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ROLE OF DATA ANALYTICS IN HUMAN RESOURCE MANAGEMENT: A REVIEW AND BIBLIOMETRIC ANALYSIS

Rekha Bishnoi
Research Scholar

Dr. Sona Vikas
Professor
School of Management & Liberal Studies (The North Cap University Gurugram)

Abstract
This investigation consists of a systematic literature review, bibliometric analysis, and comprehensive review to clarify the function of data analytics in human resource management (HRM) from 2015 to 2024. The research identifies key themes, trends, and contributions in this growing field by analysing 173 relevant articles. The findings emphasise the growing incorporation of data analytics tools and techniques into HRM practices, which enables data-driven decision-making and improves organizational performance. The bibliometric analysis demonstrates the development of influential journals, prominent authors, and research topics within the domain. Additionally, the systematic literature review consolidates the current body of knowledge, emphasizing the vital role of data analytics in a variety of HRM domains, including recruitment, performance management, employee engagement, and talent development. The insights obtained from this study offer valuable guidance to HR professionals, researchers, and policymakers who are interested in utilizing data analytics to optimize HRM processes and achieve strategic organizational outcomes.

Keywords: Systematic Literature Review, Data Analytics, Human Resource Management (HRM), HR Analytics, Bibliometric analysis, HR technology

1. Introduction

Human resource management (HRM) is one of the fields where data analytics has become a game-changing instrument. The adoption of data analytics in HRM procedures represents a dramatic departure from conventional techniques and a move towards more strategic, data-driven approaches. The present analysis delves into the application of data analytics in HRM, emphasising its influence on a range of HR operations, including hiring, employee engagement, performance management, and talent retention. Organisations may use a wealth of employee data to make well-informed decisions by implementing data analytics in HRM. Cutting-edge analytical methods like big data analytics, machine learning, and predictive analytics make it easier to see patterns, trends, and insights that were previously unreachable. HR practitioners can proactively address challenges and prepare accordingly by using predictive analytics, which can foresee future labour demands, identify potential high performers, and anticipate attrition risks. Furthermore, by

optimising candidate selection, cutting down on hiring time, and raising the calibre of hires, data analytics improves the hiring process. HR departments can comprehend candidate behaviour, pinpoint the best channels for recruiting, and customise their approaches to draw in top talent by evaluating data from several sources. Data-driven insights are particularly advantageous for employee engagement and performance management, since they enable organisations to monitor and evaluate worker satisfaction, productivity metrics, and other performance indicators in order to develop more engaged and productive staff. In order to give a thorough overview of the body of research on the application of data analytics in HRM, this bibliometric analysis was conducted. The review provides insightful information about the present state of research and suggests possible directions for future investigation by looking at publication trends, significant contributions, and important papers in this field. The results highlight how data analytics is becoming more and more important in influencing HRM's future, spurring innovation, and improving organisational effectiveness.

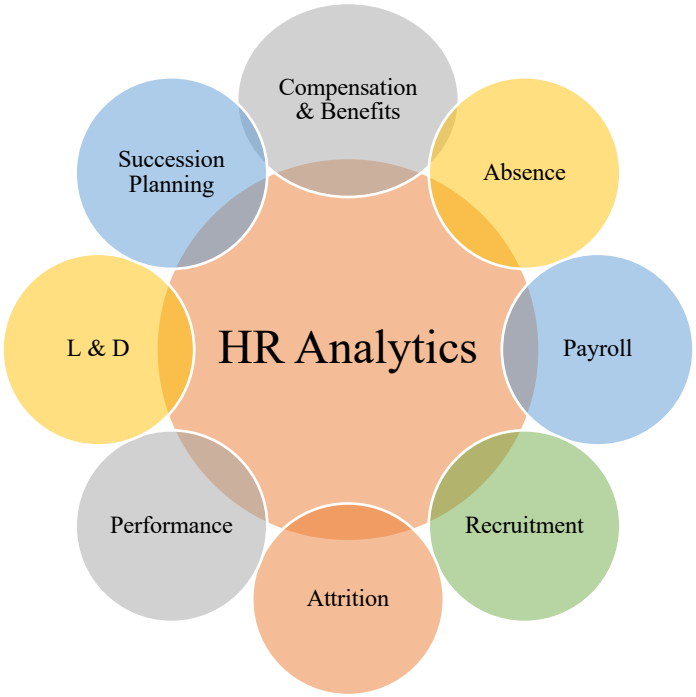

Figure No. 1 HR Analytics (Source:(Choudhury & Barman, 2016))

1.1 Intersection of HRM and Data Analytics

The integration of Data Analytics with Human Resource Management (HRM) signifies a revolutionary change in the way businesses handle talent management. Hiring, performance reviews, and employee engagement are all being revolutionised by the seamless integration of data analytics into HRM procedures. HR professionals may make data-driven decisions that ensure optimal labour allocation and strategic planning by utilizing sophisticated algorithms and predictive modelling. There are several advantages of using data analytics in HRM. It improves decision-making accuracy by offering information on skill gaps, employee performance, and

turnover rates. It also makes customised programmers for staff development possible and helps to find high-potential individuals for succession planning. Furthermore, data analytics expedites the hiring process by more quickly identifying the best candidates, which lowers expenses and the time it takes to hire. Nevertheless, there are still issues and restrictions with using data analytics for HRM. The main obstacles include interpretation difficulties, data accuracy issues, and privacy concerns related to employee data. Moreover, organisations frequently encounter pushback from conventional HR professionals who are not conversant with data-driven methodologies. A comprehensive strategy that includes strong data governance frameworks, ongoing HR professional upskilling, and open communication to foster employee confidence surrounding data utilisation is needed to overcome these obstacles. In the end, adopting data analytics in HRM promises to improve employee experiences in the digital age and optimize organizational success.

2. Bibliometric Analysis: A Comprehensive Review of the Literature

This review utilises bibliometric analysis to examine the incorporation of data analytics into the field of human resource management. This study examines academic literature in order to evaluate the changing function of data analytics in human resources practices, providing insights into influential contributions, methodologies, and trends. By employing bibliometric methodologies, this study seeks to offer valuable insights regarding the scope, influence, and circulation of research within this interdisciplinary field. These findings will serve to guide strategic human resources decision-making and guide future research endeavors.

Table No. 1 Overview of Studies on Data Analytics in Human Resource Management (Source: Author)

Sr.No	Author(s)	Year	Study Focus	Methodology	Key Findings
1	Alessandro Margherita et al.	2020	Systematic identification and classification of HR analytics topics	Systematic literature review	Identified 106 research topics in HR analytics; suggested an "exponential" view enabled by AI and cognitive technologies.
2	Alexis Megan Votto et al.	2021	Application of AI in HRM/HRIS, particularly tactical HRIS components	Systematic literature review	AI's role in HRMS and HRIS is growing; identified gaps in research for future exploration.

3	Benjamin T. Hazen et al.	2016	Impact of Big Data and Predictive Analytics (BDPA) on supply chain sustainability	Systematic literature review	Limited understanding of BDPA's impact on environmental and social sustainability; proposed research agenda.
4	Christian Voegtlin et al.	2016	Relationship between Corporate Social Responsibility (CSR) and HRM	Systematic literature review	Proposed three theoretical perspectives (instrumental, social integrative, political) to conceptualize CSR-HRM.
5	Tom Pape et al.	2016	Development of a prescriptive framework to prioritize data items for business analytics, applied to HR	Systematic literature review	Proposal of framework for prioritizing data items in BI systems, application to HR for informed decision-making.
6	Dianna L. Stone et al.	2015	Effects of information technology on HR processes	Systematic literature review	Highlighted advantages and limitations of IT in HR; suggested future research directions.
7	Gang Wang et al.	2016	Application of Big Data Business Analytics (BDBA) in logistics and supply chain management (SCA)	Systematic literature review	Proposed a maturity framework for SCA; emphasized BDBA as a strategic asset for integrated enterprise business analytics.
8	Ignacio Danvila-del-Valle et al.	2019	Examination of HR training research trends using bibliometric techniques	Bibliometric analysis	Identified three publication periods; dominant focus on US and labor-intensive industries; suggested cross-country and industry studies.

9	Karen Becker et al.	2015	Risk management in HRM, particularly human resource-related risks	Systematic literature review	Limited research has taken a risk management perspective on HRM. HRM has a role in addressing human resource issues as organizational risks. Further research is needed to develop the phenomenon of human resource risk management.
10	L.B.P. da Silva et al.	2022	Impact of digitalization and Industry 4.0 on HRM	Systematic literature review	Identified 13 themes affecting HRM due to Industry 4.0; provided insights for future studies and organizational strategies.
11	Yucheng Zhang et al.	2021	Integration of big data approaches in HRM research	Systematic literature review	Proposed a theoretical framework for HRM research integrating big data approaches; identified potential research questions, levels of analysis, methods, data sources, and software; summarized procedures for big data research in HRM and suggested future research agenda.
12	Dave Ulrich et al.	2015	Transformation and future direction of HR as a strategic business partner	Systematic literature review	Described HR's transformation from administrative to strategic roles; highlighted targets for HR work and areas for HR investments, including HR analytics,

					to add value to the organization.

Table No. 2 Key Studies in Human Resource Management and Data Analytics in HR (Source: Author)

This table provides a thorough summary of significant HRM and analytics studies from 2015 to 2023, encompassing methodologies, findings, and implications across a variety of HR disciplines. It underscores the changing role of data analytics and personalised HRM practices.

Sr. No	Author(s)	Year	Summary	Result
1	Aizhan Tursunbayeva et al.	2018	This mixed-method scoping review maps the emergence of People Analytics (PA), examining vendor value propositions, PA skillsets, and changes in academic research and online search traffic.	Diverse PA tools offer strategic benefits, but evidence is sparse, and ethical considerations are largely absent.
2	Akram Al Ariss et al.	2016	Examines under-researched topics in comparative international HR management (IHRM), focusing on talent management, international mobility, and diversity. Highlights the importance of sociocultural and institutional factors.	Sociocultural context is critical in IHRM, influencing HR practices more than international best practices.
3	Andrea De Mauro et al.	2018	Analyzes real-world job posts to clarify skills needed in Big Data professions, identifying job families and skill sets using machine learning and expert judgment.	Provides a structured classification to help HR managers develop strategies for Big Data skill acquisition.

4	Chad Murphy et al.	2016	Provides an overview of the grounded theory approach for HR research, detailing its methodology and differences from other qualitative methods.	Grounded theory offers a rigorous, data-driven approach to HR research, bridging inductive and deductive methods.
5	Dana Pessach et al.	2020	Proposes an analytics framework for HR recruiters to improve hiring decisions, using a Variable-Order Bayesian Network (VOBN) model for predictions.	The framework improves recruitment success and diversity, offering interpretable insights for HR professionals.
6	Di Fan et al.	2021	Reviews international HR management (IHRM) research, identifying key clusters and proposing a future research agenda based on bibliographic analysis of 1924 articles.	Proposes future IHRM research directions, emphasizing global work, human capital, and new empirical methods.
7	Jaemin Kim et al.	2021	Examines the impact of data-driven decision-making on the value of social capital in firm performance, using MLB teams' data analytics from 2009 to 2014.	Data-driven decisions diminish the positive effects of social capital, while intuition-based decisions enhance it.
8	Maria Markoulli et al.	2016	Systematically reviews HRM field using science mapping, analyzing 12,157 articles to reveal HRM scholarship's intellectual structure and trends.	Identifies key HRM research themes and suggests future directions to align scholarship with practitioner needs.

9	R.H. Hamilton et al.	2020	Discusses the potential of big data analytics in HR to enhance firm performance, addressing strategic questions and regulatory challenges.	Highlights the need to address privacy and ethical issues for successful big data analytics in HR.
10	Xiaoyu Huang et al.	2023	Theorizes personalized HRM, which uses advanced HR analytics and AI to provide tailored HR solutions, arguing it offers unique competitive advantages.	Personalized HRM enhances productivity, HR climate, and financial performance, moderated by business strategy.
11	Wayne F. Cascio et al.	2015	Reviews 50 years of research in International HR Management (IHRM) and Talent Management (TM), focusing on the Journal of World Business.	Identifies key trends and themes, suggesting future research directions to connect with global business trends.
12	Suriyan Jomthanachai et al.	2020	Studies Total Resource Management (TRM) in the rubberwood processing industry, using Genetic Algorithms and Web-Based Applications to improve data accuracy and production efficiency.	TRM significantly improves performance and efficiency in production, material, labor, and service resources.

Trends in HR and Data Analytics in HRM Topic Over Time

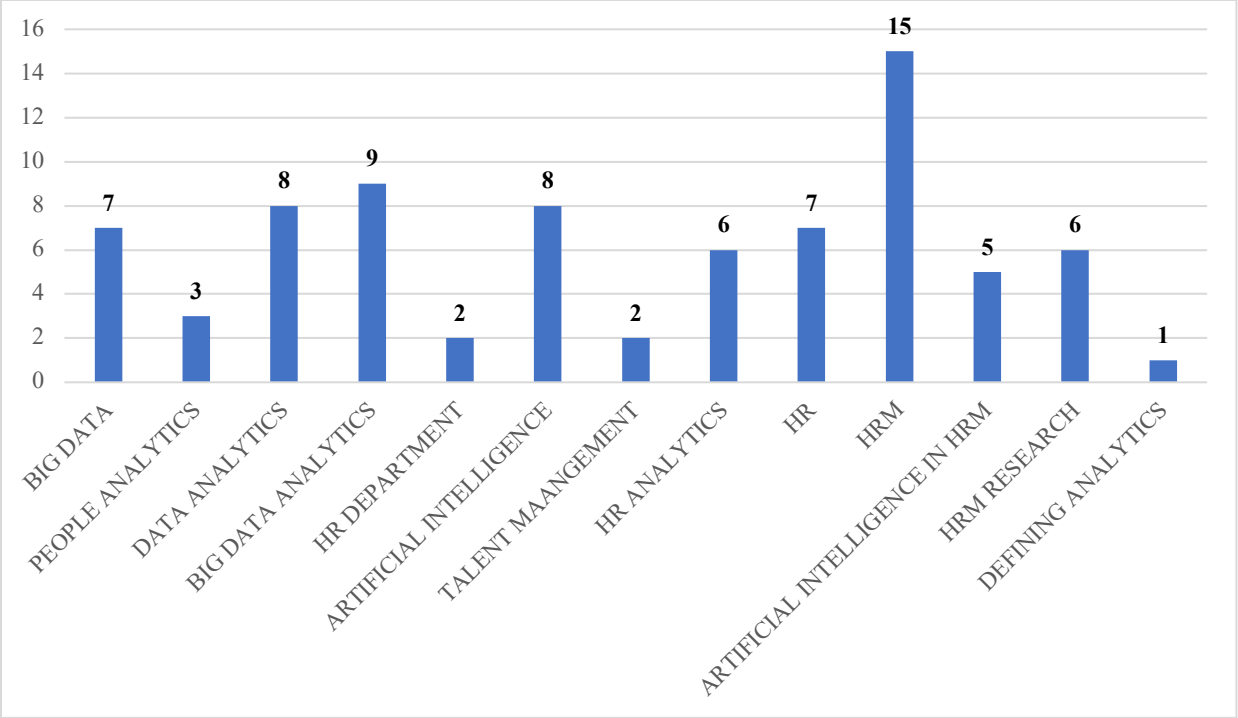

Figure No.2 Topic trend over the period (Source: Author)

According to the data, which shows topic trends over a given time period, "hrm" was mentioned the most (15 times), followed by "big data analytics" (9 times). "artificial intelligence" and "data analytics" have eight mentions apiece, whilst "big data" and "HR" have seven. With six mentions each, "hr analytics" and "hrm research" are addressed in a moderate amount. With five and three mentions, respectively, topics like "ai in hrm" and "people analytics" demonstrate moderate interest. In the trend analysis, "hr department," "talent management," and "defining analytics," which represent developing or specialised fields, receive less attention.

2.1 Rotational for the study

One revolutionary method for controlling and maximising labour skills is the integration of data analytics into human resource management (HRM). The purpose of this paper, "Role of Data Analytics in Human Resource Management: A Review and Bibliometric Analysis," is to give a comprehensive analysis of the use of data analytics in HRM. We will locate and compile the body of research through a systematic literature review (SLR), providing a thorough synopsis of recent advances and trends. In order to provide insights into the academic landscape and research output, the bibliometric analysis will be utilized to assess the impact and influence of various works, authors, and journals within this subject. Network analysis will also be utilized to map out the field's intellectual structure by investigating the connections and alliances amongst researchers and organisations. In addition to highlighting the most significant works and hot subjects, this dual approach of bibliometric and network analysis will identify gaps in the body of knowledge and

direct future research directions. This study will provide important insights for researchers, policymakers, and HR practitioners who want to use data-driven methods for improved organisational performance and strategic HR planning. It does this by analysing the function and implications of data analytics in HRM.

3. Methodology

A bibliometric study of 173 papers was used in the technique to investigate the function of data analytics in HRM. First, a thorough search encompassing the years 2015–2024 was carried out using academic databases such as Scopus and Web of Science. Particular keywords associated with data analytics and HRM were used in the search. Following that, articles were filtered according to inclusion criteria and topic relevancy. The VOSviewer software version 1.6.13.3 was utilized to analyse citation patterns and visualise bibliometric networks. Publication year, authorship, journal source, keywords, and citation counts were among the details extracted from the data. The identification of important themes, trends, and important works in the discipline was made easier by the bibliometric study. In order to analyse the data and drow significant conclusions on the application and significance of data analytics in human resource management, statistical techniques were utilised.

Inclusion criteria

The selection criteria were carefully designed to guarantee the inclusion of relevant and high-quality literature for the bibliometric study. The most recent developments and patterns in the field were captured by articles released between 2015 and 2024. To keep the list important, only papers that worked specifically with the incorporation of data analytics into HRM were chosen. To assure accuracy and comprehensiveness, conference papers, peer-reviewed journal articles, and reviews were chosen. Only articles written in English were selected in order to preserve accessibility and uniformity.

Exclusion criteria

However, in order to further hone the study, some exclusion criteria were used. Exclusivity applied to articles published after 2024 or before 2015. Articles that did not particularly address the use of data analytics in HRM were removed since they were irrelevant. Since they lacked depth and credibility, non-peer reviewed publications including letters, abstracts, and editorials were ignored. Furthermore, to ensure consistency in language understanding and analysis, articles that were not available in English were eliminated. An excellent and targeted bibliometric analysis was guaranteed by these standards.

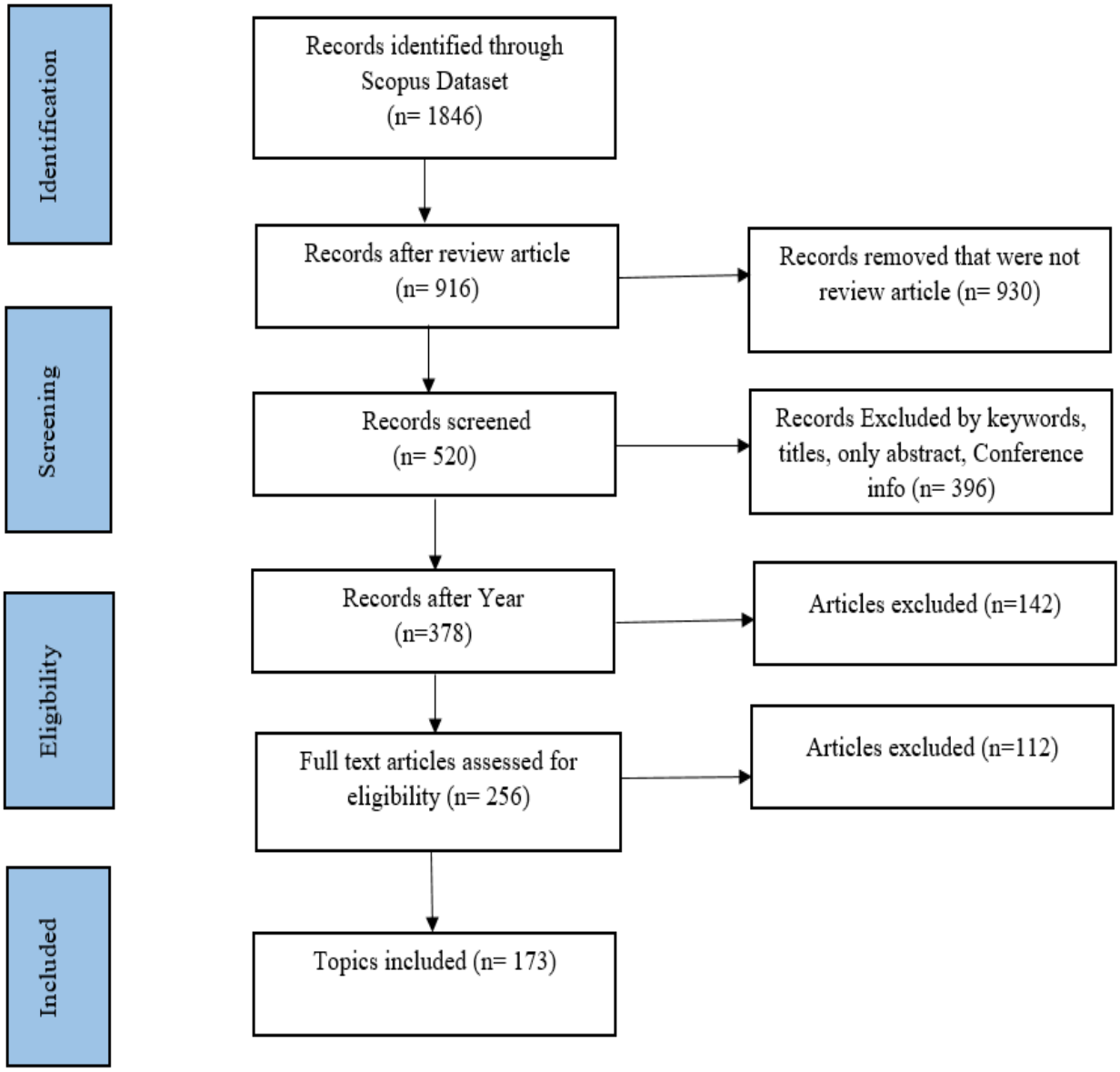

Figure No.3 PRISMA model

Reviewing the role of data analytics in human resource management using the Prisma model will guarantee a transparent and methodical approach. Output of the Scopus dataset: 84,649 documents were initially identified. Seventy-five,333 records that did not correspond to review articles were eliminated during the identification phase, leaving ninety-one review articles for additional study. Following additional filtration during the screening phase, 1,137 of these 9,316 records remained after initial screening. The quantity of entries was reduced to 378 following the application of the publication year criterion. Following this, the eligibility of the full-text articles was determined, which allowed for a comprehensive evaluation of 173 articles. In the end, 78 topics indicative of the most pertinent and substantial contributions to the domain of human resource management analytics were incorporated into the final review.A total of 1,179 records were omitted during this

procedure due to various criteria; these included titles that failed to align with the study's objectives, abstracts consisting solely of non-comparative conference information, and titles that failed to match the scope. The review's thoroughness and emphasis on pertinent, high-quality literature were guaranteed by this methodical procedure. A rigorous standard was upheld in the study through the exclusion of non-review articles and irrelevant records, thereby guaranteeing the inclusion of solely the most pertinent research on data analytics in the field of human resource management. This methodology facilitated an extensive analysis of patterns, influential thinkers, foundational publications, and the overall progression of the subject matter, thereby establishing a strong groundwork for comprehending the consequences and progression of data analytics in the domain of human resource management.

4. Analysis and Interpretation

Analysis of Publication Trends and Research Focus in Data Analytics for HRM

This study includes top contributing journals in the subject of data analytics applied to human resource management (HRM), as well as publication trends broken down by year, keyword distribution, and topic trends. An increasing but erratic trend in scholarly articles is revealed by the year-wise trajectory from 2015 to 2024, emphasising a post-2021 spike in interest. A considerable emphasis on data analytics (33%) and HR analytics (20%), as well as human resource management (35%) is indicated by the keywords. The most often discussed topic according to topic trends is "HRM," which is followed by "big data analytics" and "artificial intelligence." Journal of Management and Journal of Human Resource Management are two well-known journals that are among the top contributing journals based on impact factor. The data-driven approaches in HRM practices are becoming increasingly recognised and explored, as this report shows.

Year-wise publication details

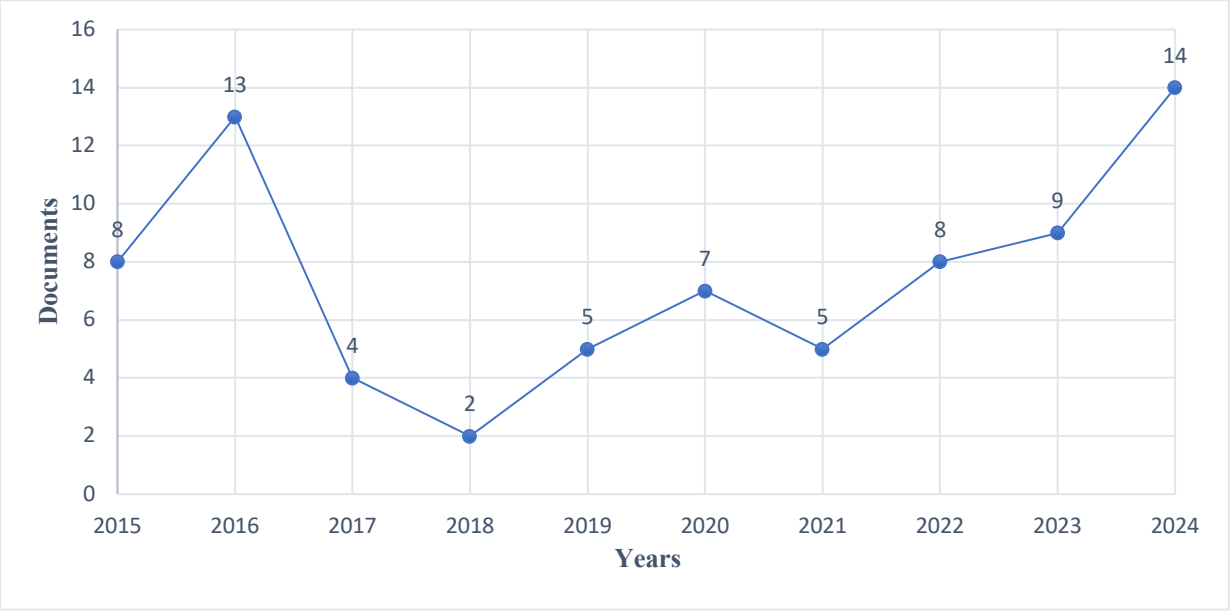

Figure No. 4 Year-wise number of publication (Source: Author)

The graph shows the progression of scholarly articles that document the use of data analytics in HRM from 2015 to 2024. The quantity of publications fluctuated at the outset, beginning with 8 in 2015, increasing to 13 in 2016, and then precipitously declining to 4 in 2017.. In 2018, the number of publications decreased even further, with only two. This period of fluctuation was succeeded by a gradual recovery, which resulted in five publications in 2019 and seven in 2020. From 2021 onward, a consistent trend of growth was observed, with five publications in 2021 and a steady increase to fourteen papers by 2024. This pattern suggests a heightened interest and emphasis in the integration of data analytics into HRM, which is indicative of the increasing acceptance of data-driven methodologies in human resource management practices. Since 2018, there has been a consistent rise in the number of publications, which indicates a growing emphasis on the convergence of HRM and data analytics in scholarly research.

Keywords- wise publication details

Figure No. 5 Keywords- wise publication details (Source: (Cloud, n.d.))

Human resource management is classified as 35% of the publication details, while HR analytics comprises 20%. Data analytics comprises 33% of the details. People analytics and HR analytics are particular areas of emphasis within the domain of human resource management. The preceding sections—Data Analytics, HR Analytics, and People Analytics—follow Human Resource Management in terms of research emphasis, as demonstrated by this breakdown. Human Resource Management receives the smallest proportion of attention.

Top contributing journals

A multitude of scholastic journals enrich the field of human resource management (HRM), each of which contributes to the comprehension and development of HR practices and theories. Interesting insights into the relative influence of prominent HRM journals within the academic community are revealed by examining their Journal Impact Factors (JIF). The 'Journal of Management' is distinguished among the highest-ranked HRM journals by its remarkable JIF of 7.728, which is indicative of its extensive readership and substantial impact. It is a prominent authority in the field due to its exhaustive coverage of management topics, which attracts both researchers and practitioners. The 'Journal of Business Research' is not far behind, with a JIF of 6.317, underscoring its significance in bridging the divide between academic research and practical business applications. Its interdisciplinary approach cultivates valuable insights for both scholars and industry professionals. In the interim, journals such as "Journal of Applied Psychology" and "Personnel Psychology" maintain JIFs of 5.851 and 5.667, respectively. These journals are distinguished by their rigorous research methodologies and empirical studies, which make substantial contributions to the comprehension of organisational dynamics and human behaviour. Nevertheless, it is important to observe that periodicals such as 'Human Resource Development Quarterly' and 'Human Resource Management Journal' have comparatively lesser JIFs (3.654 and 4.29, each). Although their influence may be more limited, they are essential in the dissemination of innovative HRM practices and the resolution of emergent issues in the field. In summary, the multifarious character of the discipline and the diverse interests of researchers and practitioners are emphasised by the diversity in JIFs among HRM journals. Each journal, regardless of its JIF, makes a distinctive contribution to the development of HRM knowledge, thereby influencing the future of organisational management and employee well-being.

Table No. 3 Top contributing journals (Source: Author)

Sr. No.	**Journal Name**	**Publication**	**(JIF)**
1	Journal of Human Resource Management	Wiley	5.123
2	Human Resource Management Review	Elsevier	4.89
3	International Journal of Human Resource Management	Taylor & Francis	4.5
4	Journal of Business Research	Elsevier	6.317
5	Human Resource Development Quarterly	Wiley	3.654
6	Journal of Applied Psychology	APA	5.851
7	Journal of Management	Sage	7.728
8	Personnel Psychology	Wiley	5.667
9	Human Resource Management Journal	Wiley	4.29
10	Journal of Organizational Behavior	Wiley	5

Citation Analysis Using Clustering

Citations are essential for referencing the sources of information utilised in this review concerning the function of data analytics in human resource management. Citations serve the dual purpose of enhancing the readers' comprehension of the subject matter and bolstering the work's credibility. Version 1.6.13.3 of the VOSviewer tool was utilised to analyse citations for the bibliographic survey. Visualizing and constructing bibliometric networks, which may comprise thousands of nodes, is the purpose of the VOSviewer software application. Each individual node in these networks is designated to a distinct cluster, where a cluster signifies a collection of nodes that are closely related. A node's cluster affiliation is simplified in VOSviewer through the use of color-based cluster differentiation. Link strength and total link strength are fundamental concepts utilised in VOSviewer. In contrast to total link strength, which represents the cumulative number of times a document is referenced on the basis of link strengths, link strength denotes the quantity of items that reference a particular node.

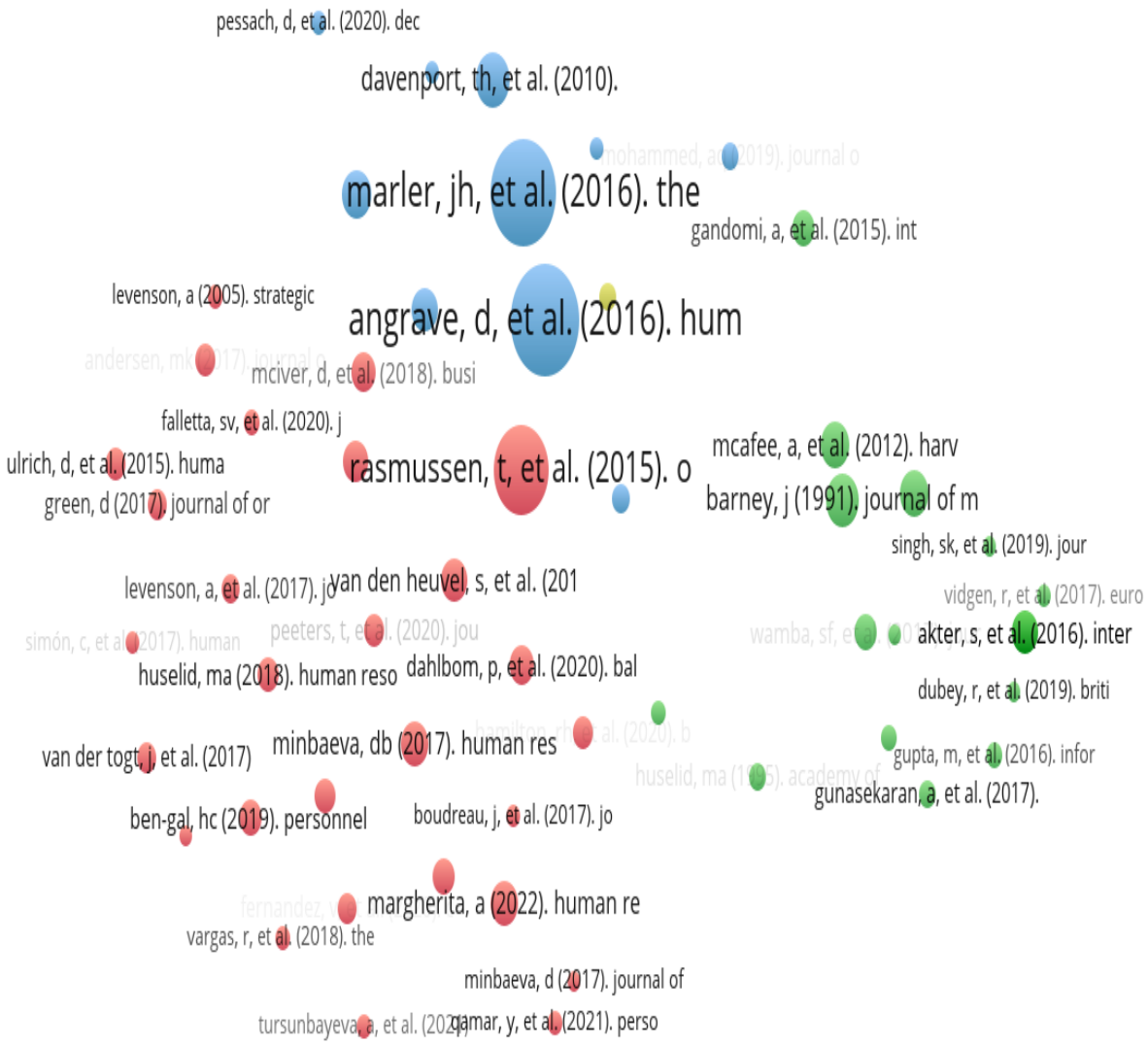

Figure No. 6 Citation Analysis in Human Resource Management Journals (Vosviewer, n.d.)

The citation analysis of Human Resource Management (HRM) journals from 2015 to 2024 provides valuable insights into the scholarly landscape of this field, as illustrated in the Figure. It emphasises the importance of significant research contributions and their influence, as determined by the total number of citations and the intensity of the links. Two papers, those by Marler et al. (2016) and Angrave et al. (2016), are notable for their significant impact, with 61 and 64 citations, respectively. These papers, which have been published in reputable HRM journals, are seminal works that have made a substantial contribution to the field's discourse. The impact of Marler et al. (2016) and Angrave et al. (2016) is further contextualised by the link strength, which is 554 and 452, respectively. It is indicative of the enduring relevance and influence of these works within

the academic community, as it reflects the extent to which they have been cited and referenced by other scholars. Additionally, the ongoing engagement and attention to these contributions within the HRM literature are underscored by the incorporation of works such as Minbaeva (2017) and Tursunbayeva et al. (2018) with substantial link strengths. The analysis also illuminates emergent influences within the discipline, in addition to established publications. The evolving nature of HRM research is underscored by the mention of Margherita (2022). Although Margherita (2022) is a recent contribution, its link strength of 499 suggests that it is having an increasing impact and resonance within the scholarly community. This underscores the dynamic trajectory of HRM research, in which the discourse within the field is being influenced by both established and newer publications as they acquire traction. The citation analysis provides a temporal snapshot of HRM research, documenting the changing trends and dynamics that have occurred over the designated timeframe. It emphasises the interconnectedness of scholastic works within the HRM domain, wherein citations serve as indicators of influence and contribution. The significance of certain papers, such as those by Marler et al. (2016) and Angrave et al. (2016), as foundational texts that have influenced subsequent research and discourse in HRM, is emphasised by their prominence. Additionally, the analysis's inclusion of a diverse array of authors and publications is indicative of the scope and profundity of HRM scholarship. The analysis encompasses a variety of voices and perspectives within the field, from seminal works by established academics like Ulrich (2015) to more recent contributions by emerging researchers such as Punasekaran et al. (2017) and Margherita (2022). This diversity contributes to the advancement of HRM theory and practice and enriches the scholarly dialogue. In summary, the citation analysis provides a nuanced view of the HRM research landscape, emphasising the interaction between established and emergent contributions. It offers valuable insights into the influence and impact of scholastic works within the field by analysing citations and link strengths. Additionally, it emphasises the dynamic nature of HRM research, which is defined by the continuous engagement with seminal and emergent literature, diverse voices, and evolving trends.

Table No. 4 Article coupling with maximum Coc (Source: Author)

Sr. No	Paper	Count of co- citation
1	Balchin Katelyn	7
2	Madore Suzanne	7
3	Nelson, Shannon	6
4	Stewart David J.	5
5	Ozer, Rachel S.	5
6	Reaume, M. Neil	7
7	Davlies, Bill	4
8	Pick, Stephanie	4
9	Ward, Marcus	4
10	Pantarotto, Jason R.	5
11	Renaud, Julie	5

12	Macrae Robert M.	4
13	Fung-Kee Fung, Michael	3
14	Duke, Kate	4
15	Garvin Dennis	3

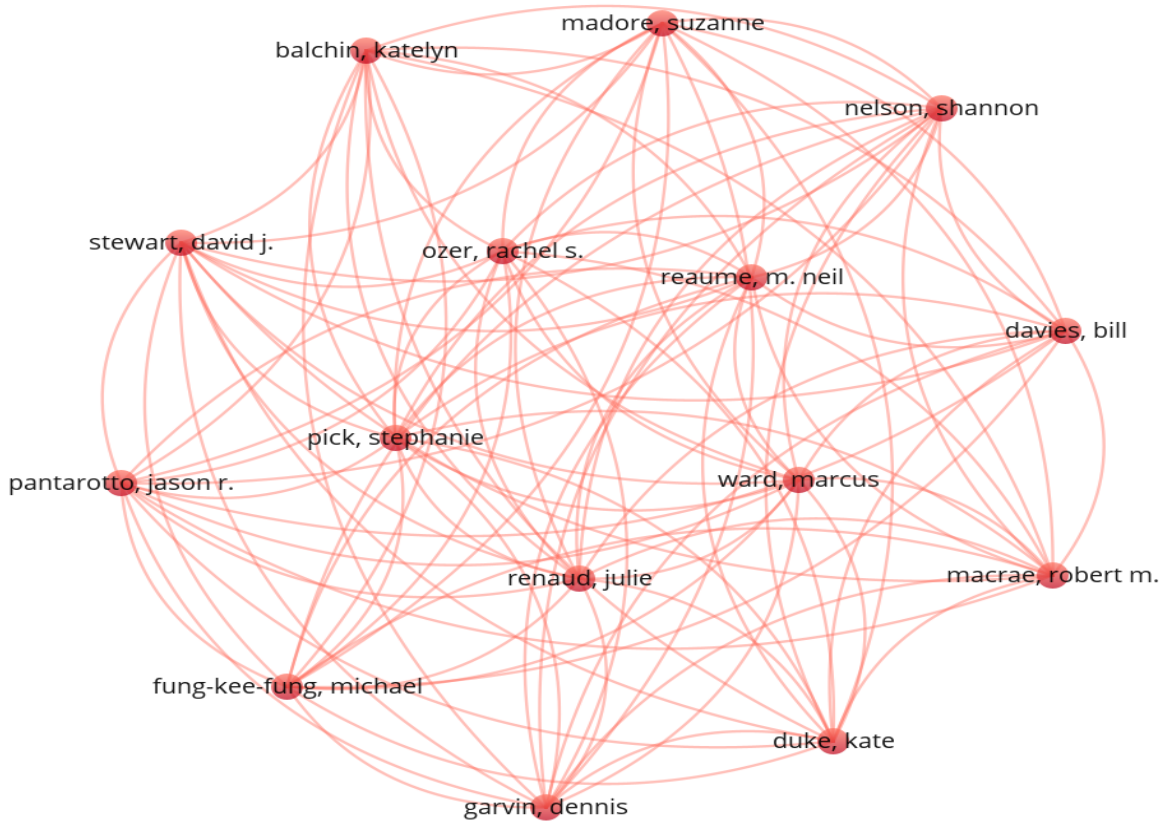

Figure No. 7 Author Contribution (Vosviewer, n.d.)

The data that has been presented provides a comprehensive understanding of the productivity, citation impact, and link strength of a variety of authors. We should investigate the interpretation of this data in order to comprehend the importance of each parameter and the implications it entails. The dataset's figures illustrate a wide variety of author contributions, each of which is distinguished by the number of documents, the number of citations, and the overall intensity of the links. It is clear that the scholarly landscape is characterised by a variety of productivity and influence levels among different authors. The authors who have a pair of documents with 28 links but no citations, namely Davies, Duke, Fung-Kee-Fung, Garvin, and Lavies, exhibit a pattern of prolific output in terms of the number of documents produced. Nevertheless, the lack of citations indicates that, despite their productivity, their work may not have captured the attention or recognition of other scholars in the field. This could suggest a lack of relevance or visibility of their research within the academic community. Nelson, in contrast, is distinguished by his 28 citations in two documents, which suggests a significant impact in terms of citation count.

Nevertheless, the absence of link strength implies that the work, despite being cited, may not be well-integrated or connected within the scholarly network, potentially restricting its impact on subsequent research. Additionally, authors such as Amin, Asif, E, and Farooq possess an 18-link strength and one citation across three documents. This suggests a moderate level of both citation impact and link strength, suggesting a certain degree of recognition and connectivity within the academic discourse, albeit not as profound as authors with greater citation counts or link strengths. Angelis has the lowest link strength at 13, despite having a substantial citation count of 119. This suggests a substantial discrepancy between the scholastic network's incorporation of their work and its impact in terms of citations. The research of the authors may have garnered significant attention from other scholars; however, it appears to be less interconnected with other works in the field. Bohlouli, on the other hand, exhibits a balanced profile, with a link strength of seven, five citations, and three documents. Although the citation count is relatively low in comparison to that of other authors, the link strength suggests a reasonable level of integration and connectivity within the scholarly network, which suggests a potentially impactful contribution to the field. In general, the data emphasises the multifaceted character of author contributions in academia, emphasising the interplay between productivity, citation impact, and link strength. It underscores the significance of not only conducting research but also guaranteeing its visibility, relevance, and integration into the broader scholarly discourse. While authors with high citation counts may garner attention, it is equally important for their work to be well-connected and influential within the academic community in order to genuinely drive progress and innovation in their respective fields.

5. Conclusion

In conclusion, the increasing importance of data analytics in the transformation of human resource management (HRM) practices is emphasised by this systematic literature review and bibliometric analysis. The results indicate a significant increase in scholastic interest and publication output, underscoring the growing significance of this field in both academic discourse and practical application. The pervasive recognition of data analytics' potential to revolutionise a variety of HRM strategies, from recruitment and selection to performance evaluation and employee engagement, is underscored by the abundance of research. In addition, the evaluation pinpoints critical thematic areas, such as the incorporation of analytics into HR decision-making, the utilisation of big data for workforce planning, and the implementation of predictive analytics for talent acquisition and retention. Informed decision-making and strategic planning in this evolving domain are facilitated by these insights, which serve as valuable signposts for researchers and practitioners traversing the complexities of effectively leveraging data analytics in HRM.

6. Future research

Future research on the function of data analytics in human resource management (HRM) should concentrate on several critical areas. Initially, valuable insights can be obtained by investigating the influence of advanced analytics and artificial intelligence on HR decision-making and employee performance. Secondly, it is imperative to examine the ethical implications and biases in HR analytics to guarantee that employees are treated fairly and equitably. Third, workforce planning can be optimised by investigating the integration of predictive analytics in talent acquisition and retention strategies. Furthermore, it will be advantageous to investigate the efficacy of data-driven methodologies in improving organisational ethos, employee engagement, and satisfaction. Lastly, cross-industry comparisons of HR analytics applications can elucidate innovative strategies and best practices. The objective of this agenda is to enhance comprehension of the ways in which data analytics can revolutionise HRM, thereby promoting efficiency and nurturing a more inclusive work environment.

7. Implications of the research

This research has practical implications that extend beyond the realm of academia, providing HR professionals with the knowledge necessary to improve organisational performance and competitiveness by implementing data-driven strategies. Organisations can optimise HR processes, promote strategic initiatives, and obtain deeper insights into their workforce by utilising data analytics. Organisations can effectively identify patterns and trends through informed decision-making, which is facilitated by data analytics tools. Ultimately, the integration of data analytics into HRM has the transformative potential to adapt and flourish in a business landscape that is becoming increasingly competitive and dynamic

8. Limitations

The generalizability of the findings may be a constraint, given that studies may concentrate on particular industries or organisational contexts, which complicates the process of universally applying the results. Additionally, limitations may arise from the quality and accessibility of data, given that human resources data frequently differs among organisations in terms of comprehensiveness, precision, and structure. An additional constraint could arise from the exclusive reliance on quantitative methodologies, which might inadvertently disregard qualitative perspectives that are vital for comprehending the human dimensions of human resource management. Furthermore, the swift progression of technology and analytics methodologies could potentially render certain literature obsolete, thereby compromising the review's comprehensiveness. In conclusion, although bibliometric analysis offers significant insights into patterns in research, it might not sufficiently encompass emergent or specialised domains. By

recognising and confronting these constraints, the validity and practicality of investigations in this field can be improved.

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