substantially impact employee performance, especially in developing countries. Nevertheless, the implementation of efficient HRM practices might need to be improved. Prior studies have primarily examined the influence of managers on employees' attitudes and perceptions of HR processes, underscoring the need to investigate HRM practices in developing nations (Dang et al., 2018; Muqedi et al., 2023). The researchers prioritize the comprehension of workers' perspectives on HRM practices to address knowledge deficiencies and improve the impact of HRM practices on their intent to remain employed with a firm (Li et al., 2019; Xiayan et al., 2021). HRM practices are linked to organizational outcomes like performance, job satisfaction, employee performance, absenteeism, and turnover, but there is no theoretical explanation for how certain HRM practices can enhance performance (Aktar & Pangil, 2018). Most HRM practice studies are conducted in developed economies such as the USA, UK, Germany, Netherlands, Italy, and Australia, with few studies on HRM practices in Africa (Otoo, 2020). Researching HRM practices in Africa poses challenges owing to a need for more studies and the intricate interaction of socio-cultural and political factors. Practices differ throughout countries, cultures, and economic systems but often have similar concerns. HRM practices vary across geographical regions (Hack-Polay et al., 2022).

This research seeks to analyze the literature on HRM practices from 2000 to 2023 using bibliometric analysis. The goal is to get insights into the development and significance of HRM practices, which have received increasing attention and importance. To achieve this objective, researchers have developed specific research questions, which are as follows:

- 1. RQ1: What are the general trends in publication output?
- 2. RQ2: What are the overall patterns in the number of publications and the total number of citations?
- 3. RQ4: Which nations have actively engaged in research on HRM practices?
- 4. RQ5: Which universities have conducted the most extensive research on HRM practices?
- 5. RQ6: Which journals receive the most citations and are considered the most influential in HRM practices?
- 6. RQ7: Which keywords are often used in the top 100 highly cited papers on HRM practices?
- 7. RQ8: Which authors have significantly contributed to the body of knowledge regarding HRM practices?

2. Literature review

2.1. Key HRM practices: a comprehensive review

Research has identified HRM practices such as hiring, training, competitive benefits, career promotion, and employee participation as crucial for managing human capital and achieving corporate goals. These practices influence employee behavior, attitudes, and performance, ensuring skilled individuals can

effectively fulfill corporate objectives (Aktar & Pangil, 2018; Xiayan et al., 2021). HRM practices are strategic organizations that manage human resources effectively, develop unique skills, foster social connections, and enhance organizational knowledge (Li et al., 2019). They encompass all activities, functions, and procedures associated with an organization's human resources, aiming to gain a competitive edge by overseeing the supply of resources and achieving organizational objectives (Mugedi et al., 2023; Otoo, 2020). All of the definitions presented by the authors are utilized in this research due to their mutual support.

Human resource management practices encompass recruitment, training, employee retention, health and safety, performance management, and compensation management (Xiayan et al., 2021). These practices, classified as "soft," aim to enhance organizational performance by cultivating a skilled workforce through engagement, professional advancement, education, and constructive feedback (Aktar & Pangil, 2018). They also focus on flexible rules, work design, compensation, benefits, and work-life balance to attract and retain top talent. Previous studies have primarily examined the impact of HRM practices on businesses, emphasizing the need to integrate these practices to achieve strategic goals (Xiayan et al., 2021). Literature analysis on HRM practices in different nations reveals that the most frequently studied areas are recruiting, selection, training, development, remuneration, rewards, and performance assessment (Mugedi et al., 2023).

2.2. Prior research on human resource management practices

Researchers have studied the impact of HRM practices on individual and organizational results (Mugedi et al., 2023). These practices aim to create a positive work environment, encourage employee participation, and assign stimulating innovation tasks. They are linked to reduced attrition rates, increased satisfaction, creative performance, organizational dedication, and engagement (Mugedi et al., 2023). HRM practices improve employee knowledge and performance through recruitment, training, skill development, performance evaluation, incentives, work structuring, employee participation, status recognition, and job security (Otoo, 2020). Research on Chinese and UK SMEs reveals that employees' perception of HRM practices, including growth opportunities, continuous learning, salary, and performance feedback, positively influences loyalty and reduces employee turnover (Li et al., 2019; Otoo, 2020). Successful HRM practices significantly influence workers' desire to remain by providing job security and ensuring long-term employment ties with the firm (Xiayan et al., 2021).

Technology integration in HRD practices has significantly altered training programs and roles, but its impact on effectiveness and resource accessibility remains contentious (Darman et al., 2023). Technological advancements like automation and artificial intelligence can streamline processes but may lead to job displacement (Ayanponle et al., 2024). HR must address these challenges by implementing reskilling programs, focusing on human skill development, and fostering adaptability (Amri, 2024). Digital transformation in HRM involves integrating artificial intelligence, machine learning, and big data analytics to streamline processes and improve decision-making (Ayanponle et al., 2024). Technological change in HRM presents challenges, including the gap between academic research and real-world applications. Future research should focus on global impact across various sectors and geographical contexts (Amri, 2024). Remote work can enhance employee productivity and organizational performance by providing a flexible environment. However, it also poses challenges in maintaining organizational culture and engagement due to the need for more direct supervision (Amri, 2024; Ayanponle et al., 2024).

Diversity and inclusion are crucial in HRM practices, enhancing employee engagement, satisfaction, and retention and improving organizational performance (Amri, 2024). However, many organizations face challenges in implementing effective strategies due to unconscious bias and structural inequalities (Darman et al., 2023). To overcome these, comprehensive and proactive strategies are needed, and further empirical studies are needed to evaluate the effectiveness of these initiatives (Amri, 2024; Ayanponle et al., 2024).

Another area of interest is sustainable HRD, a growing field focusing on how HRD practices can contribute to environmental sustainability, ethical leadership, and employee and community well-being, strongly emphasizing corporate social responsibility (Darman et al., 2023). HR adaptation involves understanding industry trends, fostering a culture of continuous learning, and regularly assessing workforce competencies to ensure agility and adaptability to future challenges (Ayanponle et al., 2024). Strategic Human Resource Management (SHRM) aligns HR practices with organizational goals for a competitive advantage. It improves employee satisfaction and retention. However, SMEs face unique challenges, and technology like AI and big data analytics can enhance SHRM effectiveness (Amri, 2024).

2.3. The significance of HRM practices: insights from bibliometric analysis

The HRD practice literature has grown significantly, but there still needs to be more exploration in specific sectors like healthcare and emerging industries and its intersection with other organizational functions like marketing or finance (Darman et al., 2023). This research examines theoretical literature to comprehend the growing significance and pertinence of HRM practice, using bibliometric analysis to map the literature review and contemplate the development of HRM practices. Bibliometric analysis uses statistical techniques to quantitatively analyze scientific output (Pessin et al., 2023). The quantitative rigor of literature evaluation is established by examining several characteristics of interest, including publications, journals, nations, languages, and organizations. This contributes to identifying and characterizing a research topic (Ellegaard & Wallin, 2015). Using digital bibliometric approaches has significantly transformed the process of scientific analysis. These methods have introduced a systematic, transparent, and repeatable review process, which assists researchers in identifying important works, mapping the study area, and mitigating subjective bias (Donthu et al., 2021). Utilizing the VOSviewer software package's visualization of similarities mapping technique will support the bibliometric analysis in this study.

The subsequent section of this article is devoted to the methodology, which describes the steps necessary to collect and analyze the data. The following section, titled "Results," is subdivided into sections detailing the outcomes derived from the bibliometric maps and the data gathered through the keyword search. The conclusion summarizes the article's aims, key results, study limitations, and recommendations for further research on HRM practices.

3. Methodology

Science mapping, or bibliometric mapping, visualizes scientific disciplines, fields, specialties, and authors. It is used to track the cognitive structure and development of scientific knowledge. Authors increasingly use it to evaluate their scientific knowledge and research and development (R&D) output (Smyrnova-Trybulska et al., 2017). Science mapping is a technique that examines the intellectual and structural relationships between different components of research (Donthu et al., 2021). This study utilizes science mapping to illustrate knowledge of existing HRM practices. Science mapping approaches encompass citation analysis, co-citation analysis, bibliographic coupling, co-word analysis, and co-authorship analysis (Donthu et al., 2021). A bibliometric analysis investigates the interrelationships among developing scientific concepts throughout time, utilizing various units such as keywords, authors, publications, journals, institutions, and countries (Pessin et al., 2023). Science mapping analysis has seven sequential processes: data collection, preprocessing, network extraction, normalization, mapping, analysis, and presentation. Software typically executes these steps concurrently, requiring minimum user input (Pessin et al., 2023; Smyrnova-Trybulska et al., 2017). The VOSviewer software effectively carries out the processes of network extraction, normalization, mapping, analysis, and visualization. These procedures are performed after configuring the settings, allowing quick data finding, acquisition, and analysis (Hallinger & Kovačević, 2019). The researchers collected and examined the data for this study using the following approach.

3.1. Criteria for searching

Web of Science, Scopus, Google Scholar, and NLM's MEDLINE are online bibliographic databases that are vital in searching and obtaining information on scientific publications, papers, and citations. These databases facilitate effective information retrieval across different sectors (Cobo et al., 2011). Researchers can employ diverse internet databases such as Web of Science, Scopus, Crossref, Lens, Dimensions, and Cochrane for bibliometric analysis, facilitating data collection from many sources (Pessin et al., 2023). Recent research indicates that Scopus's extensive coverage of pertinent journals makes it a more favorable option for conducting management research evaluations (Martín-Martín et al., 2018). The researchers utilized the SCOPUS database due to its extensive collection of publications and broader coverage of social science journals compared to the WoS database (Hallinger & Kovačević, 2019).

The study's credibility is enhanced using the Scopus database, which provides high-quality coverage of peer-reviewed social sciences and management journals. This ensures uniform data and standardized bibliometric studies. Scopus's extensive indexing and meticulous citation statistics allow for a comprehensive analysis of research patterns and key publications in HRM. The study's transparency and reliability are enhanced by its simplicity and replicability. This approach provides a reliable and rigorous review of academic trends in HRM. This study establishes key terms to collect data on HRM practices, specifically emphasizing word derivatives and equations. The Scopus database, a globally recognized indexer, is utilized to locate reference papers of exceptional quality, thereby serving as the initial stage in the research process. This stage is to identify the most pertinent articles from the initial search keyword results and store them. The search, conducted in 2024, yielded 1134 items authored between 2000 and 2023. Only English-language journal articles appeared in the search results. CSV files are generated for the initial search results. All necessary information is provided, including the author's name, citation name, document title, year of publication, source title, volume, publishing details, page numbers, number of citations, source type, DOI, abstract, keywords, and conference information. The authors adhered to the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) criteria for conducting the document search, as shown in Figure 1 (Zakaria et al., 2020).

3.2. Data collection and cleansing

The researchers retrieved data from the database and exported files in Comma-Separated Values (.csv) format. As a result of the constraints of the SCOPUS website, they could only export the initial 1143 records. Only the 1143 most-cited publications were exported for analysis, excluding the remaining data. The researchers then cleaned up the data by identifying missing or incorrect entries. An intelligent approach is to ensure that no critical fields (columns) are missing and that the data fits the field title (for example, the publication name should not be in the author field). During the data cleansing process, incorrect or incomplete entries were removed. After data cleansing, the remaining records were transferred to a distinct Microsoft Excel (.xls) document. To facilitate analysis, the new file was saved as a Text (tab-delimited) file for seamless importation into VOSviewer. One thousand one hundred thirty-four

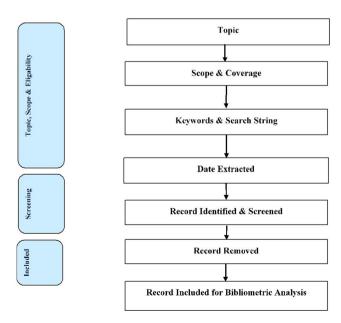


Figure 1. Source: Zakaria et al. (2020).

documents were selected for additional bibliometric analysis (Figure 2). Figure 2 illustrates how data is collected to find relevant research articles on HRM practices.

3.3. Inclusion and exclusion criteria

The researchers select the pertinent documents by employing criteria for inclusion and exclusion. The researchers only use material sourced from respected international journals. Table 1 presents the criteria for including and excluding, with the following being the inclusion criteria.

After applying the inclusion and exclusion criteria, conference papers, reviews, book chapters, conference reviews, books, letters, editorials, data papers, notes, and undefined publications are excluded.

3.4. Bibliometric analysis

The most prevalent bibliographic networks in scientific mapping include keyword maps, co-author networks, citation and co-citation networks, and bibliographic link networks (Pessin et al., 2023; Van Eck & Waltman, 2010). This research used a keyword map, co-authors from multiple nations, and a network of bibliographic ties. To enhance the significance of the findings, the researchers additionally examined publications, citations, and prominent journals in which the most frequently referenced works in HRM practices were published. Various types of software are applicable for scientific mapping purposes. The mentioned tools are INSPIRE, HistCite, VantagePoint, CoPalRed, CiteSpace II, and Gephi (Mohamud, 2023). The study employed VOSviewer, a bibliometric analysis program accessible at www.vosviewer.com, to visualize bibliometric maps and networks and generate graphs using Microsoft Excel.

The VOSviewer software employs a distance-based approach to visualize bibliometric networks, allowing for the visualization of connections for further examination. When examining bibliometric maps, there are three critical factors to consider. First, the size of nodes represents the frequency of an entity's occurrence. Second, the strength of connections between nodes is significant when they are in close

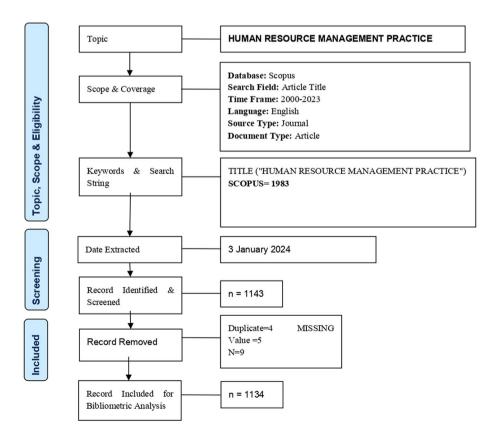


Figure 2. Flow diagram of article searching strategy.

Table 1. Inclusion and exclusion criteria.

No	Inclusion criteria
1	Publication year: 2000-2023
2	Author name: All
3	Subject Area: All
4	Document type: Article
5	Source Title: All Journals
6	Publication stage: Final
7	Keywords: Human Resource Management, Human Management Practice, Human Resource, Resource Management, Resource Allocation, HRM Practices, Human, Human Resources Management, Management Practices, Green Human Resource Management, Human Resources, Humans, HRM, Human Resource Practices, Strategic Human Resource Management, Personnel Management, Human Capital, Human Resources Management Practices, Green Human Resource Management Practices, Human Resource Management Practices, Human Resource Management Practices
8	Affiliation: ALL
9	Country: All
10	Source type: Journal
11	Language: English only

Source: Scopus Database.



Figure 3. Annual publications and citations on HRM practices.

proximity. Lastly, the thickness of the lines connecting nodes indicates both entities' presence (Mohamud, 2023; Van Eck & Waltman, 2010).

4. Results and discussions

The following section provides a concise overview of the main findings obtained from the research. The study used VOSviewer to examine HRM practices, using bibliometric methodologies such as author-article associations, keyword co-occurrences, and conceptual structure analysis, uncovering noteworthy progressions in this domain in recent research.

4.1. Analysis of annual publication and citation trends

Figure 3 illustrates the concurrent trends of yearly publications and citations on HRM methods from 2000 to 2023, with the publication count depicted on both the primary and secondary axes.

The results indicate a consistent rise in publications and citations throughout the years, underscoring heightened interest and acknowledgment of research in this domain. 2020 represents a notable apex, with 110 published works and 2278 citations, signifying an intensified academic emphasis throughout that period. Post-2020, there is a significant decrease in citation counts, indicating a shift in research emphasis or saturation within the topic. Despite this decline, the consistent volume of publications suggests that HRM methods continue to be a significant research subject, but with the potential emergence of new issues within the larger domain.

4.2. Global cooperation and national involvement

The data downloaded indicates that papers about HRM practices were obtained from 90 nations using the VOSviewer program. Table 2 displays the top 10 nations that collaborate in this area. The researchers used the criteria of link, total link strengths, documents, and citations to ascertain the top 10 collaborating nations in this domain.

Table 2 highlights that the USA and China are the most producing nations, with 127 and 128 publications, respectively. The United States of America has the most significant number of links, overall link strengths, and citations with other nations. This phenomenon might be attributed to the scientific inquiry into HRM practices and various nations' varying research capabilities. The USA's dominant position in global scientific leadership may be attributed to its robust economy and prestigious national research institutes, renowned for their excellence in scientific research and ability to recruit international specialists and academics for collaborative endeavors. Scientific research in the United Kingdom has increased dramatically in recent years. Although the link, overall link strengths, and citations rank second in this research. The impact of UK publications remains low. Thus, it should increase the quality of scientific research output and promote international collaboration in the future. Furthermore, the noteworthy findings in Table 2 are that the top 10 collaborative nations have a significant degree of educational attainment. A nation with a well-developed education system may enhance the quality of scientific research and facilitate international collaboration.

The thickness of the line linking the two nations indicates the intensity of their connection. A thicker line indicates a more robust cooperative connection. The results demonstrate a network of research collaboration across countries, where "Links" represent connections and "Total Link Strength" measures the level of collaboration intensity. The USA is at the forefront with 40 connections and a total link strength of 79, showcasing its prominent position and widespread, noteworthy cooperation. The UK, with 33 connections and a total connection strength of 77, indicates significant involvement in international research. Australia has 18 connections and a cumulative strength of 39, indicating substantial engagement in global research. China and Pakistan are heavily engaged in research collaborations, with China having 17 connections and a total link strength of 42, while Pakistan has 17 links and a total link strength of 46. Due to these discoveries, global cooperation has become more critical for generating highly impact papers. Finally, based on these findings, it is clear that researchers from many nations need to collaborate on articles that get a great deal of attention. As shown in Figure 4, the VOSviewer analysis displays a research collaboration network, with the United States and China emerging as the most productive contributors to HRM research.

4.3. The most productive universities

A VOSviewer-assisted evaluation of the attributes of collaborative institutions in terms of HRM practices: One thousand significant organizations were selected from the 2031 institutions collected from the 1133 articles to uncover more helpful information by setting an appropriate threshold value. The researchers used connection criteria, total link strengths, documents, and citations to determine the top 10 cooperating institutions in HRM techniques. Table 3 contains a ranking of the ten universities with the most prophesied HRM practices so that the reader may ascertain the actual state of published papers among these institutions.

Table 2. The ten nations with the best collaborative practices in HRM.

Rank	Country	Link	Total link strength	Documents	Citations
1	United States	40	79	127	5157
2	United Kingdom	33	77	91	2854
3	Australia	18	39	79	2105
4	Spain	11	18	51	2105
5	China	17	42	128	2018
6	Malaysia	17	46	95	1721
7	Canada	16	29	43	1441
8	India	15	19	93	1048
9	Denmark	1	1	5	1009
10	Italy	12	15	37	953

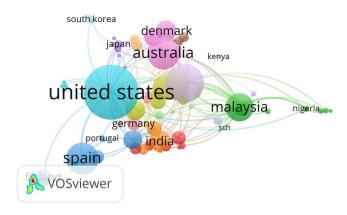


Figure 4. A network of international collaborations in HRM, highlighting the contributions of various countries. Source: VOSviewer.

Table 3.	The top	ten	collaborating	institutions	for	HRM	practices.

No	University	Country	Link	Total link strengths	Documents	Citations
1	Southwestern University of Finance	China	3	3	2	493
	and Economics					
2	University of Deusto	Spain	0	0	1	425
3	Laval University	Canada	3	3	2	380
4	Shandong University	China	3	3	1	379
5	Shanghai Jiaotong university	China	3	3	1	379
6	Universiti Tun Hussein Onn Malaysia	Malaysia	0	0	1	377
7	Abu Dhabi University	UAE	4	4	3	360
8	Tomas Bata University in Zlín	Czech republic	0	0	2	354
9	University of Murcia	Spain	2	2	1	257
10	The George Washington University	USA	2	2	1	257

Table 3 indicates that most of these universities are in China and Spain. Thus, it is clarified that both China and Spain have several esteemed scientific research institutes specializing in HRM practices. Moreover, China's Southwestern Institution of Finance and Economics is the most productive because of its extensive connections, linkages, and citations with other organizations. This is likely due to its ability to provide more real-time HRM practice data for other universities. As a result, several universities have shown a heightened interest in collaborating on papers in this particular sector.

Figure 5 illustrates several institutions represented by different colors inside the circle. The line indicates the level of collaboration between research institutes. The data suggests that the Southwestern University of Finance and Economics and the University of Deusto have the highest number of citations. Research organizations from the same nation collaborate more frequently due to their ease of communication.

4.4. Key journals

In this section, we conducted an extensive study to identify the leading journals that have published the 422 most often cited papers on HRM practices. The researchers identified the top 14 journals in HRM practices based on connection, total link strength, document count, and citation count, as presented in Table 4. The table includes essential information such as the journal's name, total number of publications (TP), total number of citations (TC), average citations per publication (ACPP), Citescore, ranking, and publisher. Table 4 indicates that the journal "International Journal of Human Resource Management" has the highest number of citations, totaling 3459. The "Journal of Cleaner Production" is the second most cited journal, with 2218 citations. It is followed by "Human resource management review," with 887 citations. "International Journal of Hospitality Management" has the lowest number of citations, with 431. The journals with the highest CiteScore and Q1 are "The Journal of Cleaner Production, Human Resource Management Review, Tourism Management, Journal of Business Research, and International Journal of Hospitality Management."

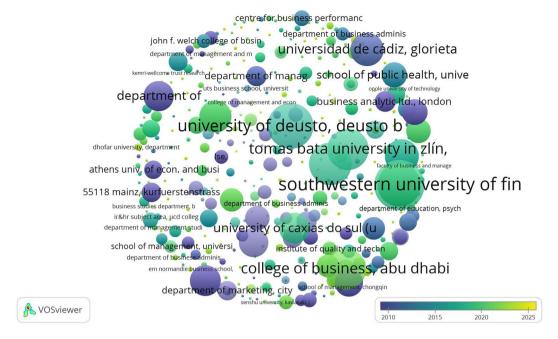


Figure 5. The network of institutional collaborations in HRM. *Source:* VOSviewer.

Table 4. Top 14 HRM journals.

No	Journal Name	Link	TLs	TP	TC	ACPP	Citescore	Ranking	Publisher
1	International journal of human resource management	1	1	52	3,459	67	10	Q1	Taylor & Francis
2	Journal of Cleaner Production	0	0	18	2218	123	18.5	Q1	Elsevier
3	Human resource management review	0	0	9	887	99	16.6	Q1	Elsevier
4	Personnel review	0	0	21	738	35	6	Q1	Emerald Group Publishing Ltd.
5	Journal of Operations Management	15	15	4	711	178	11	Q1	Wiley-Blackwell
6	Sustainability (Switzerland)	1	1	39	615	16	5.8	Q1	Multidisciplinary Digital Publishing Institute (MDPI)
7	Tourism management	1	1	3	611	204	22.9	Q1	Elsevier
8	Cambridge Journal of Economics	1	1	1	603	603	4.4	Q1	Oxford University Press
9	Journal of Knowledge Management	0	0	4	587	147	13.5	Q1	Emerald Group Publishing Ltd
10	Asia pacific journal of human resources	0	0	9	580	64	5.7	Q1	Wiley-Blackwell
11	Human resource management	0	0	10	574	54	10.1	Q1	Wiley-Blackwell
12	Journal of Business Research	1	1	6	543	91	16	Q1	Elsevier
13	International Journal of Hospitality Management	0	0	4	431	108	18.3	Q1	Elsevier
14	Employee relations	0	0	15	413	28	5.2	Q1′	Emerald Group Publishing Ltd.

Furthermore, the table indicates that Emerald Group Publishing Ltd, Elsevier, and Wiley-Blackwell are the predominant publishers, exhibiting the most presence in the top 14. In contrast, other publishers own just one journal apiece. This table offers significant insights into prominent academic journals based on their citation impact, providing vital assistance for scholars who want to submit their work to renowned scholarly publications.

4.5. Keywords analysis

Keywords are essential in publications since they provide fundamental information on terminology, objectives, and methodologies. Keyword co-occurrence analysis, which examines the simultaneous appearance of two or more terms in a document, helps identify popular study subjects and track changes in scientific knowledge domains (Donthu et al., 2021). Keyword preprocessing should be conducted before visualization to enhance the quality of keyword co-occurrence analysis by merging variants with the same meaning. The researchers chose 4101 keywords and extracted them using the threshold function, which required a minimum of 2 occurrences of each term. The resulting keyword co-occurrence network mapping can be shown in Table 5. The researchers determined the top 10 keywords in HRM practices based on connection, overall link strength, document count, and citation count. The results can be seen in Table 5.

Table 5 displays the frequency of most terms across all clusters. "Human Resource Management" has the highest number of connections, total link strengths, and incidence. The list continues with "human resource management practices," "human resource allocation," and "HRM practices. "Human" and "Green human resource management" have the fewest linkages, total link strengths, and occurrences. These keywords assist novice researchers in conducting more effective literature searches for their research papers.

The size of the circles corresponds to the frequency of keywords in HRM practices, while bigger circles indicate areas of active study and future directions. The line depicts the strength of the association between two keywords (Donthu et al., 2021). Figure 6 demonstrates the categorization of these terms into 17 distinct categories, each represented by a different color, based on their occurrence connection. Yellow groups mostly pertain to the features of human resources within the field of HRM. Brown groups primarily focus on employee interactions and personal training. These keywords aid inexperienced researchers in performing more efficient literature searches for their research articles. Yellow groups primarily focus on the characteristics of human resources within the subject category of HRM. Brown groups primarily examine employee relationships and personal training within the subject category of HRM practices. These keywords aid researchers in performing more efficient literature searches for their research articles.

4.6. Network of citations

The core author of cooperative network analysis is a valuable method for assisting corresponding researchers in comprehending the updates and dynamics of critical authors in a particular field. Table 6 demonstrates the collaborative co-authorship network in HRM practices, analyzed using the VOSviewer tool. The researchers identified the top ten citation networks in HRM practices based on connection, link strength, documents, and citations. Table 6 presents the leading ten writers in a citation network, where each author belongs to a cluster. The writers, namely Appelbaum E, Armstrong M., Bailey T., and Berg P. possess high link strengths and citations, demonstrating their significant impact on the network. Adams J.S. Cluster 4 has fewer links and overall link strength connections but possesses 12 citations. Aiken L.S. and West S.G. in cluster 2 have identical linkages, overall link strength, and citations. Most important, it is possible to identify several highly influential authors in the field of HRM research. Michael Armstrong who has written extensively on performance management released what has become a standard reference guide 'Armstrong's Handbook of Performance Management'. Indeed, this book has considerably contributed to the development of the strategic HRM field of study, through the

Table 5. Keyword co-occurrence network for HRM practices.

No	Keywords	Cluster	Link	Total link strengths	Occurrence
1	Human Resource Management	4	661	1892	413
2	Human resource management practices	12	535	1406	309
3	Human resource	2	372	968	126
4	Resource allocation	8	330	950	108
5	HRM practices	11	234	429	101
6	Resource management	6	346	900	98
7	Natural resources management	8	292	796	91
8	Human resources management	12	254	521	79
9	Human	1	295	740	71
10	Green human resource management	3	180	390	63



Figure 6. Keywords analysis. *Source:* VOSviewer.

Table 6. Famous authors collaborate via network.

No	Authors	Cluster	Links	Total link strength	Citations
1	Appelbaum e.	1	10	55	19
2	Armstrong m.	4	7	14	19
3	Bailey t.	1	9	57	18
4	Berg p.	1	9	55	18
5	Adams j.s.	4	1	1	12
5	Adler p.s.	2	3	7	11
7	Kalleberg a.l	3	7	28	8
8	Kalleberg a.	1	5	25	8
9	Aiken I.s	2	6	13	8
10	West s.g.	2	6	13	8

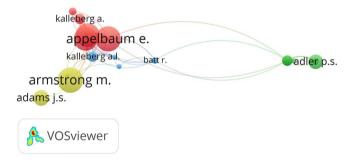


Figure 7. Interconnected network of famous writers fostering collaboration. *Source:* VOSviewer.

integration of the human resource practices with those of the organizational objectives. Similarly to Eileen Appelbaum, the author is most known for her work dedicated to high-performance work systems (HPWS). Her 'Manufacturing Advantage: High performers reveal that their HRM has paid off: The importance of High-Performance Work Systems,' published in 2000 is another important article that shows how HRM practices lead to improvement in the performance of the firm. These works are useful for the analysis of the HRM development as they focus on the importance of HR as business management tool. Table 6 displays the ranking of the ten most influential writers regarding their network of citations.

Figure 7 displays the frequency of co-author published documents, with the size of the circles representing this frequency. As the size of the circle increases, the quantity of paper also increases. Moreover, the line that links the two writers implies a cooperative relationship between them. According to the results of the bibliometrics study, there are four distinct groups, and Appelbaum is considered the most influential collaborator in HRM practices. The authors exhibit a notable degree of cooperation about the

same color cluster. As an illustration, Appelbaum serves as the primary core author within the pink cluster, wherein Berg and Kalleberg maintain a more robust collaborative rapport.

5. Discussions

This study analyzes HRM practices from 2000 to 2023 using Scopus data. It provides a comprehensive overview of research trends and popular issues, quiding scholars in understanding HRM practices. However, gaps persist, such as limited exploration in specific sectors and a need for more research on HRD's intersectionality with other organizational functions.

The paper also provides a trend analysis of HRM practices, with 2020, 2021, 2022, and 2023 serving as pioneer years. In addition, we have identified the recent topics that should be associated with HRM practices, such as HRM, resource allocation, resource management, natural resources management, and green HRM. Prior research indicates that the present discussions and developing patterns in human resources management practices center around topics like digital transformation, including Al and machine learning, diversity and inclusion, environmental sustainability, ethical leadership, employee and community well-being, corporate social responsibility, and strategic HRM (Darman et al., 2023; Ayanponle et al., 2024; Amri, 2024).

Most of the research was conducted in developed countries, but developing countries also contribute to the expanding corpus of knowledge. A more comprehensive understanding of the HRM practices will be achieved through increased coordination among the countries and universities. This study confirms previous research that HRM practice studies primarily focus on developed countries, despite similar concerns across geographical regions, and highlights a lack of research on African practices due to socio-cultural and political factors (Hack-Polay et al., 2022; Otoo, 2020).

Finally, HRM practices are rooted in the business and management realm. Their primary objective is to establish and implement policies and practices that promote fairness and equity inside the firm. Thus, the "International Journal of Human Resource Management" had the most influence in terms of citations regarding future trends in HRM and the world of work.

6. Conclusions

The concept of HRM practices has received significant attention from researchers and practitioners. Existing research and the author's analysis of the literature on HRM practices indicate that this field is growing. Globalization and technological improvements have made the world more complex, dynamic, and unpredictable (Aktar & Pangil, 2018). Organizations encounter ongoing competition due to elevated performance, quality, and cost-effectiveness standards. Consequently, they develop distinctive strategies that set them apart from rivals. Since HRM practices aim to accomplish organizational objectives, their efficient application has become important (Otoo, 2020). Furthermore, firms use HRM practices to maintain a competitive advantage over their competitors. As a result, researchers focus their efforts on this topic to examine the tangible advantages of HRM practices for firms.

Bibliometrics is a research method that seeks to analyze and identify the current dominant patterns and themes in published research within a specific topic or publication (Pessin et al., 2023; Van Eck & Waltman, 2010). It is a practical approach for gathering information on a particular study area over time. It allows readers to get essential information from many sources. This study analyzes research on HRM practices published from 2000 to 2023. The Scopus database gathers bibliographic data, offering insights into published papers, prominent authors, and organizations actively researching HRM practices. From 2017 to 2023, there has been a substantial rise in articles focused on HRM practices. The year 2023 has the highest number of publications, totaling 146. 2020 saw a pinnacle in scholarly output, with 110 papers and an impressive 2278 citations.

The USA is the most prolific nation, having published 127 publications and 5157 citations, followed closely by the United Kingdom with 91 and 2854 citations. The USA dominated research papers on HRM practices from 2000 to 2023. This demonstrates that the nation's progressively autonomous research system is independent of other nations. Southwestern University of Finance and Economics is the most prolific university, with a remarkable record of 2 publications and 493 citations. A collaborative research

article between the University of Murcia and The George Washington University received 257 citations. These universities had the lowest number of citations.

The main feature of China was the predominance of citations in research publications on HRM practices. The International Journal of Human Resource Management is a notable source for HRM practices, with a productive record of publishing 52 papers and receiving 3459 citations. The "Journal of Cleaner Production" category ranks second with 18 articles and 2218 citations. The "Human Resource Management Review" ranks third, with nine published papers and 887 citations.

"Human resource management," "human resource management practices," "human resource," and "resource allocation" are the most frequently used keywords.

In 2020, 110 publications and 2278 citations were published on HRM practices, marking a high. However, citation numbers fell below 2278 in the subsequent years. However, there was a sharp increase, particularly after 2017. This implies a rising interest in the issue. Each author contributed to one or two publications. Appelbaum and Armstrong had the highest number of citations, totaling 19. They were followed by Bailey and Berg, who had 18 citations.

Hence, in operationalizing this paper, the use of bibliometric analysis has the strength of capturing quantitative data on the state of research on the subject under consideration, namely HRM practices, as well as a limitation in that it only offers quantitative measures in capturing publication trends and patterns but does not capture other aspects of the qualitative nature of the practices. This limitation implies that although the study provides an umbrella view of the patterns, it is expected that HRM practitioners should supplement these findings with qualitative work because of the practical relevance. For instance, the enhanced publication and citation rates reveal the upsurge of the significance of HRM practices in delivering organizations' objectives. Managers can take advantage of this trend with the help of a sharp focus on the most recent scientific developments in the field of HRM and the improvement of top-performing strategies that would allow them to sustain a leading edge. Also, recognizing the most widespread keywords and high-impact journals can contribute to practitioners becoming aware of areas to focus on and sources of the most recent knowledge about HRM. It implies that by integrating the usability of quantitative data collected through bibliometric analysis and qualitative perspectives from case studies and experiences, HRM practitioners can develop better and more practical approaches for dealing with the area's intricate and ever-evolving issues.

7. Limitations and future research

The HRM Practices area has had substantial development in recent years, highlighting the importance of this topic. Consequently, HRM practices have become a crucial area of study for scholars and professionals. Although the theoretical underpinning of HRM practices is still being developed, there is significant variation in the results of these practices, which continues to attract the attention of academics and scholars. Additional scholarly study is anticipated to resolve any lingering ambiguities on this topic. Although, there are some limitations to the study. First, the findings cannot be generalized because the data were obtained exclusively from the Scopus database rather than from publications listed in other databases like the Web of Science, Dimensions, PubMed, and Microsoft Academic. While the data originated from Scopus, it is prudent to do further research utilizing data from other databases due to the potential limitations imposed by this particular database, which may have influenced the study. Second, to get a deep comprehension of "HRM Practices," it is necessary to conduct a complete qualitative literature study. This is because the inquiry in this field involves a bibliometric analysis, and the identification of future directions relies on quantitative analysis.

Finally, our analysis was limited to examining data from the 100 most-cited publications. The findings differed significantly if we had utilized all the articles retrieved in the initial search. As a result, the next set of results must be considered in light of these constraints.

Authors' contributions

The authors have made substantial contributions to the composition of this article. Mohamud Ahmed Mohamed and Ibrahim Hassan Mohamud were responsible for the study's inception, design, and development. They wrote the first draft of the paper, collected and analyzed the data, and evaluated and edited the publication. Abukar Mohamed Sahal contributed to the literature review. Mohamed Ali Farah wrote the discussion part.



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Data availability statement

The data that support the findings of this study are available from the corresponding author, [Mohamud Ahmed Mohamed], upon reasonable request.

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