IRJMS

Emerging Trends in Employee Engagement Research: A Bibliometric Analysis of Published Articles

Arti Awasthi[1], Farhina Sardar Khan[2], Syed Shahid Mazhar[1]*, Dipti[1], Anamika Singh[1], Hiba Khan[1]

[1]Department of Business Management, Integral University, Lucknow, Uttar Pradesh, India, [2]Department of Commerce, Integral University, Lucknow, Uttar Pradesh, India. Corresponding Author's Email: shahid.dphil@gmail.com

Abstract

This study presents a bibliometric analysis of research on employee engagement, focusing on the literature published between 2013 and 2023. Using VOS viewer software, this study visualizes research trends, identifies influential contributors, highlights leading journals, and pinpoints active countries in the field over the past few years. The analysis employed logical operators ("employee engagement" OR 'Work engagement') to comprehensively capture relevant publications. The results indicated a significant increase in research output on employee engagement, particularly with a peak of 238 articles indexed in SCOPUS in 2020, reflecting the increasing recognition of employee engagement as a pivotal driver of organizational success. India emerged as the second most active country in employee engagement research, after the USA, followed by the United Kingdom, China, Australia, and Malaysia. This upward trend reflects the global relevance of employee engagement in regional contexts, shaping research contributions. Beyond mapping research activities, this study provides a comprehensive overview of prominent journals and researchers, shedding light on interconnected themes and trends within the field of study. The insights from this analysis emphasize the importance of incorporating broader and more diverse data sources in future studies to enrich the understanding of employee engagement and enhance the effectiveness of engagement strategies in organizations.

Keywords: Bibliometric Analysis, Core Journals, Employee Engagement, Emerging Trends, Human Resource Management, Organizational Success, Scopus, VOS Viewer, Work Engagement.

Introduction

In an era of rapid technological advancements, evolving workforce dynamics, and growing economic uncertainties, understanding what drives employees to remain committed, motivated, and productive is more important than ever (1). Employee engagement (EE) involves a deeper emotional, cognitive, and behavioural connection between workers and their work that goes beyond mere motivation and job satisfaction (2). EE is a critical component of organizational success that directly influences the performance, productivity, profitability, and overall growth of businesses (3). A welcoming environment that fosters growth and engagement significantly enhances the retention of high-performing employees, making EE a crucial area of attention for organizations globally (4). Despite its significance, employee engagement remains an under-explored concept, with ongoing debates regarding its definitions, theories, drivers, and outcomes. The limited global adoption of EE practices and the lack of agreement in its

conceptualization underline the need for a systematic analysis of the research area. Globally, businesses seek to build resilient and innovative workplaces with long-term profitability for their most valuable resources, which is their workforce (5). Consequently, EE has drawn the interest of researchers and industry leaders alike as an essential component of organizational success (6). EE offers insight into enhancing performance, reducing turnover, and nurturing holistic well-being (7). Although EE is crucial for organizations worldwide, its levels remain alarmingly low, posing significant challenges to turnover intention, productivity, innovation, and overall business growth (8). Research has consistently highlighted that improving engagement is not only vital for boosting organizational performance but also for creating a workplace that attracts top talent, promotes long-term success, and supports sustainability initiatives (9). By addressing these challenges, organizations can unlock the full

potential of their workforce while aligning with broader strategic goals. Employee engagement (EE), often defined as the degree to which employees are emotionally, cognitively, and behaviourally committed to their tasks, is widely acknowledged as a critical driver of organizational performance (10). Researchers and organizational leaders view EE as a strategic imperative to align employees with company goals and values, promoting enthusiasm, psychological involvement, and a positive work environment (11). This strong emotional connection enhances organizational resilience and adaptability, making it indispensable in today's competitive environments. Therefore, developing and implementing effective strategies to foster engagement can promote a committed and productive workforce, which is essential for sustaining a competitive advantage in today's dynamic environment. This underscores the pressing need for organizations and policymakers to prioritize understanding and enhancing EE. While previous studies have extensively explored the antecedents and consequences of EE (12), existing research has often focused on specific contexts. However, there is a lack of systematic bibliometric analyses that map the evolution of EE and provide a comprehensive overview of key trends, emerging themes, and gaps for a given period. This study aims to explore the development of research on employee engagement (EE) through three key objectives. First, it examines the growth of international publications on EE from 2013 to 2023 using the SCOPUS database, revealing the increasing attention on this topic over time. Second, it identifies the countries, authors, journals, and articles that are prominent in EE research, thereby providing researchers and practitioners with a consolidated body of knowledge. Finally, the study employed a co-word/co-occurrence analysis to create a global map of research papers related to EE, highlighting the interconnections among various research domains and identifying emerging trends and areas for further exploration. This study addresses the following research questions based on the given objectives:

Q1. What are the trends in annual publications on employee engagement?

Q2. Which countries, authors, journals, and articles are the most prominent in employee engagement research?

Q3. What are the current research trends in the EE field of employee engagement?

Q4. What are the future directions for research on employee engagement?

Depending on the goals, data, and context to be examined, there are numerous methodological approaches to literature review, each with unique characteristics for its application (13). These include theory-based reviews, conceptual or theory development reviews, meta-analytic reviews, systematic reviews, framework-based reviews, bibliometric reviews, and hybrid reviews (14). To answer the research questions, a bibliometric analysis was conducted. This analysis provides a quantitative approach to evaluate research progress, uncover key studies, and identify emerging trends within a field (15). This study examined the evolution of employee engagement (EE) research by compiling previous publications from 2013 to 2023. The remainder of this paper is organized as follows. The next section presents the research questions and objectives of this study. The third section outlines the theoretical background of this study. Section four describes the materials and methods used in the study. The fifth section presents comprehensive findings from the bibliometric analysis. The sixth section discusses the results and discussion, while Section seven outlines the implications of the study. The last two sections address the study's limitations and conclusions. Over the past decade (2013-2023), research on employee engagement has evolved significantly and become more diverse (16). Initially, studies focused on understanding the concept itself, including its definition, components, and various measurement techniques (17). As research progressed, the focus shifted to factors affecting engagement levels, such as leadership style, work-life balance, emotional intelligence, job design, socioeconomic factors, organizational culture, and environmental consciousness (18). Scholars have also examined the relationships among engagement, employee well-being, intelligence, etc. to attain broader organizational outcomes (19). The concept of EE in small and medium-sized enterprises (SMEs) represents a growing area of interest, with studies highlighting its role in improving individual

performance and organizational outcomes. However, research in this domain remains relatively fragmented, necessitating a deeper exploration of engagement practices specific to SMEs (20). Understanding the dynamics of EE in SMEs is particularly important, given their pivotal role in economic development and the unique challenges they face, such as limited resources and higher turnover rates. Human resource management (HRM) practices are recognized as the foundation for developing employee engagement. Effective HRM strategies such as conflict management systems, communication, pay practices, performance appraisal, training and development, and self-awareness initiatives are essential for building a positive work environment that encourages employee commitment. Organizations are increasingly seeking innovative HRM approaches to enhance EE, particularly in the face of evolving workforce dynamics and technological advancements. The rise of technology and expansion of remote work environments have led to new studies on virtual engagement and the effects of digital tools on employee connectivity and productivity (21). Artificial intelligence has also become a preferred topic among researchers because of its multifaceted applications, including enhancing employee engagement through personalized experiences, predictive analytics, and automation of routine tasks, which ultimately improve productivity and decision-making processes (22). Similarly, the connection between employee engagement and environmental consciousness extends to critical sustainability dimensions including climate change, waste management, and biodiversity. Engaged employees are involved in advancing organizational initiatives, such as carbon footprint reduction, renewable energy adoption, and waste optimization strategies, such as recycling and resource conservation. Furthermore, biodiversity conservation efforts such as eco-restoration projects benefit from the active participation of a committed workforce (23). Integrating these environmental priorities into engagement strategies not only enhances employee motivation but also drives tangible progress toward achieving sustainability goals. Socioeconomic and cultural factors significantly shape these practices, with developed regions often emphasizing innovation and leadership,

while developing regions prioritize foundational concerns, such as job security. Collectivist cultures focus on team-based engagement, whereas individualistic societies highlight autonomy and personal achievements (24). Cross-comparative analyses reveal how regional contexts, such as India's emphasis on work-life balance versus the Nordic focus on sustainability-driven engagement, influence practices. Organizations that align employee engagement with environmental stewardship foster a purpose-driven workforce that contributes to global sustainability goals while enhancing innovation and resilience. Numerous studies have demonstrated that employees are integral to organizational growth and play a critical role in driving its success (25). To foster a comprehensive work environment, organizations are now considering employees' socioeconomic and cultural development as an essential component of engagement (26). Variables such as education level, economic conditions, cultural traditions, and governance systems significantly influence how environmental issues are understood, prioritized, and addressed across different regions and nations. Cross-comparative analyses reveal significant regional disparities; for instance, countries with robust educational systems and effective governance structures, such as Nordic nations, are more successful in integrating sustainability into employee engagement frameworks. By contrast, developing regions often grapple with pressing economic challenges that overshadow long-term sustainability efforts. Moreover, as businesses adapt to the demands of the modern world, their focus is shifting toward creating workplaces that are not only engaging but also sustainable (27). The IT sector has already begun to embrace eco-friendly strategies to foster a more sustainable and employee-friendly environment. These initiatives reflect the growing recognition that organizational success is not just about financial gains, but also about creating a holistic workplace that supports the health, culture, and socioeconomic development of its workforce. Psychological factors are increasingly being recognized for their role in enhancing employee retention. For instance, one study indicates that maintaining a well-understood psychological contract between employers and employees fosters a relational contract, contributing to long-term organizational

commitment and sustainability (28). A few studies have further explored the link between emotional intelligence (EI) and employees' capacity to manage stress and remain committed to the workplace. One EI model incorporates three main components: intrapersonal intelligence (how well individuals manage themselves), personal interconnection (quality of interpersonal interactions), and social intelligence (skills in relationship management). These aspects of emotional intelligence are critical for promoting employee well-being and job satisfaction in the workplace (29). Strong EI factors also positively impact employee retention and enhances stability within organizations. Significantly, research has advanced, with traditional surveys now being complemented by real-time feedback systems, social network analysis, and sentiment analysis of digital communications. Additionally, longitudinal studies have become more common, allowing researchers to monitor engagement over time and identify effective strategies to sustain or enhancing it (30). Interdisciplinary collaborations that integrate environmental science, psychology, information technology, sociology, neuroscience, and management have further enriched our understanding of employee engagement, adding depth to both theoretical and practical applications. Overall, the research path from 2013 to 2023 reflects a dynamic field characterized by theoretical advancements and practical applications that respond to the changing needs and challenges of the modern workforce. Despite the growing body of EE literature, previous research on employee engagement has primarily focused on its significance, antecedents, and consequences. However, there is a notable lack of bibliometric analyses that systematically map the width and depth of this research area, focusing on the Scopus database from 2013 to 2023. Bibliometric studies have proven effective in other domains for identifying influential publications, mapping research trends, and highlighting future directions (31). By employing VOS viewer, this study aims to systematically analyze EE literature, uncovering hidden patterns and relationships that can guide future research and practice. The lack of bibliometric studies on EE, particularly those addressing its evolution over the past decade, has created a significant research gap. This study contributes to the field by offering a comprehensive analysis of publication trends, influential contributors, and thematic clusters in EE. By addressing this gap, it seeks to provide actionable insights for both researchers and practitioners, advancing the scholarly understanding and practical applications of EE.

Methodology

This study offers a thorough analysis of previous studies on employee engagement, makes recommendations for future research areas, and makes a significant contribution by visualizing new trends and patterns in this area. Scopus, which is widely acknowledged as a reliable source for scholarly research, was used to collect data. In the search sections labelled "Article title, Abstract, keyword," the terms "Employee engagement" and "Work engagement" were used as keywords. Data from numerous sources, such as the document title, publisher name, document type, author's keyword, year, cited references, and other pertinent sources, were analysed to conduct the research. The Systematic Performance Analysis and Review Technique (SPAR-4) were used in this study (32). The effectiveness of different systems and processes is assessed using the SPAR-4 methodology, which involves three core stages: assembling, arranging, and assessing, which are detailed below in Figure 1.

Stage1: Assembling

The assembling phase focuses on the identification and acquisition of relevant publications. For this study, bibliographic data were retrieved from the Scopus database covering the period from 2013 to 2023. A search query employing the keywords "Employee engagement" OR "Work engagement" resulted in 1854 publications. This phase ensures comprehensive datasets for analysis, laying the groundwork for subsequent filtering and categorization.

Stage 2: Arranging

At this stage, the retrieved articles were systematically organized and filtered. The selection criteria included several dimensions, such as article title, source title, authorship details (e.g., author name, country of affiliation), keywords, sponsorship information, and citation metrics. The articles were refined to include only English-language journal publications.

Stage 3: Assessing

The final stage involved the assessment of selected articles using bibliometric and narrative synthesis methods. Employing tools such as VOS viewer, this study conducted co-citation and keyword-occurrence analyses to map research trends and thematic clusters. This evaluation phase also incorporated longitudinal analysis using annual scientific production data. The narrative synthesis approach was used to identify research gaps and propose future directions, thus enhancing the academic and practical relevance of the study.
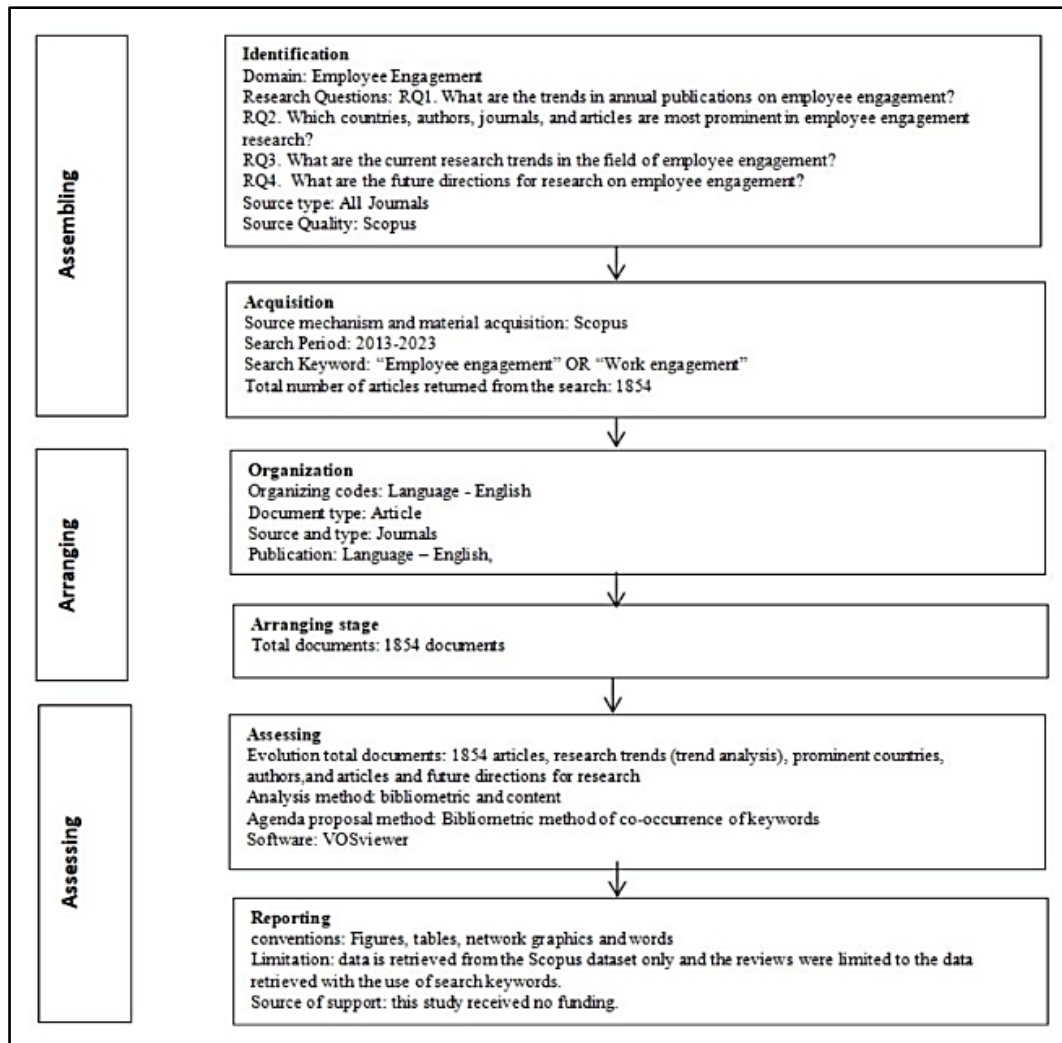
```
┌─────────────────────────────────────────────────────────────────────────────┐
│ ┌──────────┐   ┌────────────────────────────────────────────────────────┐   │
│ │          │   │ Identification                                         │   │
│ │          │   │ Domain: Employee Engagement                            │   │
│ │          │   │ Research Questions: RQ1. What are the trends in annual │   │
│ │ Assembling│  │ publications on employee engagement?                   │   │
│ │          │   │ RQ2. Which countries, authors, journals, and articles  │   │
│ │          │   │ are most prominent in employee engagement research?    │   │
│ │          │   │ RQ3. What are the current research trends in the field │   │
│ │          │   │ of employee engagement?                                │   │
│ │          │   │ RQ4. What are the future directions for research on    │   │
│ │          │   │ employee engagement?                                   │   │
│ │          │   │ Source type: All Journals                              │   │
│ │          │   │ Source Quality: Scopus                                 │   │
│ └──────────┘   └────────────────────────────────────────────────────────┘   │
│                ┌────────────────────────────────────────────────────────┐   │
│                │ Acquisition                                            │   │
│                │ Source mechanism and material acquisition: Scopus      │   │
│                │ Search Period: 2013-2023                               │   │
│                │ Search Keyword: "Employee engagement" OR "Work         │   │
│                │ engagement"                                            │   │
│                │ Total number of articles returned from the search:1854 │   │
│                └────────────────────────────────────────────────────────┘   │
│ ┌──────────┐   ┌────────────────────────────────────────────────────────┐   │
│ │          │   │ Organization                                           │   │
│ │          │   │ Organizing codes: Language - English                   │   │
│ │          │   │ Document type: Article                                 │   │
│ │ Arranging│   │ Source and type: Journals                              │   │
│ │          │   │ Publication: Language – English,                       │   │
│ │          │   └────────────────────────────────────────────────────────┘   │
│ │          │   ┌────────────────────────────────────────────────────────┐   │
│ │          │   │ Arranging stage                                        │   │
│ └──────────┘   │ Total documents: 1854 documents                        │   │
│                └────────────────────────────────────────────────────────┘   │
│ ┌──────────┐   ┌────────────────────────────────────────────────────────┐   │
│ │          │   │ Assessing                                              │   │
│ │          │   │ Evolution total documents: 1854 articles, research     │   │
│ │          │   │ trends (trend analysis), prominent countries,          │   │
│ │          │   │ authors, and articles and future directions for research│  │
│ │ Assessing│   │ Analysis method: bibliometric and content              │   │
│ │          │   │ Agenda proposal method: Bibliometric method of         │   │
│ │          │   │ co-occurrence of keywords                              │   │
│ │          │   │ Software: VOSviewer                                    │   │
│ │          │   └────────────────────────────────────────────────────────┘   │
│ │          │   ┌────────────────────────────────────────────────────────┐   │
│ │          │   │ Reporting                                              │   │
│ │          │   │ conventions: Figures, tables, network graphics and words│  │
│ │          │   │ Limitation: data is retrieved from the Scopus dataset  │   │
│ │          │   │ only and the reviews were limited to the data          │   │
│ │          │   │ retrieved with the use of search keywords.             │   │
│ │          │   │ Source of support: this study received no funding.     │   │
│ └──────────┘   └────────────────────────────────────────────────────────┘   │
└─────────────────────────────────────────────────────────────────────────────┘
```

Figure 1: The SPAR-4 Structure

Bibliometric Analysis

This analysis of research on employee engagement using Scopus data from 2013 to 2023 provides valuable insights into the evolution of this organizational concept. During this period, significant scholarly attention has been paid to understanding the causes, effects, and factors driving employee engagement. Researchers have used bibliometric methods to identify trends, key contributors, and thematic clusters, thereby highlighting emerging research directions and gaps. This analysis revealed the multidisciplinary nature of employee engagement research, with contributions from social science, economics, psychology, humanities, environmental science, computer science, and so on.

Bibliometric analysis is crucial to assess the impact and dissemination of employee engagement research. Seminal works, influential authors, and leading journals were identified by examining citation patterns and publication trends, shaping discourse in this area. This analysis also identifies the theoretical frameworks, measurement instruments, and intervention strategies that have gained significant attention. Moreover, it highlights the global scope of

employee engagement research, with contributions from diverse geographical regions, indicating the universality of this phenomenon across different cultural and organizational contexts. The present study utilized this analysis to assess the data and identify recent contributions, resulting in a review of 1,854 published articles. This approach addresses specific research questions and uncovers prevailing research paths, collaborative efforts among countries, keyword co-occurrences, and other relevant factors (33). The VOS viewer bibliometric mapping of employee engagement research from 2013 to 2023 reveals important trends. In Figure 2, the data indicate fluctuations in the number of SCOPUS-indexed articles, with the highest number recorded [238] in 2020 and the lowest [83] in 2013. This suggests varying levels of focus and activity in employee engagement studies over time.
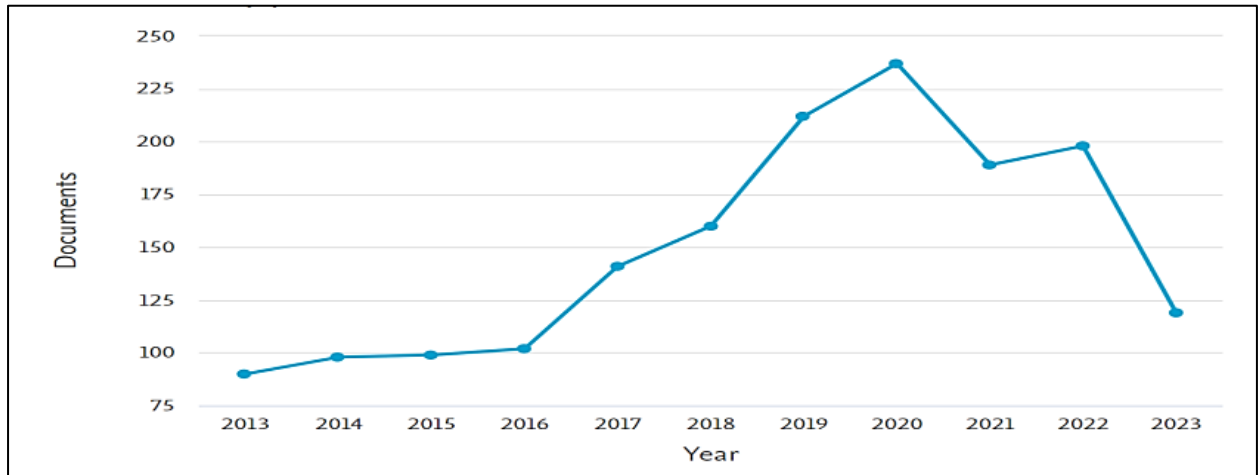
Figure 2: Number of Published Articles in The Period 2013–2023
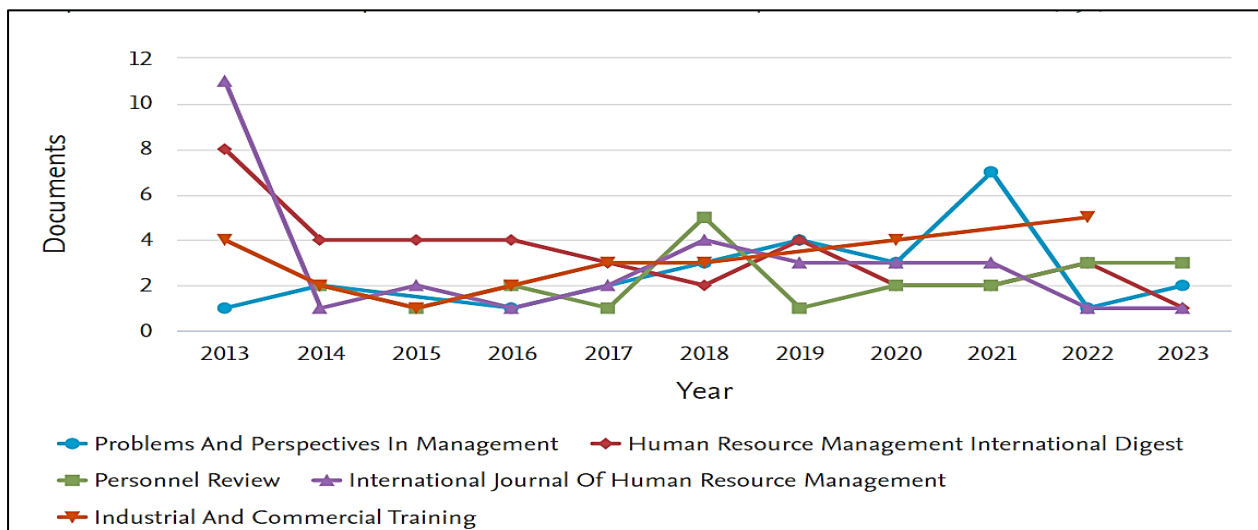
Figure 3: Top Most Journals by the Number of Articles Published

Figure 3 displays the top journals publishing articles on employee engagement, with document counts shown per year from 2013 to 2023. It highlights key journals, such as problems and perspectives in management, human resource management international digest, personnel review, international journals of human resource management, and industrial and commercial training. This figure reveals fluctuations in the volume of publications over time, with notable peaks in 2013, 2018, and 2021. The International Journal of Human Resource Management and Human Resource Management International Digest has shown relatively steady contributions over the years and has emerged as a leading journal with 11 papers published in 2013. Whereas other journals vary more significantly in their annual outputs.

Figure 4 shows the recorded counts of the most prolific authors in the field. A.B. Bakker leads with

22 publications on employee engagement, followed by B. Suck with 19 papers. K. Alfes is third with 10 papers, and E. Demerouti is fourth with 9 papers. D. Derks and K. Nimon are tied for

fifth with 8 publications each. Four authors— Fletcher, Jena, Martins, and Zigarmi— were in sixth place, with seven papers each.
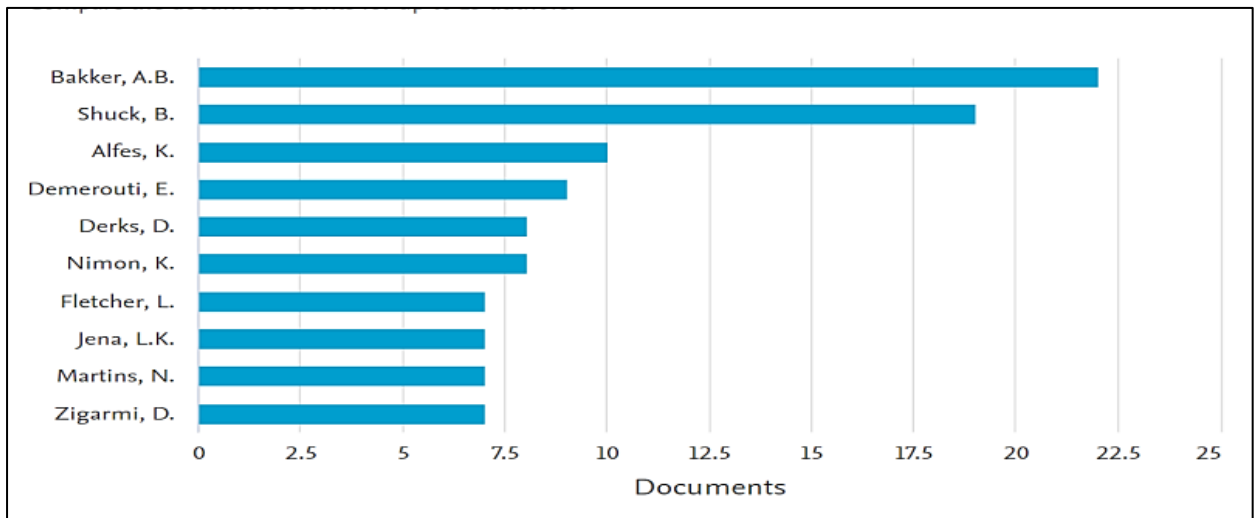
Figure 4: Prominent Authors by Documents Published

The geographic origins and institutional affiliations of research articles are crucial in bibliometric analysis, as they highlight research intensity and contributions from different regions and organizations. By examining citation and co-citation patterns, the academic status and collaboration networks of publications from various nations and institutions can be assessed. An analysis of data from the Scopus database revealed that 1,854 articles on employee engagement were distributed across 78 countries. Figure 5 identifies the top 10 countries by the number of articles, accounting for 82.4% of all the publications. The United States had 391 publications (29.2%), indicating a significant lead over other nations. India was the second-highest contributor, with 290 publications (21.6%), followed by the United Kingdom (152 publications, 11.3%). These findings underscore the substantial contribution of researchers from the United States to employee engagement. The analysis of the top ten leading countries further illustrates the productivity and influence of researchers in this area.
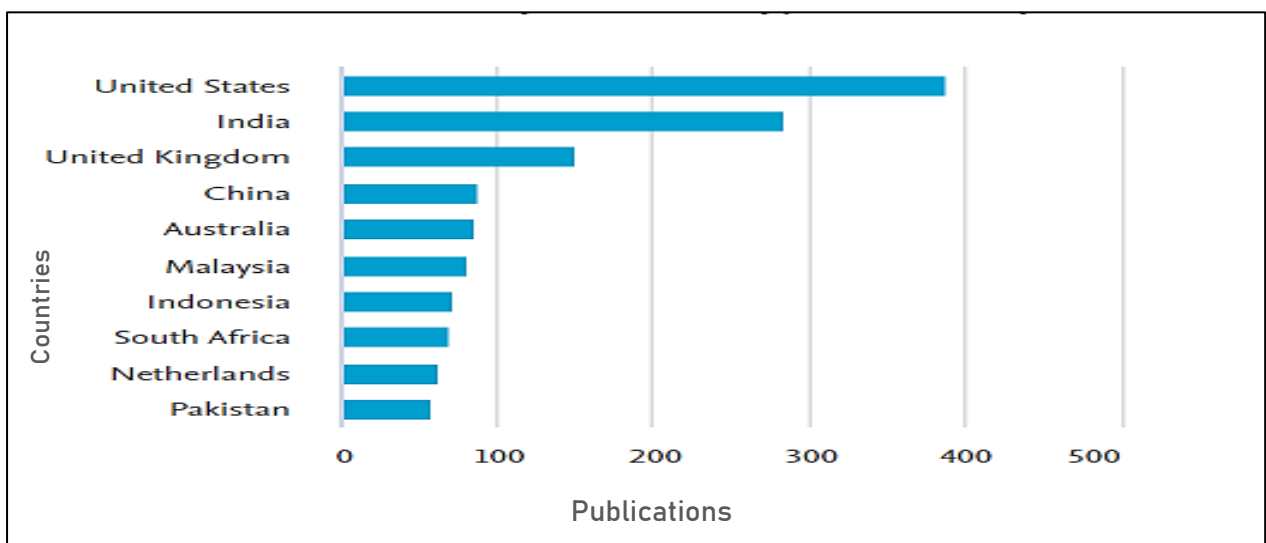
Figure 5: Top Most Productive Countries in Terms of Publications

The search results for the Scopus database are shown in Figure 6, for the research categories, respectively. The top ten research categories are presented here. These categories span various

disciplines, with Business Management leading the list with the highest percentage of publications (55.4%). Subsequent categories included Social Science (14.7%), economics (6.7%), Decision Science (6.2%), psychology (5.1%), engineering (3.5%), Computer Science (2.5%), Arts and Humanities (2.4%), Environmental Science (1.2%), medicine (0.8%), and others (1.5%), each according to the publications of employee engagement-related studies.
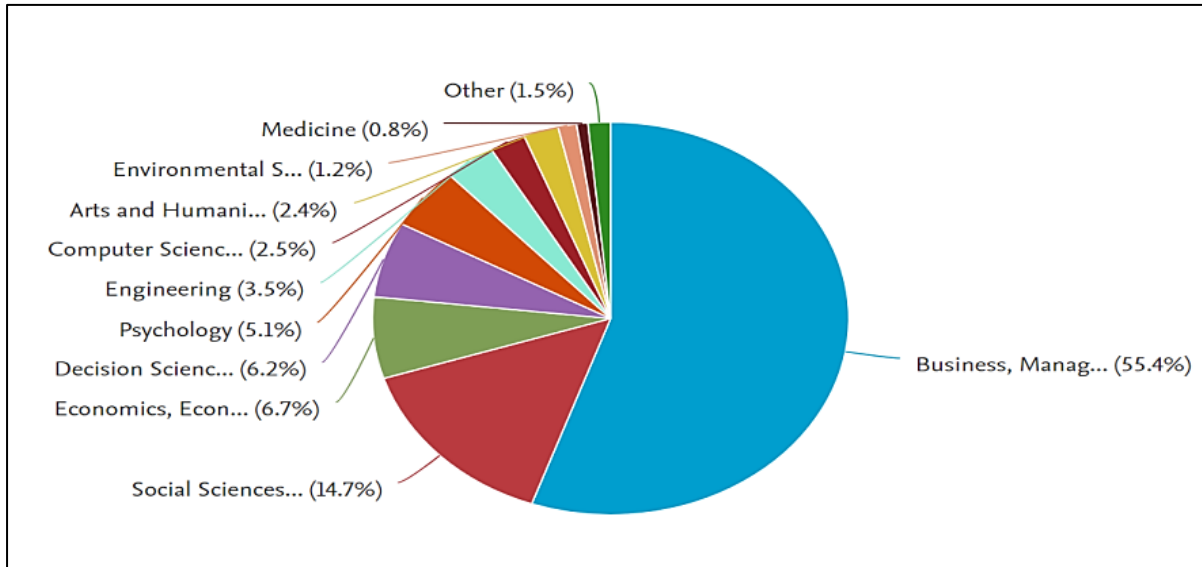

Figure 6: Top Most Research Categories in Terms of Publications

The significant increase in SCOPUS-indexed papers on employee engagement from 2013 to 2023 highlights growing scholarly interest in this area. This surge reflects the efforts of scholars and practitioners to understand and improve employee engagement in modern work environments. Articles constituted 90.4% of the total publications, highlighting the depth of empirical research, theoretical advancements, and practical insights in the field of employee engagement. The distribution of research publications by type within the EE field of employee engagement is shown in Figure 7. Off all

the publications, 90.4% were categorized as articles, which is the vast majority. Conference Papers (5.0%) and reviews (4.6%) followed. This distribution show that comparatively few studies have been published in conferences or review papers, with a maximum of no. of research in this field was presented in a traditional article format. While conference papers and reviews contribute less to the dissemination of knowledge in the field of employee engagement, this pattern indicates a strong emphasis on in-depth research articles that probably offer thorough analyses and findings.
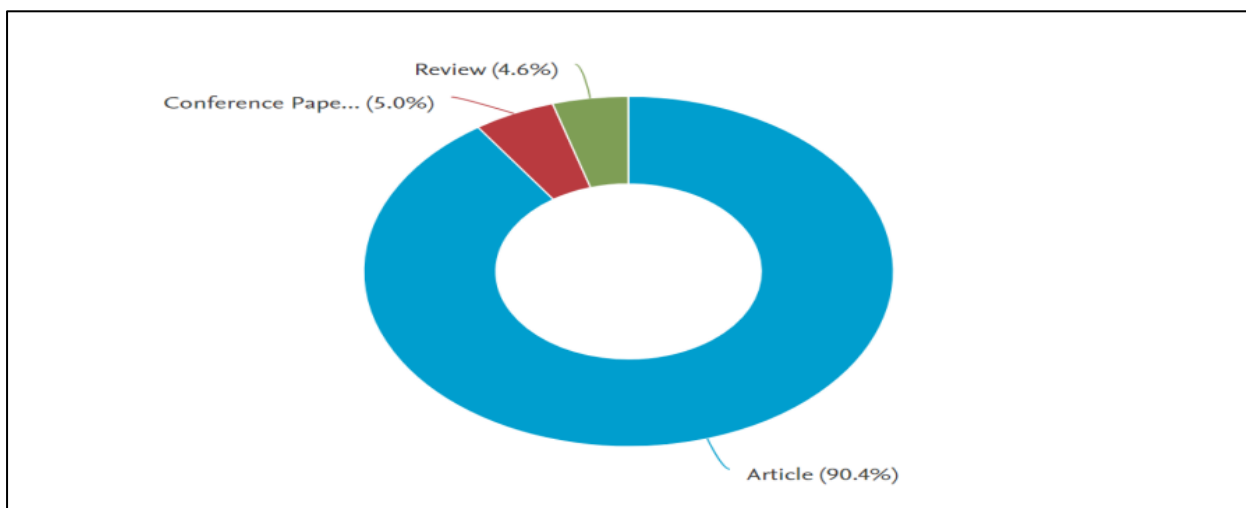
Figure 7: Top Most Research Categories in Terms of Publications

This study, utilizing bibliometric analysis with the SCOPUS database and Vosviewer software, makes a significant scientific contribution toward employee engagement. These findings can serve as a foundation for future bibliometric research in related areas and inspire researchers in other fields to explore similar methodologies. Analyzing keywords from relevant research papers is essential for gaining a deeper understanding of employee engagement. Keywords highlight key issues and demonstrate their interrelationships. Figure 8 shows the co-occurrence of the authors' keywords, with terms such as employee engagement, leadership, job satisfaction, turnover intention, performance, technology, communication, HRM practices, and sustainability being the most frequent and significant ones. In Figure 8, The map shows the evolution of articles using keywords and illustrates how research focus areas and themes within the field of employee engagement developed over time. This map was generated using a co-occurrence analysis of keywords from articles within the given database and visualized using VOS viewer software, which groups keywords into clusters based on their co-occurrence, where keywords that frequently appear together in the same articles are often represented nearby and share a similar color. Each cluster shown in the figure represents a distinct research theme or focus area, such as leadership, job satisfaction, turnover intention, performance, innovation, and HRM practices. The size of each keyword (node) represents its frequency in literature. Larger nodes signify keywords that appear more frequently, indicating prominent research focus areas. As employee engagement is a central theme in this study, it appears as a large node, reflecting its high frequency across studies. Lines between keywords indicate the relationships between them, where stronger or more frequent connections indicate a closely related research focus. For instance, employee engagement is closely linked to keywords such as leadership, job satisfaction, and turnover intention, which suggests that these areas are often, studied together, highlighting integrated themes in research. By examining the density and spread of keywords, we can identify the areas that are heavily studied versus those that are emerging or underexplored. The keyword map shown in Figure 8 is valuable for identifying potential research gaps and guiding future studies. By visualizing which areas are densely populated with sparse keywords, under-researched topics, such as HRM practices and employee engagement, sustainable employee engagement, technology and employee engagement, employee engagement and emotional intelligence, and employee engagement in remote work conditions.
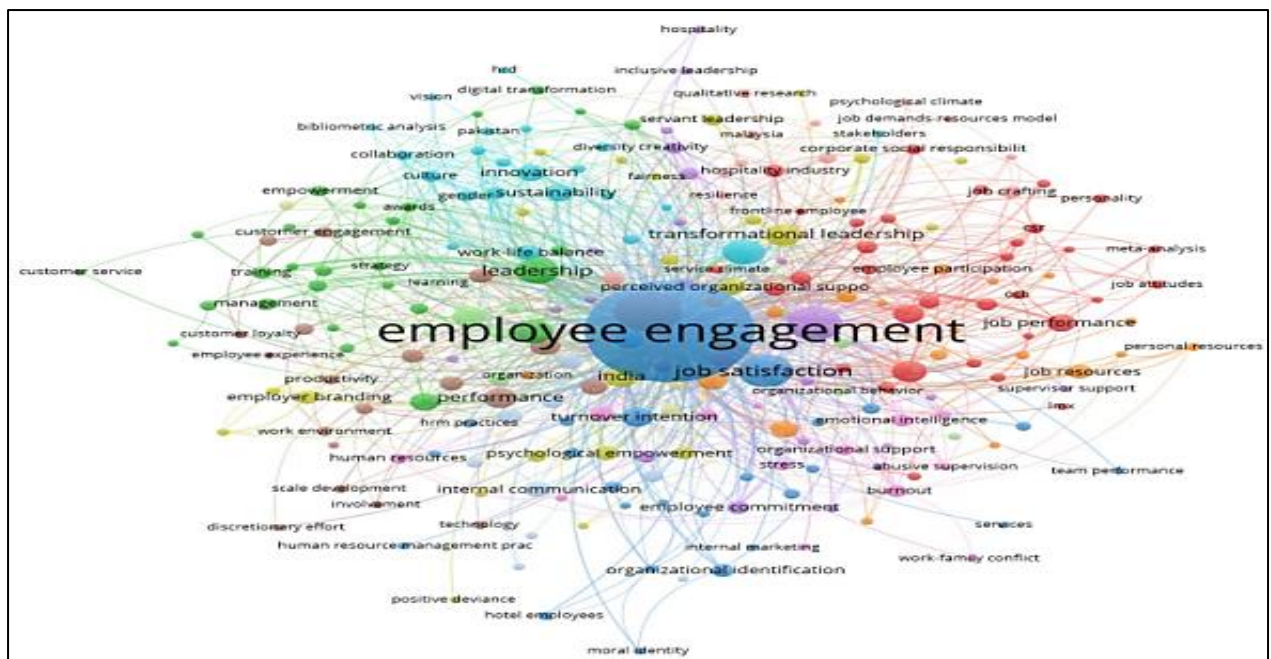

Figure 8: Co-Occurrence of Author Keyword Networks

The analysis identified 82 terms grouped into five primary clusters, as shown in Figure 8, based on keyword co-occurrences with a minimum threshold of 10.

- Cluster 1 (red): Job performance, job attitude, job crafting, personality, resilience, psychological climate, corporate social responsibility.
- Cluster 2 (green): Leadership, management, training, strategy, awards, learning, organizational behaviour, empowerment, and digital transformation.
- Cluster 3 (blue): Job satisfaction, turnover intention, team performance, HRM practices, internal communication, organizational identification, internal marketing.
- Cluster 4 (yellow): Transformational leadership, employer branding, psychological empowerment, perceived organizational support, fairness, India.
- Cluster 5 (pink): Stress, burnout, emotional intelligence, organizational support, work-family conflict, abusive supervision, job crafting, human resources.
- Additional identified clusters included the following:
- Cluster 6 (brown): Performance, work environment, productivity, customer engagement, technology, customer loyalty, employee experience, involvement.
- Cluster 7 (purple): Employee commitment, supervisor support, creativity, hospitality, inclusive leadership.
- Cluster 8 (cyan): Work-life balance, sustainability, innovation, culture, diversity, gender, collaboration, HRD, vision.
- Cluster 9 (orange): Job resources, personal resources, employee participation.

According to research findings, a citation map represents individual articles as circles, with size indicating the number of citations (29). Articles were grouped by citation patterns, with different colors representing the clusters. The first cluster (red) focuses on statistical tools and techniques. Mapping based on keyword co-occurrence revealed leadership, performance, job satisfaction, and organizational support to be the most researched topics in employee engagement, underscoring their importance in shaping employee engagement and highlighting the research community's focus on these themes.

Results and Discussion

The findings from the bibliometric analysis offer valuable insights into current research trends in employee engagement, highlighting key themes and identifying areas that remain underexplored. Key themes emerging from this analysis include the measurement and drivers of engagement, impact of engagement on organizational outcomes, and various interventions designed to enhance employee engagement. This analysis also emphasizes the growing need for deeper investigations into cross-cultural perspectives, technology-mediated engagement, and the critical role of leadership in promoting and sustaining engagement within organizations.

Keyword Analysis

The analysis of keywords from research papers provides insights into the predominant themes of employee engagement studies. Frequently used terms such as "engagement," "leadership," "culture," and "environment" reveal focal points in existing research and highlight central interests among researchers in the field.

Distinct thematic clusters emerged through keyword mapping, emphasizing the various aspects of employee engagement.

- Cluster 1: Job Performance, Job Attitude, and Corporate Social Responsibility (CSR)
  This cluster underscores how individual and organizational factors such as job performance and attitudes influence engagement. The inclusion of CSR suggests a rising interest in how socially responsible practices within organizations can foster greater employee commitment and engagement. This demonstrates the sustainability of the approach.
- Cluster 2: Leadership, Management, and Digital Transformation
  Research in this cluster highlights the role of leadership styles such as transformational and transactional leadership in shaping engagement levels. It also touches on management practices and the transformative impact of digital technologies, which have increasingly become a focus of the shift toward virtual and hybrid work environments.
- Cluster 3: Job Satisfaction, Turnover Intention, and HRM Practices

This cluster reflected concerns about employee well-being, retention, and human resource management strategies aimed at improving job satisfaction and reducing turnover. The focus here is on employee experience and how organizations can strategically manage their workforce to enhance engagement and minimize attrition. Additional clusters included themes related to emotional intelligence, stress management, work-life balance, employee commitment, culture, innovation, and psychological empowerment. This diversity highlights the multifaceted nature of employee engagement, which encompasses both individual motivations and organizational strategies. The findings suggest that employee engagement is influenced by a complex interplay of psychological, social, and organizational factors, each contributing to an employee's overall experience and performance within the workplace.

Citation Analysis

Citation analysis provides further insight into the influence and interconnectedness of research on employee engagement. By examining clusters based on citation patterns, the analysis identifies prominent topics and methodologies that shape theoretical and practical developments within this field.

- Cluster 1: Emphasis on Statistical Tools and Techniques
  This cluster primarily focuses on the use of quantitative methods, highlighting the importance of empirical research on employee engagement. Articles in this cluster often rely on statistical analyses to explore the relationships between engagement and various factors, providing a robust evidence base that underpins much of the field's theoretical foundation.
- Clusters 2 and 3: Leadership, Technology, and HRM Practices

These clusters focused on the critical influence of leadership styles, technological advancements, and HRM practices on engagement levels. The high citation frequencies within these clusters indicate their significance in advancing both academic understanding and practical interventions for employee engagement. Studies often emphasize the strategic role of leadership in fostering an engaged workforce and explore how digital tools can support engagement, particularly in increasingly remote and technologically driven work environments.

The citation patterns observed in these clusters suggest the presence of well-established research areas as well as emerging trends that point to gaps in the literature. For instance, while leadership and HRM practices are frequently cited and well-researched, there remains a need for studies that examine engagement in specific organizational contexts, such as small and medium enterprises (SMEs), and across different cultural settings.

Emerging Trends and Research Gaps

The bibliometric analysis reveals not only established themes but also potential areas for further exploration. Notably, there is a limited amount of research focused on cross-cultural perspectives on employee engagement. As globalization continues to impact workplaces, understanding how cultural differences affect engagement could provide valuable insights for multinational organizations. Another emerging area is technology-mediated engagement, where studies can further investigate the effectiveness of digital tools in sustaining engagement, especially in remote or hybrid work settings. Additionally, while the role of leadership in promoting engagement is well recognized, there is scope for research into specific leadership behaviors and practices that are most effective and sustainable across various types of organizations.

Implications of this Study

The findings of both the keyword and citation analyses have several implications for researchers, practitioners, and policymakers. First, understanding the key themes and clusters within the area of employee engagement can guide the development of research agendas and inform strategic decision-making within organizations. By focusing on prevalent topics such as leadership, HRM practices, technology, turnover intention, satisfaction, and performance, researchers have the potential to enhance understanding and provide evidence-based remedies. Second, identifying influential articles and clusters based on citation patterns can help researchers prioritize their reading and citation efforts, ensuring that they engage with the most impactful and relevant literature. Policymakers and organizational leaders can use these insights to guide policies and practices intended to improve an organization's efficiency and employee engagement. In

conclusion, the results of the keyword and citation analyses provided valuable insights into the prevailing themes and influential works in the area of employee engagement. By leveraging these insights, researchers and practitioners can further the state of knowledge and develop effective interventions aimed at enhancing employee engagement and organizational effectiveness.

Limitation of the Study

Although our study yielded valuable insights into employee engagement, several limitations need to be acknowledged. First, our reliance on data exclusively from the Scopus database may have introduced bias as it may not encompass all relevant publications in the field. Journals not indexed in Scopus could have been overlooked, potentially resulting in gaps in the dataset. Additionally, the subjective nature of keyword selection poses a limitation, as it may have overlooked emerging or niche topics within the field, skewing the analysis towards more established themes. Moreover, our citation analysis may suffer from biases inherent to Scopus, such as the tendency to prioritize well-established or widely cited works. This could have led to an overrepresentation of certain themes or methodologies in our findings, limiting the diversity of the perspectives considered. Furthermore, our study only included publications in English, perhaps omitting important studies conducted in different languages, and overlooking important contributions from non-English-speaking regions. Temporal considerations also impact the scope of our study as we focused solely on publications published between 2013 and 2023. This limited timeframe may not capture long-term trends or developments in the field, thereby potentially overlooking significant shifts or emerging areas of inquiry. Furthermore, although our clustering approach sheds light on recurring themes and significant work, researchers' subjective assessments of these clusters may vary. Finally, the generalization of our findings may be limited by the specific context and datasets analyzed. Different databases, periods, or methodologies may yield different results, making it challenging to extrapolate our findings to other contexts or populations. Despite these limitations, our study offers valuable insights into the prevailing themes and influential work within the field of employee engagement, laying the groundwork for future studies to overcome these shortcomings and to further enrich our understanding of this complex and evolving field.

Conclusion

This study provides a comprehensive overview of employee engagement research through a bibliometric analysis. This study synthesizes the existing literature, identifies research trends, and reveals potential avenues for future research. The SPAR-4-SLR framework provides a structured and comprehensive methodology for this review. By leveraging advanced bibliometric techniques, such as co-citation and keyword-occurrence analysis, this study identified key trends, thematic areas, and potential gaps in the literature. These findings enhance our understanding of the employee engagement domain, enabling organizations and researchers to make informed decisions and develop strategies to enhance employee engagement. This Bibliometric analysis emphasizes the development of research on employee engagement, demonstrating a growing interest in the topic. Leadership, HRM practices, technology, performance, turnover intention, and work-life balance have received significant attention in the literature. Environmental consciousness, socioeconomic factors, cross-cultural perspectives, and sustainability add another layer to this research. Exploring how these aspects influence employees' understanding, perception, and intention regarding employee engagement within diverse contexts and perspectives contributes significantly to the field. To enhance future research, utilization of additional data sources is recommended for more accurate and comprehensive results.

Abbreviation

None.

Acknowledgments

Author Contributions

All the authors contributed equally to the conceptual framework, methodology development, data analysis, data organization,

editing, proofreading, and writing of the manuscript.

Conflict of Interest

The authors declare no conflicts of interest associated with this study.

Ethics Approval

Not applicable.

Funding

This study did not receive any specific financial support from funding agencies, institutions, or organizations.

References

1. Stoyanova T, Iliev I. Employee engagement factor for organizational excellence. International Journal of Business and Economic Sciences Applied Research (IJBESAR). 2017;10(1):23-9.
2. Karanika-Murray M, Duncan N, Pontes HM, Griffiths MD. Organizational identification, work engagement, and job satisfaction. Journal of Managerial Psychology. 2015 Nov 9;30(8):1019-33.
3. Kelliher C, Hailey VH, Farndale E. Employee engagement in multinational organizations. In Employee engagement in theory and practice 2013 Oct 30; 180-194.
4. Presbitero A, Fujimoto Y, Lim WM. Employee engagement and retention in multicultural work groups: The interplay of employee and supervisory cultural intelligence. Journal of Business Research. 2025 Jan 1;186:115012.
5. Stor M. The effects of shaping employee work engagement and job satisfaction on company performance results: the mediating role of HRM outcomes in Central European MNCs. Central European Management Journal. 2024 Feb 13;32(3):490-510.
6. Prentice SB. Job satisfaction or employee engagement: Regardless of which comes first, supportive leadership improves them both. Advances in Developing Human Resources. 2022 Nov;24(4):275-85.
7. Rajashekar S, Jain A. A thematic analysis on "employee engagement in IT companies from the perspective of holistic well-being initiatives". Employee Responsibilities and Rights Journal. 2024 Jun;36(2):165-87.
8. Shama, Mazhar SS, Rehman AU, Khan FS. How digital technology and innovation can be leveraged in small and medium enterprises: a bibliometric analysis. International Journal of Technological Learning, Innovation and Development. 2023;15(2):162-82.
9. Atiku SO, Itembu-Naunyango KA, Oladejo OM. Inclusive Leadership and Employee Engagement as Critical Drivers of Sustainability in Telecommunication Companies. Administrative Sciences. 2024 Jun 16;14(6):126.
10. Kurniawati NI, Raharja E. The influence of employee engagement on organizational performance: a systematic review. WSEAS Transactions on Business and Economics. 2023;20(4):203-13.
11. Tsaur SH, Hsu FS, Lin H. Workplace fun and work engagement in tourism and hospitality: The role of psychological capital. International Journal of Hospitality Management. 2019 Aug 1; 81:131-40.
12. Saks AM. Antecedents and consequences of employee engagement. Journal of managerial psychology. 2006 Oct 1;21(7):600-19.
13. Bhukya R, Paul J, Kastanakis M, Robinson S. Forty years of European Management Journal: A bibliometric overview. European Management Journal. 2022 Feb 1;40(1):10-28.
14. Paul J, Khatri P, Kaur Duggal H. Frameworks for developing impactful systematic literature reviews and theory building: What, why and how? Journal of Decision Systems. 2023 Apr 6:1-4.
15. AlRyalat SA, Al-Ryalat N, Ryalat S. Machine learning in glaucoma: a bibliometric analysis comparing computer science and medical fields' research. Expert Review of Ophthalmology. 2021 Nov 2;16(6):511-5.
16. Chowdhury R, Chowdhury R. A holistic approach to employee engagement. Systems Thinking for Management Consultants: Introducing Holistic Flexibility. 2019:269-304.
17. Chaudhary V, Mohanty S, Malik P, Mary AA, Maroor JP, Nomani MZ. Factors affecting virtual employee engagement in India during COVID-19. Materials Today: Proceedings. 2022 Jan 1;51:571-5.
18. Bano A, Khatun A, Kumar D. Examining Drivers of Engagement And Employee Engagement In Relation To Organizational Performance-A Study of Banking Sector In Hyderabad City. Bano, A., Khatun, A., & Kumar, D.(2024). Examining Drivers Of Engagement And Employee Engagement In Relation To Organizational Performance-A Study Of Banking Sector In Hyderabad City. Migration Letters. 2024 Feb 1;21:1067-81.
19. Singh P, Bala H, Dey BL, Filieri R. Enforced remote working: The impact of digital platform-induced stress and remote working experience on technology exhaustion and subjective wellbeing. Journal of Business Research. 2022 Nov 1;151:269-86.
20. Na-Nan K, Pukkeeree P, Chaiprasit K. Employee engagement in small and medium-sized enterprises in Thailand: the construction and validation of a scale to measure employees. International Journal of Quality & Reliability Management. 2020 Dec 7;37(9/10):1325-43.
21. Stofberg L, Strasheim A, Koekemoer E. Digitalisation in the workplace: the role of technology on employee engagement and creativity teams. InAgile coping in the digital workplace: Emerging issteams. Agile coping in the digital workplace: Emerging issues for research and practice. Springer Nature Switzerland AG. 2021, pp. 231–257. https://doi.org/10.1007/978-3-030-70228-1_12
22. Prentice C, Wong IA, Lin ZC. Artificial intelligence as a boundary-crossing object for employee engagement and performance. Journal of Retailing and Consumer Services. 2023 Jul 1; 73:103376.
23. Umair S, Waqas U, Mrugalska B. Cultivating sustainable environmental performance: The role of green talent management, transformational leadership, and employee engagement with green initiatives. Work. 2024 Aug 6;78(4):1093-105.

24. Ruoxi W, Albattat A, Tham J. How Individualistic and Collectivistic Psychological Values of Sport Players Influence Their Performance?. Journal for ReAttach Therapy and Developmental Diversities. 2023 Sep 25;6(9s (2)):1009-18.

25. Abdullahi MS, Raman K, Solarin SA, Adeiza A. Employee engagement as a mediating variable on the relationship between employee relation practice and employee performance in a developing economy. Journal of Applied Research in Higher Education. 2023 Jan 2;15(1):83-97.

26. Alameeri K, Alshurideh M, Al Kurdi B, Salloum SA. The Effect of Work Environment Happiness on Employee Leadership. Proceedings of the International Conference on Advanced Intelligent Systems and Informatics. Advances in Intelligent Systems and Computing AISC, Springer, Cham. 2020. vol 1261, pp. 668-680. https://doi.org/10.1007/978-3-030-58669-0_60

27. Bajpai P, Khan FS, Mazhar SS, Uddin S. Employees work performance analysis under Green HRM strategies adopted in IT company. Journal of Information and Optimization Sciences. 2022 Oct 3;43(7):1859-69.

28. Usmani KA, Khan FS. Understanding psychological contract: Long-term investment for business sustainability. Management Dynamics. 2017;17(2):60-9.

29. Shakeel U, Khan FS. Role of emotional intelligence in conflict management as part of customer relationship management in select public and private sector banks. Academy of Marketing Studies Journal. 2022;26(S3):1-6.

30. Anitha J. Determinants of employee engagement and their impact on employee performance. International journal of productivity and performance management. 2014 Apr 8;63(3):308-23.

31. AlRyalat SA, Malkawi LW, Momani SM. Comparing bibliometric analysis using PubMed, Scopus, and Web of Science databases. JoVE (Journal of Visualized Experiments). 2019 Oct 24(152): e58494.

32. Paul J, Lim WM, O'Cass A, Hao AW, Bresciani S. Scientific procedures and rationales for systematic literature reviews (SPAR-4-SLR). International Journal of Consumer Studies. 2021 Jul;45(4): O1-6.

33. Han Y, Yang Y, Mohamed R. A bibliometric analysis of work engagement in the hospitality and tourism industry. Journal of Hospitality and Tourism Insights. 2023 Dec 1;6(5):1946-66.