

Article

Bibliometric Analysis and Visualization of Global Research on Employee Engagement

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Abstract: Over the past few years, employee engagement has gained significant attention due to its positive impact on various organizational indicators such as job satisfaction, commitment, performance, productivity, and profitability. The aim of this study is to conduct a thorough analysis of existing research on employee engagement. To accomplish this aim, 786 articles concerning employee engagement indexed in the Web of Science (WoS) between the years 2002 and 2022 were analyzed using bibliometric analysis methods. The VOSviewer program was employed to conduct citation, co-citation, co-authorship, and co-occurrence analysis. The study identified the leading countries, institutions, authors, journals, and scientific publications on the topic and shed light on current research patterns and future research avenues. The results demonstrate that the most productive country is the USA, the most productive institution is the University of Louisville, the most productive author is Brad Shuck, and the most productive journal is Sustainability. The current trend of research involves exploring the antecedents (e.g., corporate social responsibility, perceived organizational support, organizational culture, work–family balance) and consequences (e.g., job satisfaction, organizational commitment, employee performance, organizational citizenship behavior) of employee engagement. However, further research is necessary to explore the impact of various leadership styles, digital technologies, and new ways of working on employee engagement.

Keywords: employee engagement; human resource management; organizational behavior; bibliometric analysis



Citation: Kişi, N. Bibliometric Analysis and Visualization of Global Research on Employee Engagement. *Sustainability* **2023**, *15*, 10196. <https://doi.org/10.3390/su151310196>

Academic Editors: Grigorios L. Kyriakopoulos and Delia Virgă

Received: 15 May 2023
Revised: 14 June 2023
Accepted: 26 June 2023
Published: 27 June 2023



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1. Introduction

Today, one of the most concerning global economic issues is the low level of employee engagement observed in the workplace [1]. A comprehensive investigation undertaken by Aon Hewitt [2], involving the analysis of data collected from over eight million employee responses, has indicated that only 27% of all employees can be classified as highly engaged. Moreover, The Global Workplace Study, carried out by Hayes et al. [3] and encompassing 27 countries, has unveiled the truth that only 15.5% of employees exhibit full engagement. This study has provided a remarkable finding, exposing a substantial 21% range that spans between the highest and lowest levels of full engagement. It is noteworthy to mention that China demonstrates the lowest rate at 5%, while the United Arab Emirates boasts the highest rate at 26%. These findings accentuate the significant variation observed worldwide in terms of employee engagement levels.

The Gallup State of the Global Workplace report, which covered 96 countries, revealed that the global employee engagement rate of 21% is low level, resulting in a significant cost to the global economy. Specifically, the report estimated that low engagement results in a loss of USD 7.8 trillion and accounts for 11% of the global gross domestic product (GDP). It also highlighted a strong relationship between engagement and key performance metrics, including productivity, profitability, security, and retention [4]. The findings from a study conducted by Harter et al. [5] elucidated the significant link between employee engagement and meaningful business outcomes, demonstrating its generalizability across

diverse companies. Therefore, in order to enhance the level of engagement within an organization, it is critical to comprehend the concept of engagement and its implications [1].

The definition and meaning of employee engagement are widely debated in the literature. The term is used to describe psychological states, characteristics, and actions, as well as their determinants and consequences [6]. The definition provided by Kahn [7] characterizes employee engagement as the process of harnessing employees' selves to their job roles and utilizing their physical, cognitive, and emotional energies in the work environment (p. 694). According to Harter et al. [5], employee engagement is the level of involvement, satisfaction, and enthusiasm that individuals exhibit towards their job (p. 269). Maslach et al. [8] proposed that engagement can be conceptualized as the inverse of burnout, and encompassed three dimensions: energy, efficacy, and involvement (p. 416). The concept includes the degree of commitment and involvement that an employee has towards their company and its values. Engaged employees are not only aware of their responsibilities in achieving business goals but also motivate their colleagues to do the same. They show a willingness to go beyond their job requirements in performing their roles [9].

On the other hand, several studies have investigated the basic determinants of employee engagement. For instance, Al Mehrzi and Singh [10] identified leadership, organizational culture, teamwork, and perceived organizational support as key predictors of employee engagement. Jagannathan [9] emphasized that the working environment, team, and co-worker relationships are the main predictors of employee engagement. Chiwawa [11] found that the statistically significant elements for employee engagement include leadership, organizational climate, employee recognition, information and communication. Nguyen and Pham [12] pointed out that employee engagement is significantly associated with work design and work-family balance. Work design can be measured based on factors such as job autonomy, job challenge, job fit, and job meaningfulness, while workload reasonableness and organizational support are two factors that can be used to evaluate work-family balance.

Additionally, The Job Demands-Resources (JD-R) model posited that job demands (e.g., emotional demands, role ambiguity, work pressure) and job resources (e.g., autonomy, social support, performance feedback) are crucial in defining and predicting employee engagement. Work engagement is most likely to happen when there are sufficient job resources to counterbalance high job demands [13]. Dollard and Bakker [14] extended the JD-R model by constructing a psychosocial safety climate model, which examines the influence of both job demands and job resources on psychological health and employee engagement.

Furthermore, extensive empirical research demonstrates the positive correlation between employee engagement and a multitude of beneficial outcomes for organizations. Firstly, it is linked to increased employee performance [9]. Secondly, it can enhance job satisfaction, foster organizational commitment, and reduce turnover intention [15]. Thirdly, it is positively associated with organizational citizenship behavior, which involves voluntary behaviors that benefit employees and the organization [16]. Finally, at the business-unit level, a noteworthy connection exists between employee engagement and customer satisfaction, according to research findings [5].

Moreover, employee engagement has been widely acknowledged as a key factor contributing to the competitiveness, success, and sustainability of organizations [9,10,17]. Therefore, ensuring and maintaining high levels of employee engagement is paramount in achieving enduring positive outcomes. As businesses operate in an ever-evolving environment, they face the need to foster innovation to enhance their efficiency, productivity, and overall sustainability. Engaged employees, driven by their higher levels of motivation, are more inclined to identify and implement innovative solutions that contribute to sustainable practices [18]. Employees, serving as catalysts for organizations to adopt corporate sustainability, also represent one of the most vital resources in enabling an organization to fulfill its economic, social, and environmental responsibilities [19]. Engaged employees are

more likely to exhibit behaviors that support sustainability efforts within the organization. Recognizing the vital link between employee engagement and sustainability, organizations increasingly prioritize the improvement of employee engagement as a driving force behind their sustainability initiatives. Additionally, engaged employees have a profound impact on cultivating a culture of sustainability within the organization. They act as advocates for sustainable practices in the workplace, inspiring and motivating their colleagues. Their enthusiasm and commitment create a ripple effect, leading to the development of a more sustainable organizational culture [20].

Given the substantial positive effects that engagement has exhibited on individuals, organizations, and society as a whole, extensive research has been dedicated to comprehending the phenomenon of employee engagement. Despite the wealth of literature on this topic, to the best of our knowledge, no study has conducted a bibliometric analysis of the literature on employee engagement published in the Web of Science (WoS) database from 2002 to 2022. Consequently, the primary objective of this study is to fill the existing research gap by providing answers to the following four research questions:

- Q1. What are the annual publication and citation frequency trends in employee engagement?
- Q2. What are the leading countries, institutions, authors, journals and articles on employee engagement?
- Q3. What are the current research trends in the field of employee engagement?
- Q4. What are the future research directions for employee engagement?

In order to address these research questions, a bibliometric analysis was employed, utilizing various techniques such as citation analysis, co-citation analysis, co-authorship analysis, and co-occurrence analysis. The structure of this study is outlined as follows: Following the introduction, Section 2 provides an overview of previous bibliometric analysis and meta-analysis studies that have explored employee engagement. Section 3 details the materials and methods utilized in this study. Section 4 presents the extensive findings obtained from the bibliometric analysis. Lastly, Section 5 concludes the study by discussing its limitations and offering suggestions for future research endeavors.

2. Literature Review

Over the past fifteen years, the concept of employee engagement has garnered considerable attention from scholars, practitioners, consultants, and businesses, solidifying its position as a heavily researched topic in the field of management literature. As a result, a considerable volume of the literature on employee engagement has emerged, including review articles, meta-analyses, special journal issues, and books [21]. An overview of the primary objectives and key findings of previous studies on employee engagement, performed through bibliometric analysis, can be presented as follows:

A study accomplished by Sutopo et al. [1] investigated the growth of publications pertaining to employee engagement from 2016 to 2022, utilizing the Google Scholar database. The study aimed to identify prominent journals and research trends within these publications. The findings demonstrated that a significant portion of the publications were featured in the *International Journal of Management Review*. Furthermore, transformative leadership and organizational culture emerged as predominant factors in the realm of employee engagement research.

Another study by Andrić et al. [22] carried out a systematic review of studies on Scopus, Ebsco, and Lens.org to explore the strategies implemented by organizations to foster employee engagement during the pandemic. Their findings revealed that the most preferred approaches for enhancing employee engagement are strategies related to providing mental relief care and resilience. Additionally, they emphasized that competence development, empathy building, and expectation management contribute to increased job engagement.

Motyka [23] implemented a systematic literature review between the years 2002 and 2018 using the EBSCO, Emerald, and ProQuest databases to determine the relationship

between employee engagement and performance. The majority of the studies were published in the *Journal of Occupational and Organizational Psychology*, with a significant portion of the research conducted in the USA and the Netherlands. The findings provided statistical evidence of a significant relationship between employee engagement and various performance categories.

In a bibliometric analysis performed by Altaf and Masrek [24] on work engagement studies in the WoS database from 1980 to 2020, utilizing the Biblioshiny software (version 4.2.0) for data analysis, the findings highlighted the Netherlands as the most productive country and identified Erasmus University as the most productive institution in this research area. The *Journal of Vocational Behavior* stood out as the most frequently cited journal in the field, while the main keywords in work engagement research encompassed work engagement, engagement, work, job satisfaction, and burnout.

Nurrosidah and Sopiah [25] presented a bibliometric analysis on work engagement using VOSviewer software. The study analyzed 30 articles indexed in Scopus obtained from Elsevier and Wiley databases between 2019 and 2022. The findings expressed that work engagement was associated with various topics, including leadership styles, human resource management (HRM) practices, organizational commitment, behavioral psychology, and work systems.

Han et al. [26] investigated global research trends on work engagement in the hospitality and tourism industry, analyzing 335 articles published between 2005 and 2021 using the Scopus database. The study stressed a significant and rapid growth in research focusing on work engagement in this industry. The *International Journal of Hospitality Management* had the highest number of published articles, and the USA emerged as the leading country in research production. The themes identified in the research included job resources and outcomes related to work engagement.

Lastly, Saks et al. [21] executed a study that encompassed multiple databases, including PsycInfo, ProQuest, Google Scholar, ResearchGate, JSTOR, and WoS, with a specific focus on organizational engagement. They provided a comprehensive review of research on organizational engagement, presenting a novel model that explores the antecedents and consequences of organizational engagement. The study identified several antecedents of organizational engagement, including perceived organizational support, perceptions of justice, corporate social responsibility, organizational structural factors, organizational climate, and HRM practices. The outcomes associated with organizational engagement were defined as job satisfaction, organizational commitment, organizational citizenship behavior, job performance, and organizational performance.

Overall, bibliometric analysis studies offer considerable insights into various facets of engagement research, illuminating the determinants, strategies, and outcomes linked to work and organizational engagement. Furthermore, alongside bibliometric analysis, meta-analysis studies hold a significant position in the literature. These meta-analysis studies aim to synthesize a multitude of independent studies addressing similar topics and, as well as to offer comprehensive findings. They adopt a different approach from bibliometric analysis, uncovering critical trends and overarching conclusions within the field. The following meta-analysis studies provide findings into various factors related to employee engagement at work:

In their meta-analysis, Harter et al. [5] analyzed the relationship between employee satisfaction, employee engagement, and various business outcomes, including customer satisfaction, productivity, profit, employee turnover, and accidents, at the business-unit level. The study identified significant and generalizable relationships between employee satisfaction, employee engagement, and these specific business outcomes. These findings underscored the crucial role of employee satisfaction and engagement in influencing key performance indicators and organizational success.

Borst et al. [27] implemented a comparative meta-analysis across various sectors to investigate the attitudinal, behavioral, and performance outcomes of work engagement. The results indicate that work engagement was associated with job satisfaction, organiza-

tional commitment, workaholism, and turnover intention. However, the strength of these relationships varied across sectors, with semipublic employees exhibiting significantly higher levels of work engagement compared to public and private employees.

In a meta-analysis by Neuber et al. [28], the impact of work engagement on performance and absenteeism was examined. The findings signified a positive relationship between work engagement and employees' task performance. Additionally, work engagement showed a negative association with absenteeism, implying that engaged employees are less likely to have high rates of absenteeism.

Young et al. [29] determined the relationship between personality and employee engagement through a meta-analysis. The findings showed that individuals with higher levels of extraversion and conscientiousness tend to exhibit greater work engagement. Positive affectivity was also positively associated with work engagement, while the relationship between openness to experience and work engagement was found to be weak.

Knight et al. [30] accomplished a systematic review and meta-analysis to assess the effectiveness of work engagement interventions. The results revealed that interventions aimed at enhancing work engagement in organizations have the potential to yield positive outcomes. Specifically, group interventions exhibited a medium to large effect size, highlighting the advantages of collaborative work in improving resources, work engagement, and overall well-being.

In another meta-analysis, conducted by Virga et al. [31], the main focus was assessing the effectiveness of work engagement interventions. The results demonstrated that interventions based on positive psychology methods and the development of soft skills were particularly successful in improving work engagement. Additionally, it is recommended to schedule short reminder sessions after the first month following the completion of the intervention, as these sessions have been found to have positive effects on work engagement.

Mazzetti et al. [32] investigated the relationship between work engagement and job demands and resources. The meta-analysis findings revealed that personal and development resources have a stronger association with engagement. Moreover, the study brought attention to the importance of interventions that prioritize the development of personal resources and leadership training for effectively enhancing engagement.

Indeed, the meta-analysis studies on work engagement, which comprehensively examine its antecedents, interventions, outcomes, and sector-specific differences, significantly contribute to the scientific understanding of this construct. These studies provide insights that support organizations and researchers in their endeavors to improve employee engagement and its impact on various organizational outcomes.

Moreover, the present study's bibliometric analysis offers a comprehensive overview of the existing literature on employee engagement, enhancing the understanding of this research domain. By quantitatively examining publication patterns, identifying leading authors and institutions, and uncovering research themes and trends, this analysis contributes to the comprehension of the intellectual structure within the field. The insights derived from this analysis offer guidance for future research and practical applications in the realm of employee engagement.

The collaborative utilization of meta-analysis studies and bibliometric analysis synergistically contributes to the advancement of scientific knowledge concerning employee engagement.

3. Materials and Methods

3.1. Data Source and Selection

The selection of techniques and tools for data analysis is a crucial aspect of the research process. The acquisition of data on scientific papers can be accomplished by utilizing online databases. The prominent databases commonly used in bibliometric research include Scopus, WoS, Google Scholar, and Medline [33]. For this study, the data was retrieved from the WoS Core Collection published by Thomson Reuters on 1 March 2023. WoS was chosen due to its wide coverage of significant academic information sources, ensuring access to

high-quality data [34]. Once the databases are selected, the next step involves setting up the search criteria. In this stage, we employed document tracking by searching for a specific term, as illustrated in Table 1.

Table 1. Parameters of the search strategy.

Database	WoS Core Collection
Search word	Employee engagement
Category	Title
Document type	Article
Period time	2002–2022
Language	ALL
Research areas	ALL
Indexes	ALL
Query String	TI = (“employee engagement”)
Search Date	1 March 2023

In order to filter the data on employee engagement, a query was executed on the WoS database in March 2023 using the search term “employee engagement”. A total of 1039 publications were obtained. Subsequently, document types such as books, editorials, and conference proceedings (totaling 240 documents) were excluded, as their full texts may not be available. Only articles were considered as document types in the research. Furthermore, the data for 2023 (consisting of 13 documents) were excluded from the study due to the limited two-month data available in the database, which would not provide sufficient information for meaningful comparisons with data from other years. To meet these specific criteria, the “article” option was selected as the document type in the query, while the year 2023 was excluded as a publication year. As a result of the search strategy, 786 records were obtained and saved as plain text files in the “savedrecs.txt” format for subsequent analysis.

3.2. Data Analysis and Visualization

Given the remarkable advancement in scientific knowledge production in recent years, there is a need for a comprehensive and collective analysis of the literature. In this context, the utilization of bibliometric methods has emerged as a quantitative approach to systematically analyze bibliographic materials. This method facilitates the categorization and organization of information based on different variables, including journals, authors, institutions, and countries. By employing bibliometric analysis, researchers can gain a holistic understanding of a specific research area [35].

The present study utilized bibliometric analysis to conduct a statistical examination of the research collected from the WoS database pertaining to employee engagement. Multiple analyses, including citation analysis, co-citation analysis, co-author analysis, and co-occurrence analysis, were conducted by selecting analysis units, such as documents, sources, authors, organizations, countries, cited references, and author keywords [33]. To facilitate the construction and visualization of bibliometric maps, the software tool VOSviewer (version 1.6.18) was used [36]. This approach enabled an understanding of the interrelationships among the different elements within the field of employee engagement.

4. Results and Discussion

The concept of employee engagement has attracted considerable interest from authors globally, leading to a plethora of articles published in various countries, organizations, and journals. The sample of the present study, obtained through a query in the WoS database, consisted of a total of 786 articles published in 367 journals, authored by 1846 individuals affiliated with 1021 institutions located in 78 different countries.

4.1. Number of Publications

The corpus of scholarly articles on employee engagement within the WoS database has exhibited a progressive upsurge from 2002 to 2022. Over this span, a total of 786 articles have been published, contributing valuable insights to the field. Figure 1 portrays the annual distribution of these publications, shedding light on the evolving landscape of employee engagement research.

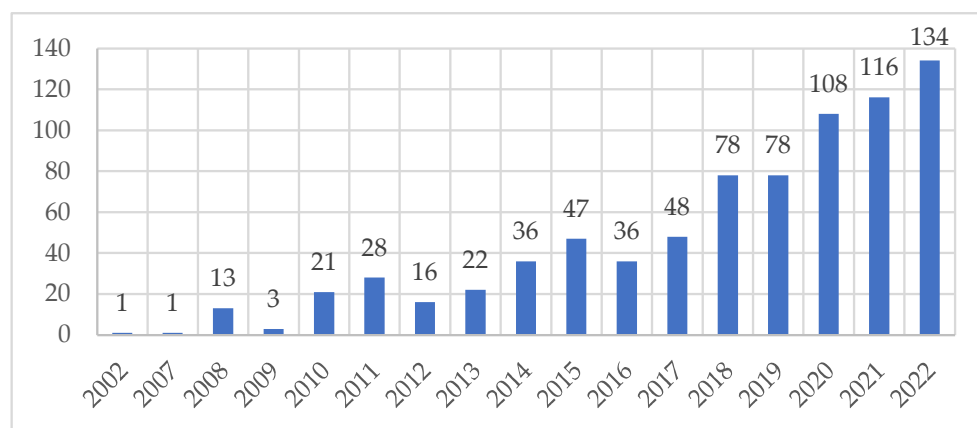


Figure 1. Distribution of publications by year.

The distribution of publications in the field of employee engagement can be divided into two distinct periods, as shown in Figure 1. The initial period spans from 2002 to 2017, while the subsequent growth period covers the years 2018 to 2022. The first article on employee engagement in the WoS database was published in 2002. Over the following 15 years, the number of articles exhibited an irregular increase. However, starting in 2018, there has been a significant surge in scholarly attention towards this subject, resulting in a substantial rise in the volume of publications. Notably, approximately 66% of the research has been undertaken within the last five years, indicating a growing interest in the field. This trend is consistent with the findings of Han et al. [26], who observed a doubling in the number of publications on work engagement in the hospitality and tourism industry between 2018 and 2019. Moreover, Sutopo et al. [1], in their examination of employee engagement publications in the Google Scholar database, and Saks et al. [21], who investigated organizational engagement research across various databases such as PsycInfo, ProQuest, Google Scholar, ResearchGate, JSTOR, and WoS, both highlighted the noticeable increase in publications between 2016 and 2020.

The increasing research focus on positive organizational phenomena has contributed to the growing attention to employee engagement. Both public and private sectors recognize the importance of cultivating an engaged workforce. Employers widely believe that engaged employees tend to outperform their non-engaged counterparts, primarily due to their heightened job interest and willingness to exceed expectations for the betterment of their organization. Furthermore, engaged workers perceive their job as more fulfilling and meaningful. These factors have converged to position employee engagement as one of the most captivating topics in recent times [37].

In addition, citation analysis plays a crucial role in assessing the scholarly impact and significance of articles in the field. It provides insights into the attention and influence garnered by these publications. Figure 2 offers an overview of the citation distribution of employee engagement research over time.

The findings of the citation analysis indicate a noticeable upward trend in the number of citations. Particularly, 76% of the citations are attributed to articles within the last five years, emphasizing the timeliness and impact of the research on scholarly discourse. Consequently, an integration of findings on both statistical analysis of publication distribution

and citation analysis offers a thorough understanding of the growth and impact of research in the field.

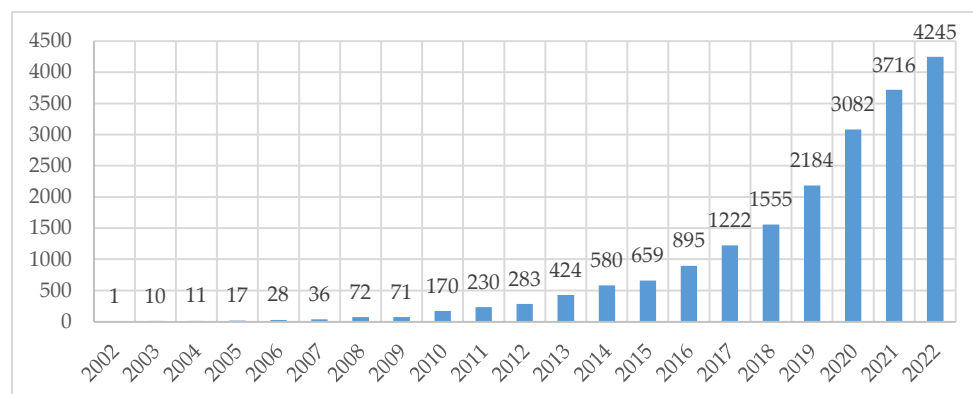


Figure 2. Distribution of citations by year.

4.2. Geographic Distribution of Publications

The research areas related to employee engagement have witnessed contributions from various countries, with a total of 78 countries contributing to the literature. Table 2 provides an overview of the leading countries in terms of their publication output from 2002 to 2022, including their total citations, normalized citations, and links.

Table 2. Countries with the most published articles.

Country	TP	TC	NC	Links
USA	208	10,468	235.95	12
India	157	1683	98.70	6
China	46	916	92.50	13
England	45	1477	63.31	10
Australia	38	1726	58.74	8
South Africa	37	342	16.92	2
Malaysia	35	213	22.58	10
Pakistan	35	383	39.43	9
Canada	30	2342	67.34	6

TP: total publications. TC: total citations. NC: normalized citations.

Information on research productivity and impact in the field of employee engagement provides insights into leading countries. Based on the data presented in Table 2, the USA occupies a leading position in terms of publication volume and relative impact. The volume of research and the number of citations from the USA underline its dominant position in this field. Similarly, India and China have made significant contributions and impacts on employee engagement research. In contrast, countries such as the UK, Australia, South Africa, Malaysia, Pakistan, and Canada exhibited relatively lower research output and impact compared to the countries mentioned above. However, these countries have made notable contributions, albeit on a smaller scale, and have been actively involved in the field of employee engagement.

These findings are consistent with previous studies by Han et al. [26], and Andrić et al. [22], who have also identified the USA and China as prominent contributors to employee engagement research. On the other hand, in their investigations into work engagement, Altaf and Masrek [24] have identified the Netherlands, the USA, and China as the top three countries in terms of publication productivity. Additionally, Motyka [23] has pointed out that the majority of research on this topic is accomplished in the USA, the Netherlands, the UK, and India. The convergence of these findings highlights the global significance and widespread interest in comprehending and enhancing employee engagement across various contexts.

Furthermore, a survey implemented by Gallup [4] in 2021 provides intriguing insights about regional variations of engaged employees. The USA and Canada demonstrated the highest regional percentage of engaged employees at 33%, despite significant levels of stress and worry among their workforce. In South Asia, comprising Afghanistan, Bangladesh, India, Nepal, Pakistan, and Sri Lanka, the regional percentage of engaged employees stood at 27%. Similarly, Southeast Asia, consisting of Cambodia, Indonesia, Laos, Malaysia, Myanmar, Philippines, Singapore, Thailand, and Vietnam, reported a regional percentage of engaged employees at 24%. These findings shed light on the varying levels of employee engagement across different regions, showcasing the importance of cultural and contextual factors in shaping employee engagement practices. On the other hand, Europe exhibits the lowest regional percentage of engaged employees, standing at 14%. This raises questions about the underlying reasons for lower engagement levels in European countries and emphasizes the need for further research and targeted interventions to enhance employee engagement within this region.

On the other hand, a country-based co-authorship analysis was conducted to examine international collaboration among authors in the field of employee engagement. Only countries with a minimum of ten published articles on the topic were considered in the construction of the co-authorship network. The resulting network, depicted in Figure 3, provides a visual representation of the collaborative relationships between countries in the study of employee engagement.

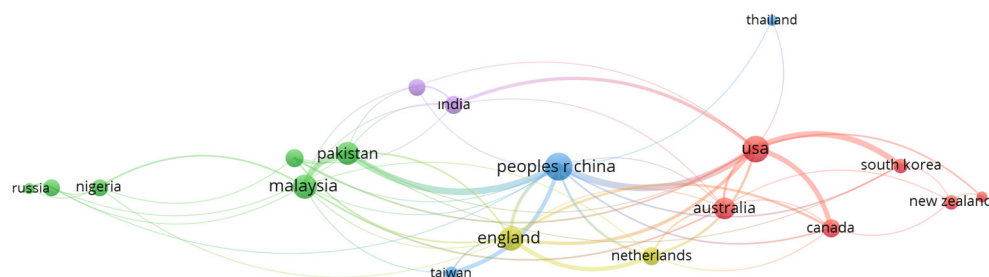


Figure 3. Co-authorship network between countries.

The circles in Figure 3 represent countries, while the links between them indicate the co-authorship relationships. The number of links, as illustrated in Table 2, represents the count of international co-authored publications between a country and other countries. By examining this interactive network map, it is possible to determine which countries have a higher number of international co-authorships, indicating a greater level of collaboration and co-publication activity between them. The links between the circles indicate the strength of collaborations, with thicker links indicating stronger collaborations.

The cooperation network in this study reveals the presence of five distinct clusters and a total of 19 participating countries. The blue cluster, centered around China (with 13 links), encompasses two contributing countries: Taiwan and Thailand. These countries exhibit a high level of collaboration in their research on employee engagement. The red cluster, centered around the USA (with 12 links), comprises five contributing countries: Australia, Canada, New Zealand, South Africa, and South Korea. These countries participate in significant collaborations in studying employee engagement. The co-authorship analysis performed by Han et al. [26] on work engagement aligns with the findings of the present study, highlighting the prominent role of China and the USA in international collaborations pertaining to employee engagement research.

The value of these findings extends beyond individual countries and clusters. By shedding light on international collaborations, this analysis facilitates the identification of potential research partners, encourages cross-cultural exchanges, and promotes knowledge sharing. Researchers, practitioners, and policymakers can benefit from these insights to foster collaboration and advance employee engagement research worldwide.

4.3. Institution Distribution of Publications

An examination of employee engagement-related studies in the WoS database spanning from 2002 to 2022 uncovers the participation of 1021 research institutions. The distribution of these institutions indicates that the majority (77%) have contributed to a single publication, while 14% of institutions have been involved in two publications. Additionally, 1% of institutions have demonstrated a notable commitment to this field by producing at least seven publications on the topic. Table 3 provides a comprehensive overview of the institutions that have made substantial contributions to the literature on employee engagement, based on the quantity of articles published.

Table 3. Institutions with the most published articles.

Institution	Country	TP	TC
University of Louisville	USA	25	915
Colorado State University	USA	11	150
University of Toronto	Canada	10	1197
University of South Africa	South Africa	9	33
Deakin University	Australia	8	464
Florida International University	USA	8	559
Indian Institutes of Technology	India	8	153
Macquarie University	Australia	7	219
University of Alabama	USA	7	119

TP: total publications. TC: total citations.

Among the institutions conducting research on employee engagement, it is noteworthy that two of them are located in Australia, while four are located in the USA. The University of Louisville, situated in the USA, emerges as the most productive institution in terms of publication numbers on this topic. Furthermore, the collaborative efforts between these institutions are not only evident in their publication outputs but also reflected in the citation network depicted in Figure 4.

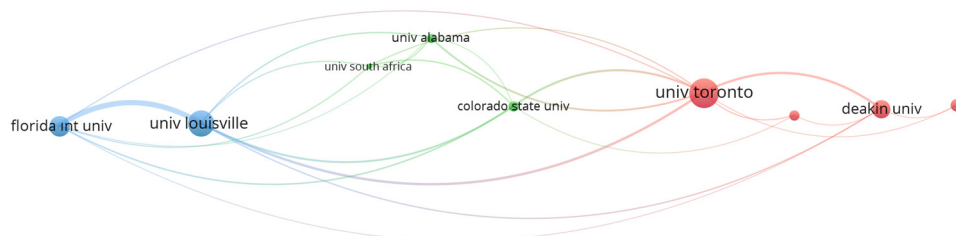


Figure 4. Citation network of institutions.

This network visualization provides a comprehensive overview of the interconnectivity and knowledge exchange between these institutions, bringing attention to the global nature of employee engagement research. The VOSviewer software program was employed to visually represent the collaboration network between these institutions, specifically focusing on those that have made significant contributions with at least seven publications on the topic of employee engagement. This network visualization facilitates a holistic examination of the collaborative efforts undertaken by these institutions, shedding light on the global nature of employee engagement research and the intercontinental exchange of knowledge and expertise.

The analysis of the institutional citation network reveals the presence of three distinct clusters and a total of nine contributing institutions. The first cluster, depicted in blue, includes the University of Louisville and Florida International University from the United States. The second cluster, represented in green, comprises Colorado State University and the University of Alabama from the USA, along with the University of South Africa. Lastly, the red cluster represents institutions from Australia, namely Deakin University and

Macquarie University, as well as the Indian Institutes of Technology from India and the University of Toronto from Canada.

These clusters suggest the presence of regional collaborations in employee engagement research across different geographical locations. Furthermore, examining the citation counts for the most productive institutions provides insights into their research impact. For instance, the University of Toronto stands out with a substantial total citation count of 1197. Similarly, the University of Louisville has amassed a total of 915 citations, highlighting its significant contributions to the field. Such findings illuminate the significant influence of these institutions in the research landscape of employee engagement.

4.4. Authors of Publications

An extensive examination of the 786 articles focused on employee engagement uncovered the active participation of 1846 authors. A significant portion of these authors (90%) have contributed to a single publication, indicating a diverse range of contributors in the field. To gain deeper insights into the research productivity of these authors, Table 4 provides an overview of the individuals who have demonstrated notable research output in the realm of employee engagement.

Table 4. Most productive authors.

Author	Country	TP	TC	AC
Shuck, B.	USA	25	915	36.6
Saks, A.M.	Canada	10	1197	119.7
Byrne, Z.S.	USA	9	110	12.2
Albrecht, S.L.	Australia	8	450	56.3
Kim, W.	South Korea	5	77	15.4
Reio, T.G.	USA	5	520	104
Abdullahi, M.S.	Malaysia	4	7	1.8
Alfes, K.	Germany	4	661	165.3
Dhanda, U.	India	4	62	15.5
Gruman, J.A.	Canada	4	860	215
Hameduddin, T.	USA	4	44	11
Lemon, L.L.	USA	4	57	14.3
Nimon, K.	USA	4	143	35.8
Rothmann, S.	South Africa	4	184	46
Shrotryia, V.K.	India	4	62	2.3
Zigarmi, D.	USA	4	143	15.5

TP: total publications. TC: total citations. AC: average citations per publication.

This table presents the authors who have made significant contributions to the literature, offering insights into their research productivity and impact in the field. Brad Shuck emerges as the most productive author in the field of employee engagement, with twenty-five publications on the topic. Alan M. Saks closely follows in second place with ten publications, while Zinta S. Byrne ranks third with nine contributions. These authors were identified among the most cited authors in a study performed by Sutopo et al. [1] on employee engagement. Furthermore, Table 4 shows significant variation in the average number of citations per publication among prolific authors, ranging from 1.8 to 215 citations. It is worth highlighting the exceptional performance of Jamie A. Gruman, a Canadian researcher, who achieved the highest average number of citations per publication, an impressive 215.

Additionally, to comprehend the collaborative dynamics within the employee engagement literature, Figure 5 provides a visual representation of the author collaboration network generated using the VOSviewer software.

The visualization in Figure 5 illustrates the network structure, with circles representing authors and the size of the circles indicating the number of links. The connections between authors signify their collaborations, and the colors of the circles show different collaboration clusters. The author collaboration network in the field of employee engagement consists of 10 clusters and involves 44 authors, each of whom has contributed at least one article on

the topic. Within the network, Brad Shuck, from the USA, holds a prominent position with 27 links, indicating extensive collaboration with other authors. Woocheol Kim, from South Korea, also plays a significant role in the network with 14 links.

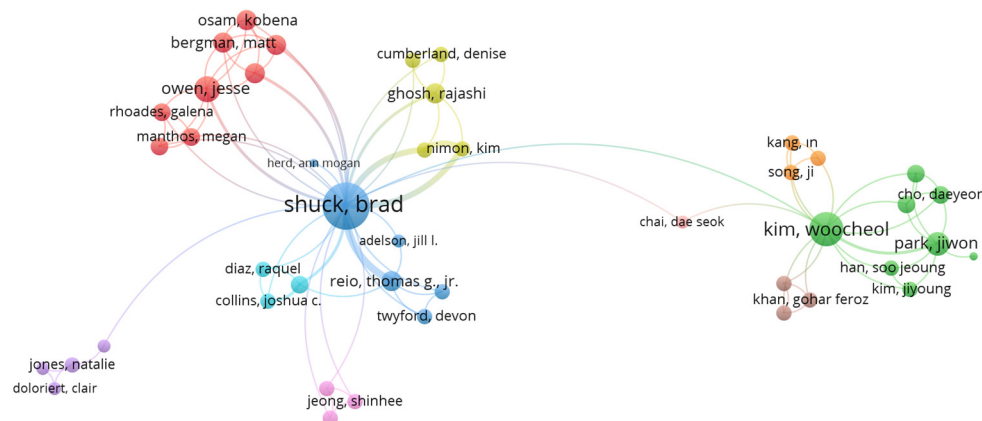


Figure 5. Co-authorship network of researchers.

4.5. Journals of Publications

Within the WoS database, publications on employee engagement were found to be distributed across 367 distinct journals. Among these journals, approximately 65% (238 journals) featured a single article on employee engagement, while approximately 15% (53 journals) published two articles on the topic. Notably, around 3% (10 journals) exhibited a significant level of involvement with this topic by publishing ten or more articles. An overview of the top journals in terms of the number of publications related to employee engagement is presented in Table 5.

Table 5. Journals with the most published articles.

Journal Title	TP	Subject Category of the Journal
Sustainability	16	Environmental Sciences, Green and Sustainable Science and Technology
Frontiers in Psychology	15	Psychology, Multidisciplinary
SA Journal of Human Resource Management	15	Management
Journal of Asian Finance Economics and Business	14	Business
Pacific Business Review International	12	Business
International Journal of Productivity and Performance Management	12	Management
Sage Open	11	Social Sciences, Interdisciplinary
International Journal of Human Resource Management	11	Management
Global Business Review	10	Business
International Journal of Human Capital and Information Technology Professionals	10	Management

TP: total publications.

The top 10 journals, predominantly focused on the domains of Business and Management, have emerged as the primary outlets for publishing research on employee engagement. These journals collectively account for approximately 16% of all publications in this field.

Notably, “Sustainability” and “Frontiers in Psychology” stand out as the leading journals, having contributed 16 and 15 articles on the topic, respectively. The journal “Sustainability” has demonstrated a positive growth pattern, publishing 4, 4, and 7 articles,

respectively, over the past three years. Similarly, “Frontiers in Psychology” has exhibited a clear upward trend, contributing 1, 3, and 9 publications during the same period. These findings underscore the increasing publication activity within these leading journals, underscoring their significant role in advancing the field of employee engagement.

Furthermore, the importance of impact factors in assessing a journal’s influence and reputation within the scholarly community is well recognized. According to the latest available data, the journal “Sustainability” achieved an impressive impact factor of 3.889 in 2021. Likewise, “Frontiers in Psychology” obtained a remarkable impact factor of 4.232 during the same year. These high impact factors can be considered a positive indicator of the quality and impact of the articles published in these journals.

A study by Andrljic et al. [22] pointed out the significant role of “Sustainability” in the field, ranking it fourth in terms of annual article output. Furthermore, the high productivity and scholarly impact of “Frontiers in Psychology” have been recognized by both Andrljic et al. [22] and Altaf and Masrek [24], firmly establishing it as one of the most influential journals in the realm of employee engagement.

4.6. Citation and Co-Citation Analysis of the Publications

The citation analysis conducted in this study offers insights into the scientific impact of the 786 articles focusing on employee engagement. These articles have garnered a total of 19,920 citations from various publications, underscoring their importance within the research community. An interesting finding from the data extraction process is that 36% of the articles have received at least ten citations, indicating their recognition within the scholarly discourse. Table 6 presents an overview of the most cited articles on employee engagement. The top three articles contribute to 23% of the total citations, signifying their influential role in shaping the discourse. The following provides an overview of the content discussed in the top three scholarly articles:

Table 6. Most cited articles on employee engagement.

Article Title	Author(s)/Year	TC	AC
Business-unit-level relationship between employee satisfaction, employee engagement, and business outcomes: A meta-analysis	Harter, J.K.; Schmidt, F.L.; Hayes, T.L. (2002) [5]	1894	86.23
Linking job demands and resources to employee engagement and burnout: A theoretical extension and meta-analytic test	Crawford, E.R., LePine, J.A., and Rich, B. L. (2010) [38]	1479	105.79
The meaning of employee engagement	Macey, W.; Schneider, B. (2008) [6]	1273	79.63
Psychosocial safety climate as a precursor to conducive work environments, psychological health problems, and employee engagement	Dollard, M.F.; Bakker, A.B. (2010) [14]	423	30.21
The meaning, antecedents and outcomes of employee engagement: A narrative synthesis	Bailey, C.; Madden, A.; Alfes, K.; Fletcher, L. (2017) [39]	323	46.29
Performance management and employee engagement	Gruman, J.A.; Saks, A.M. (2011) [17]	313	24.08
Employee engagement, human resource management practices and competitive advantage: An integrated approach	Albrecht, S.L., Bakker, A.B., Gruman, J.A., Macey, W.H.; Saks, A.M. (2015) [40]	267	29.67
What do we really know about employee engagement?	Saks, A.M.; Gruman, J.A. (2014) [41]	263	26.4
Determinants of employee engagement and their impact on employee performance	Jagannathan (2014) [9]	259	25.9
Daily transactional and transformational leadership and daily employee engagement	Breevaart, K.; Bakker, A.; Hetland, J.; Demerouti, E.; Olsen, O.K.; Espevik, R. (2014) [42]	255	25.5

TC: total citations, AC: average citations per year.

The article undertaken by Harter et al. [5] has garnered a remarkable 1894 citations, solidifying its position as the most influential publication in the field of employee engagement. Employing a comprehensive meta-analysis, the authors delved into the intricate relationship between employee engagement and many factors, including productivity, profitability, accidents, turnover, and customer satisfaction. Their findings not only provide insights into the multifaceted nature of employee engagement but also establish its crucial role in organizational success. Moreover, they introduced the Gallup Workplace Audit scale, which has been acknowledged by Motyka [23] as one of the extensively employed instruments in employee engagement research.

The study authored by Crawford et al. [38] ranks second position in terms of citations, accumulating a total of 1479 citations. It focused on the validity of the JD-R model and provided significant findings on the complex interplay between working conditions, employee engagement, and burnout, thereby enhancing the understanding of the factors influencing employee well-being. Published in 2010, the study has maintained the highest average number of citations per year among all publications, with an impressive average of 105.79 citations annually. Among the authors listed in Table 6, Arnold B. Bakker and Evangelia Demerouti have emerged as the primary contributors in terms of citations for this study, with 44 and 24 citations respectively.

Ranking third on the list, the article written by Macey and Schneider [6] has accumulated 1273 citations. It explores the definition and conceptual boundaries of employee engagement while proposing a comprehensive framework for further analysis. The authors emphasize the psychological states, traits, and behaviors that constitute employee engagement, shedding light on its dynamic nature over time. Additionally, they underscore the potential of employee engagement as a crucial driver for achieving a competitive advantage in the ever-evolving organizational landscape. Notably, their study has received the highest number of citations from Brad Shuck, who stands out as the most productive author in Table 4, with 21 citations.

These most cited articles not only make significant contributions to the scholarly discourse on employee engagement but also serve as seminal works that shape the field's theoretical foundations and empirical investigations. By illuminating the meaning, drivers, and outcomes of employee engagement, they provide valuable perspectives for researchers and practitioners.

Furthermore, the co-citation analysis uncovers the frequency at which two publications have been cited together by other scholarly articles, offering important information regarding the interconnectedness within the literature.

In this study, the co-citation map includes a minimum of fifty references that appear in the bibliographies of the 786 publications focused on employee engagement. Out of the 28,662 cited references, only 37 references meet the established threshold for co-citation frequency. The findings of the co-citation analysis, illustrated in Figure 6 using the VOSviewer software, illuminate the significant and influential studies that have consistently been cited together in the employee engagement literature.

In the co-citation network of references, the size of the circles represents the number of citations, with larger circles indicating higher citation counts. The proximity between two nodes signifies the strength of the co-citation relationship, where closer nodes indicate a stronger connection. The colors assigned to the circles denote shared thematic areas or common topics among the cited publications. The co-citation map generated in this study provides a visual representation of the grouping of references from the employee engagement articles into three distinct clusters: blue, green, and red.

The blue cluster, comprising 12 publications, focuses on psychological factors, such as meaningfulness, safety, and availability which contribute to the development of employee engagement in the workplace. Several studies within this cluster establish a positive relationship between employee engagement and performance [43,44]. Within this cluster, Kahn [7] stands out as the most cited reference, accumulating 450 citations.

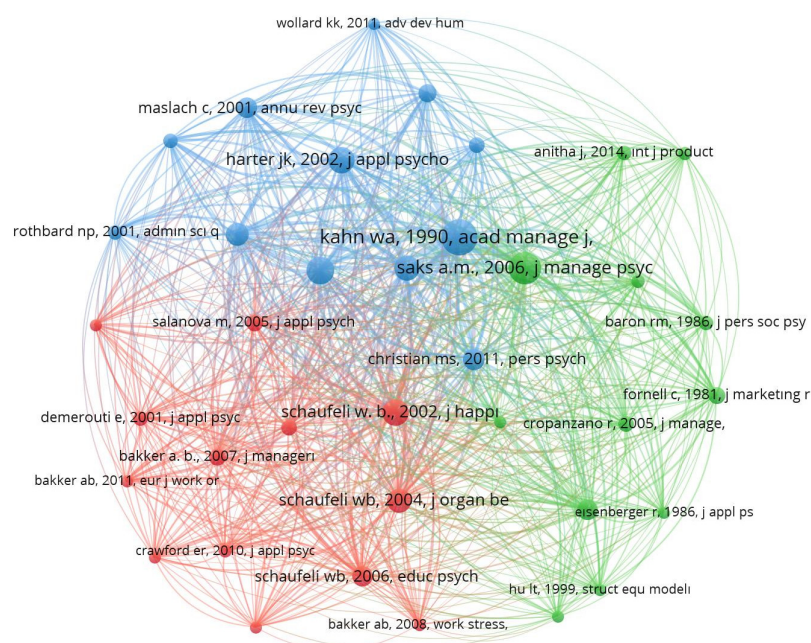


Figure 6. Co-citation network of references.

The green cluster, comprising 12 publications, delves into the factors that contribute to employee engagement and investigates its consequences. Researchers within this cluster utilize various theoretical frameworks, such as social exchange theory [45] and the structural equation model [46,47], to gain insight into predicting and understanding the levels of employee engagement in the workplace. Saks [16] holds the distinction of being the most cited reference with 363 citations in this cluster.

The red cluster, comprising 13 publications, primarily centers around the measurement and assessment of employee engagement. Some studies in this cluster examine employee engagement as the inverse of burnout [48,49]. Additionally, a significant portion of the articles within this cluster are associated with the work engagement subfield and employ the JD-R model as a theoretical framework to guide their investigations. Schaufelli et al. [48] stand out as the most cited reference with 247 citations in this cluster.

These distinct clusters highlight different aspects of employee engagement research, including its psychological underpinnings, measurement methodologies, and the factors influencing its development and outcomes. By examining these clusters, researchers can gain a broad understanding of the multidimensional nature of employee engagement and its implications for organizational success. Importantly, the clusters are closely positioned to one another, indicating the presence of shared concepts and ideas across different research domains. This proximity encourages collaboration and the dissemination of knowledge within the field.

4.7. Keywords Co-Occurrence Analysis of Publications

The analysis of author keywords in research provides insights into the prominent topics and research trends within a specific field. In this study, a set of keywords was extracted from 786 articles on employee engagement, and the VOSviewer software was used to conduct a systematic analysis and visually present the findings.

To ensure accuracy and consistency, keywords with similar meanings but different spellings were consolidated. For instance, corporate social responsibility was merged with CSR, employer branding with employer brand, Job Demands and Resources Model with the JD-R model, Utrecht Work Engagement Scale with UWES, human resource management with HRM, organizational citizenship behavior with OCB, Gen Y with Generation Y, and employee behavior with employee behaviors and employee behaviour.

Following the consolidation process, a total of 1536 distinct keywords were extracted from the dataset. However, to focus on the most significant and prevalent keywords, only those that appeared in at least ten articles were considered, resulting in a final set of 36 keywords that met the threshold. These keywords were then clustered and organized based on their thematic similarities, as depicted in Table 7.

Table 7. Main keywords on employee engagement.

Clusters	Author Keywords (Occurrences)
Cluster 1 (Red)	Employee engagement (498), turnover intention (24), human resource management (22), JD–R model (20), India (17), burnout (14), HRM practices (14), psychological empowerment (14), performance management (10)
Cluster 2 (Green)	Engagement (57), leadership (27), transformational leadership (21), organizational culture (18), work-family balance (12), performance (12), job resources (10)
Cluster 3 (Blue)	Employee performance (30), perceived organizational support (23), organizational citizenship behavior (19), COVID-19 (16), affective commitment (15)
Cluster 4 (Yellow)	Social exchange theory (25), internal communication (14), employer branding (12), job performance (12), self-efficacy (11)
Cluster 5 (Purple)	Work engagement (45), corporate social responsibility (33), organizational engagement (16), job engagement (14), organizational justice (12)
Cluster 6 (Turquoise)	Job satisfaction (44), organizational commitment (29), organizational performance (16), human resource development (13), motivation (12)

The clustering of keywords provides an overview of the key research areas and themes that have been extensively explored and discussed in the employee engagement literature.

By conducting a co-occurrence analysis on the author keywords presented in Table 7, a network map is generated and visualized in Figure 7. This map provides a visual representation of the relationships between keywords within the employee engagement literature, offering insights into the thematic structure of the field. It supports identifying clusters of closely associated keywords and improves our comprehension of the interconnections among different research topics in the field.

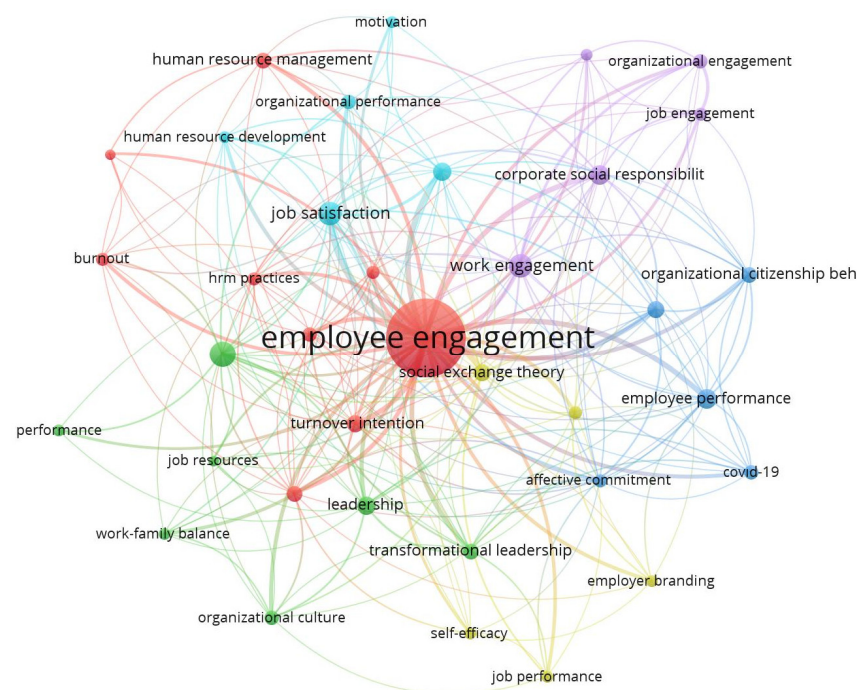


Figure 7. Co-occurrence network of author keywords.

The size of the circles within the network map corresponds to the frequency of each keyword, with larger circles indicating higher occurrence rates. The distance between nodes represents the level of relatedness between the keywords, with closer nodes indicating stronger associations. To facilitate identifying keyword clusters, different colors are assigned to each cluster, providing clear differentiation and visualization of the thematic data.

The co-occurrence analysis performed in this study has identified six distinct clusters: red, green, blue, yellow, purple, and turquoise. Cluster 1 (red) primarily examines the relationship between employee engagement and burnout, as well as turnover intention. Several studies within this cluster employ the JD-R model to explore the predictors of engagement. Research on the JD-R model aims to identify job demands, job resources, and personal resources that impact employee engagement [50]. Additionally, this cluster highlights the importance of key HRM practices, such as personnel selection, socialization, performance management, training, and development, in fostering employee engagement in the workplace. Similarly, Saks et al. [21] identified HRM practices as key themes in organizational engagement research. Furthermore, in their study, Han et al. [26] found a close association between keywords such as employee engagement, HRM, burnout, and turnover intention, as well as work engagement in the hospitality and tourism industry.

Cluster 2 (green) explores the impact of leadership styles, organizational culture, and work-family balance on employee engagement. The study by Nurrosidah and Sopiah [25] provided evidence supporting the relationship between leadership styles and work engagement. Specifically, transformational leadership and organizational culture are identified as prominent themes within this cluster [1]. Additionally, maintaining a healthy work-family balance is recognized as a critical factor in enhancing employee engagement and reducing intention to leave the organization [51]. In this regard, Andrić et al. [22] stressed the provision of resources to mitigate family interference with work as one of the effective practices for promoting employee engagement.

Cluster 3 (blue) delves into the interrelationships between affective commitment, perceived organizational support, organizational citizenship behavior, employee performance, and employee engagement. In line with this, Saks et al. [21] defined perceived organizational support as a determinant of employee engagement and underlined the positive association between organizational engagement, organizational citizenship behavior, and performance. Furthermore, Motyka [23] identified a substantial relationship between employee engagement and various performance categories through a comprehensive review of the literature.

Cluster 4 (yellow) encompasses studies that adopt a conceptual framework rooted in social exchange theory, which posits that interactions between parties involve reciprocal interdependence [45]. This theory serves as an effective tool in understanding the factors influencing employees' level of engagement in their work and organizations. Saks [16], who investigated employee engagement within the context of social exchange theory, suggested that engaged employees are more inclined to cultivate high-quality relationships with their employer, leading to more positive attitudes, intentions, and behaviors. In this cluster, the strategic significance of internal communication in maximizing engagement and enhancing organizational performance is widely recognized [52]. Additionally, the importance of employer branding practices that aim to attract and retain talented employees is emphasized [53]. These practices are essential for organizations seeking to create an environment that promotes employee engagement and ultimately improves overall performance.

Cluster 5 (purple) focuses on different forms of engagement, such as work engagement, job engagement, and organizational engagement. It examines the influence of organizational justice and corporate social responsibility on levels of engagement. Mubashar et al. [54] suggested that policies promoting justice towards employees within organizations can enhance trust, resulting in higher levels of job and organizational engagement. Furthermore, Ali et al. [55] pointed out that organizations can build a positive reputation by implementing corporate social responsibility initiatives. To enhance employee engagement, organizations

should aim to create a supportive work environment, foster positive perceptions of justice among employees, and increase their corporate social responsibility efforts [21].

Cluster 6 (turquoise) emphasizes the interconnectedness of employee engagement, job satisfaction, organizational commitment, organizational performance, human resource development, and motivation. Tomar [56] underscored the significant impact of employee engagement, which encompasses job satisfaction, employee commitment, and talent retention, on organizational performance. Similarly, Saks et al. [21] observed a positive relationship between organizational engagement and job satisfaction, organizational commitment, and organizational performance. Furthermore, human resource development emerges as a key success factor in fostering employee engagement, as it involves an ongoing process of equipping employees with essential skills and knowledge [57].

4.8. Research Gaps and Future Directions

In order to advance the field of employee engagement research, it is crucial to not only identify the primary topics investigated but also to determine gaps in the research. The findings derived from the co-occurrence analysis of author keywords elucidate specific areas that necessitate further exploration in future studies.

One significant area for further investigation revolves around the relationship between employee engagement and various leadership styles. While it is widely recognized that leadership plays a vital role in shaping employee engagement, specifically through positive leadership behaviors such as transformational leadership that foster an engaged work environment [6,58–60], additional research is required to examine the impact of other leadership styles. Despite a substantial body of literature focusing on the influence of transformational leadership on employee engagement [61–63], there remains a critical need for a deeper understanding of how different leadership styles, including authentic leadership, ethical leadership, inclusive leadership, servant leadership, and transactional leadership, impact employee engagement.

Moreover, technology plays a significant role in improving employee engagement, as suggested by Stofberg et al. [64]. Technological tools offer employees faster access to company information, increased flexibility, reduced duplication, and an accelerated work pace, all of which can have a positive impact on employee engagement [65]. To enhance employee engagement and achieve long-term business outcomes, organizations can leverage digital platforms, wearable sensors, online communication and learning opportunities, as well as reward and recognition programs for employees. Therefore, further research is necessary to acquire a thorough comprehension of the influence of digital technologies on employee engagement.

Furthermore, the work environment and new working methods are additional key factors that require attention in employee engagement research. A positive work environment plays a crucial role in promoting positive social connections among employees, fostering a positive culture, and enhancing employee well-being, productivity, and engagement within the organization [66]. Additionally, different types of innovative work arrangements, including co-working spaces, remote working, and flexible working, may also influence employee engagement [67]. Therefore, investigating the impact of new working practices on employee engagement is a vital area of research.

To advance the field of employee engagement research, it is essential to address the identified gaps and explore various topics, including different leadership styles, the impact of technology, and the influence of new working methods. By conducting thorough investigations in these areas, researchers can contribute to the understanding of the factors that shape employee engagement and develop evidence-based strategies to promote a highly engaged workforce. This endeavor will not only enhance scholarly knowledge but also have practical implications for organizations seeking to foster a culture of engagement and maximize employee performance.

5. Conclusions

The significance of employee engagement as a strategic imperative for organizations on a global scale has been increasingly recognized [5]. Engaged employees not only exhibit above-average levels of productivity and contribute to team effectiveness but also serve as a potential source of organization-wide competitiveness and strategic advantage. They exhibit enthusiasm, commitment, and a willingness to go beyond their assigned duties, aligning themselves with the organization's mission and vision [68]. Moreover, organizations prioritize employee engagement to achieve key objectives in human resources, such as recruitment, retention, and job performance, while simultaneously enhancing workplace satisfaction and optimizing profit realization [69,70]. These insights underscore the crucial role that engaged employees play in driving strategic goals and emphasize the significance for organizations to harness their potential for sustainable success [53,71].

In order to obtain a comprehensive understanding of employee engagement, this present study utilizes a variety of approaches to explore different aspects related to the topic, including countries, institutions, journals, authors, frequently cited publications, and current and future research trends. Through the application of bibliometric analysis, a corpus of 786 articles on employee engagement sourced from the WoS database, covering the period from 2002 to 2022, is examined. The analysis encompasses a wide range of factors, including 367 journals, 78 countries, 1021 institutions, and 1846 authors, thus providing a data-driven exploration of the employee engagement research landscape.

The findings of the study reveal the prominent role of the USA in terms of research output and impact in the field of employee engagement research. The analysis of co-authorship among countries demonstrates substantial collaboration networks between 19 countries that have published at least ten articles, underscoring the significance of international collaboration in advancing the understanding of employee engagement. Notably, China stands out as the country with the highest number of international co-authorships, emphasizing its strong global collaboration efforts in employee engagement research. The University of Louisville stands out as the most productive institution, making significant contributions with 25 published articles on the topic. Brad Shuck, affiliated with the University of Louisville, emerges as the most productive author in the field.

The study also identifies the leading journals in the field, primarily within the subject categories of Business and Management. Journals such as "Sustainability" and "Frontiers in Psychology" have published the highest number of articles on employee engagement research. One seminal work in the field, the study by Harter et al. [5], stands out due to its high citation count. This work establishes a strong association between employee engagement and fundamental organizational indicators. It highlights the significant relationship between employee engagement and crucial metrics such as productivity, profitability, turnover rates, workplace accidents, and customer satisfaction.

Furthermore, an analysis of keyword co-occurrence patterns in scholarly publications reveals a predominant focus on specific subjects in the current research on employee engagement. Several key themes emerge in this field, such as work engagement, job satisfaction, corporate social responsibility, employee performance, and organizational commitment. These themes emphasize the prevailing areas of interest in the scholarly discourse on employee engagement. Nevertheless, there are numerous aspects pertaining to employee engagement that necessitate further exploration. This study, in particular, identifies various potential research areas, including the impact of various leadership styles, digital technologies, and new ways of working on employee engagement. Investigating these areas in-depth will contribute to the understanding of the multifaceted nature of employee engagement.

As a result, this study significantly contributes to the advancement of employee engagement research by offering an analysis of current and future research trends. Through a holistic perspective, it facilitates the identification of pertinent scholarly journals, influential authors, and seminal articles that can be instrumental in constructing theoretical frameworks and designing research models within the field of employee engagement. Therefore,

it functions as a valuable resource for researchers seeking to expand their knowledge and understanding of employee engagement, fostering further advancements in the field.

While the present study offers valuable insights for researchers, it is important to acknowledge its potential limitations. One notable limitation is that the data collection process relied solely on a single online database, namely the WoS. To broaden the scope of the bibliometric analysis, future investigations should consider incorporating multiple databases, such as Scopus, PubMed, Science Direct, and Google Scholar. By including these additional sources, researchers can capture a more comprehensive view of the research landscape on employee engagement. Another limitation is related to the search query, which was restricted to the term employee engagement and focused exclusively on articles. To obtain a more comprehensive representation of the literature, it would be beneficial to expand the search by incorporating alternative keywords, such as work engagement, job engagement, and organizational engagement. Additionally, considering different types of publications, such as book chapters and conference proceedings, would provide a more inclusive understanding of the topic. In summary, by incorporating multiple databases, broadening the search query, and considering various publication types, researchers can obtain a more robust understanding of the topic.

Funding: This research received no external funding.

Institutional Review Board Statement: This study did not require ethical approval.

Informed Consent Statement: Not applicable.

Data Availability Statement: Publicly available datasets were analyzed in this study. This data can be found here: <http://apps.webofknowledge.com> (accessed on 1 March 2023).

Acknowledgments: The author would like to thank editors and reviewers for their valuable comments and suggestions to improve the study.

Conflicts of Interest: The author declares no conflict of interest.

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