Role Of Artificial Intelligence in Working with Emotional Intelligence in Leadership: A Bibliometric Analysis

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Abstract— To incorporate leadership in the governance of the Employees, one must have a thorough awareness of the various advantages of EI in HEI. Following the development of artificial intelligence came the emergence of emotional artificial intelligence, being aware that increasing the presence of emotions in AI would raise the likelihood of parallels between humans and machines. It will also be able to comprehend humans and be more likely to identify the root cause and consequences of an issue. Many of the gadgets in our bedrooms and kitchens are artificially intelligent to assist us with everyday activities, but they lack the emotional intelligence to adjust to our needs. An artificial intelligence that satisfies a person's needs needs to be capable of adjusting to their mental state. At the MIT laboratory, several technologies are being created. A total of 309 publications on the relevance of emotional intelligence in leadership were found in the scientific databases Scopus and Emotional Intelligence Important in Leadership, out of which 105 were chosen for further study. The Bibliometric tool was used to process the data; it included details on yearly production, journal analysis, author analysis, document analysis, keyword analysis, etc. Managers and policymakers in organizations in general and Higher Educational Institutions in specific can get some valuable inputs from the study's findings that will help promote artificial intelligence with emotional intelligence in their respective organizations that will ensure their growth, stability, and prosperity.

Keywords— Emotional intelligence, Leadership, Bibliometric Analysis, Emotions

1. Introduction

Organizations found that employing a single leadership style was ineffective and that a blended approach including all the elements covered above was more successful. This was referred to as the transformative leadership style, which increased organisational productivity and satisfaction[1]. This leadership model's primary drawback was the leader's inability to choose which standard of leadership to adopt in a particular circumstance. His unfortunate circumstance provided the framework for integrating emotional intelligence into leadership Emotional intelligence (EI) is broadly characterised as a collection of essential talents for recognising, understanding, and regulating emotions[5]. These skills help leaders deal with

everyday demands in a knowledgeable, accessible, and encouraging way Emotionally intelligent leadership motivates by focusing emotions, and passion and the drive opens the door to attaining objectives that would not have been apparent otherwise When motivating teams, coaching, and casting a vision for the future in a setting that promotes high performance, these leaders employ emotions[2,3]. A lot of educational institutions have started using AI to grade student examinations through the use of automated multiple-choice question systems. This resulted in an exponential acceleration of the grading process. By not being able to change the answers, conventional grading methods save teachers and professors a great deal of time and lead to the decay of negative bias from professors to students[9]. The programme Photo Math is the most sophisticated AI in use today. This program can scan any maths issue, from elementary algebra to complex calculus, using the phone's camera. The AI in the software is capable of scanning any symbol, including handwritten difficulties and computer fonts. In the literature, there have been some attempts to apply emotional intelligence to leadership[7,8}. The potential to achieve goals that may not have been disclosed otherwise is made possible by emotionally intelligent nursing leadership, which inspires via channelling emotions, passion, and motivation[10]. In an atmosphere that promotes great performance, these leaders utilise emotions to inspire people, coach, and create a vision for the future. Furthermore, EI has been recognised in the literature as assisting nurse leadership that promotes a positive work atmosphere[12]. Given that nurse leadership entails a deeper emotional comprehension of the complicated situations that arise from dealing with people who are paradoxical, emotional intelligence (EI) may have an impact on employees' subjective well-being and quality of work life[13]. It seems that emotional intelligence (EI) might help nursing leaders build buffers like happier moods, more flexible perspectives on the world, and stronger social networks.[28]. According to the research, EI supports leadership that creates a positive workplace culture Although emotional intelligence (EI) in leadership entails a greater comprehension of the complicated situations that are inevitable when working with people who possess contradictory natures, it may have an impact on subjective well-being and quality of working life[14].EI seems to have the potential to help leaders build protective mechanisms including happier moods, more flexible ways of viewing the world, and stronger social networks. In terms of reciprocal interdependent connection that is rooted in a social environment, emotional intelligence (EI) provides a new possibility for leadership[15]. Our research shows that employee workplace behaviours and transformational leadership styles are highly mediated by emotional intelligence in HEI. The study's goal was to investigate how emotional intelligence among employees affects how transformational leadership is used at work. Emotionally intelligent leadership is defined by self-awareness, supervisory abilities, and positive empowerment processes[16]. This leadership fosters a productive workplace that is flexible, new, and transformative. Since it often considers, evaluates, and enhances leadership and supervisory skills, emotional intelligence may bring fresh perspectives and be helpful to leaders even though it cannot be quantified as a general answer[29,30].

2. Results

2.1 evolution of the number of publications per year

(Figure 1) Published a maximum number of 33 research papers in the whole period, which was in 2023. After 2021, 24 total research papers were continued in 2020 there were 21 papers, and in 2019 there were 16 papers published.
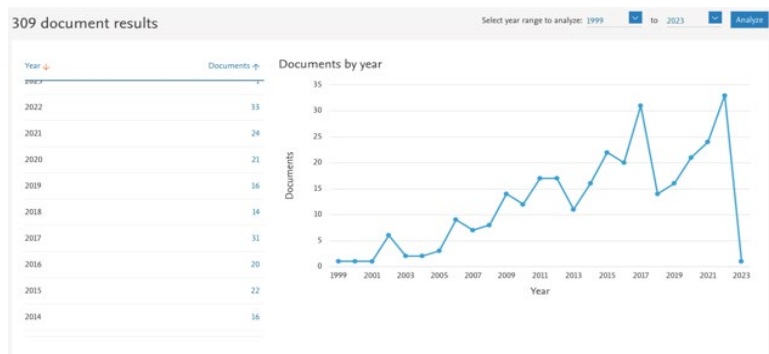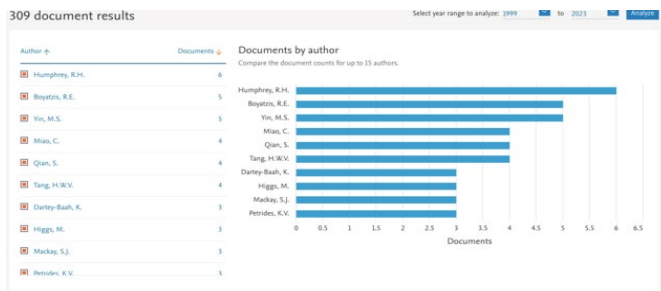
Fig 1: Distribution by Year (Source: by Scopus)

2.2 documentation per year by source

In Figure 2. The Journal of Leadership and Organisational Development, which contains fifteen publications, is the basis for the present issue on "Emotional Intelligence and Leadership." The top five sources in the documentation are Frontiers in Psychology with six documents, International Journal of Organization Analysis with four, Journal of Nursing Management with four, and Personality and Individual Difference with four.
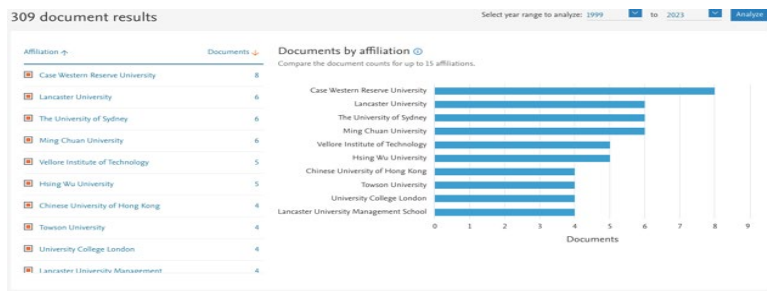

Fig 2: Distribution by source. (Source: by Scopus)

Fig 3: Distribution by Authors.(Source: by Scopus C. Source growth)

2.3 the most prominent authors:

Figure 3. The total number of citations for and the number of publications in the Scopus database for such publications are used as the next benchmarks to rank writers' productivity after the connection strength to the topic of EI and Leadership. The most productive author is Humphrey R.H., who has six documents in the Scopus index. And then Boyatzis. R.E. has five articles that are Scopus-indexed. Five of Yin, M.S.'s papers are listed in Scopus. Miao.C. is fourth in a row and has six Scopus publications. In the Scopus database, Qian.S. is ranked fifth with five articles, followed by Tang, H.W.V. with five publications. Most other well-known authors in the area have depended on partnerships (CI > 1) to produce co-authored works. It seems to sense that the subject of how EI affects leadership has caught the attention of academics.

Fig 4: Distribution by Affiliations. (Source: by Scopus)

2.4 The most prominent affiliations

The most prominent affiliations: By the Figure's categorisation publication by affiliation, organisations occupied the top spots in Employees' study on leadership and emotional intelligence. The top ten contributors to the field are Case Western Reserve University, Lancaster University, the University of Sydney, Ming Chuan University, Vellore Institute of Technology, Hsing Wu University, the Chinese University of Hong Kong, Towson University, University College of London, and Lancaster University Management School. Publications are created across the continents of Asia, America, Europe, and Australia. However, most of the research in North America and Asia is done. Both the continent of Europe and the continent of Africa lag the dominant continent in Figure 4.
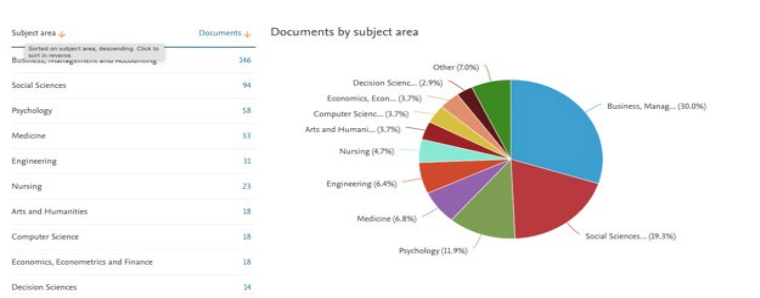
Fig 5. Distribution by subject. (Source: by Scopus)

2.5 The most prominent countries

In Figure 6. The United States is the leading contributor in publishing distribution through the country of origin, with the UK in the second rank and India in the third rank, as shown in Figure. China is now in fifth place, followed by Australia. Following that, Canada and Malaysia took the sixth and seventh positions, respectively. South Africa came in at number eight, followed by Spain at number nine and Greece at number 10.
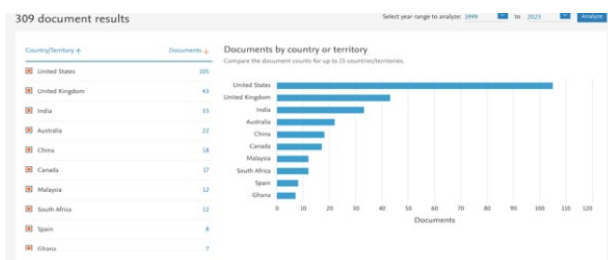
Fig 6: Distribution by Country. (Source: by Scopus)

3. Findings

Keyword network analysis plays a crucial role in bibliometric studies by revealing the level of international interest and identifying research hotspots in disciplinary areas, which can promote scientific research support and recognition. In this section, we used the word co-occurrence network map to examine employee research, leadership, and emotional intelligence. With multiple occurrences of 5 and a threshold of 21, 682 keywords related to EI, leadership, and employees were discovered across 309 studies in the area. The domain's resulting word co-occurrence network map was displayed using a VOS viewer. Four clusters using VOS viewer have been developed to their full potential. When viewing the map, identical-colored nodes may be seen. cluster together to form clusters; the clusters' proximity to one another indicates how strong the clustering is. Consider that the thickness of the line represents the level of co-occurrence to comprehend the co-occurrence in Fig 7.
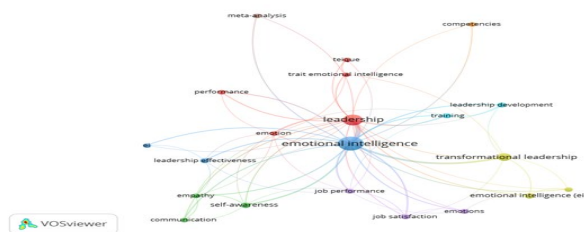

Fig 7: Keywords co-occurrence network

This Form 5 cluster created for the analysis may be summarised as follows: Emotional intelligence is what Cluster 1 is for. Leadership is in Cluster 2. Leadership Transformational falls under Cluster 3. Communication belongs to Cluster 4, and job satisfaction to Cluster 5. Additionally, based on an analysis of the EI, leadership term co-occurrence network, a list of the publications with the most links to EI, leadership is shown. Emotional Intelligence (Blue network) - Word Cluster 1 Themes related to leadership, transformational leadership, leadership development, communication, and work satisfaction make up this cluster. Competences co-word leadership cluster 2 (Red Network): Performance, meta-analysis, trait emotional intelligence, emotions, technique, and competencies are all included in this cluster. Transformational Leadership is related to the third co-word cluster (yellow network). This includes job satisfaction, emotional intelligence, trait emotional intelligence, leadership development, and leadership. Communication is the fourth co-word cluster (green network): Empathy, self-awareness, emotional intelligence, and leadership are the main topics in this cluster. Cluster 5: Job Contentment (purple network). The keyword density visualization map is shown in Fig. 8.

Fig 8: Keyword density visualization map

Following are the pinnacle 10 keywords that focus on (frequency, and total link strengths): Leadership (96,117), Transformational Leadership (32,33), Self-Awareness (9,17), Training (7,16), Job Performance (7,15), Emotion (5,14), Job Satisfaction (7,14), Empathy (5,12), and Leadership Development are all factors that affect emotional intelligence (8,11). shows a graphic of a word cloud made up of 682 author keywords connected to leadership and emotional intelligence. The cloud highlights the main themes that were previously found and verified the predominance of characteristics connected to leadership, job satisfaction, and emotional intelligence. Co-authorship analysis: Analysis of co-authors is crucial. Since it aims to comprehend the extent of research cooperation across many nations, organizations, and authors in a certain area (7). The extent of interaction between countries and those that are well-known on the terrain of leadership research is examined in this section of the investigation. As a consequence, the co-authorship network for the country is shown in Fig. 9. The extent of collaboration among authors from different countries. The parameter used to characterize co-authorship analysis by nations is based on the unit of analysis chosen, countries, and is based on the number of countries chosen, 57, and the minimum necessary chosen papers per nation as a threshold, 16. According to research studies in EI and leadership, the United States, United Kingdom, India, Australia, Malaysia, South Africa, Chain, Germany, Pakistan, and Canada have a level of communication, whereas the United Kingdom and India have effective field-wide communication through 2022 publications.
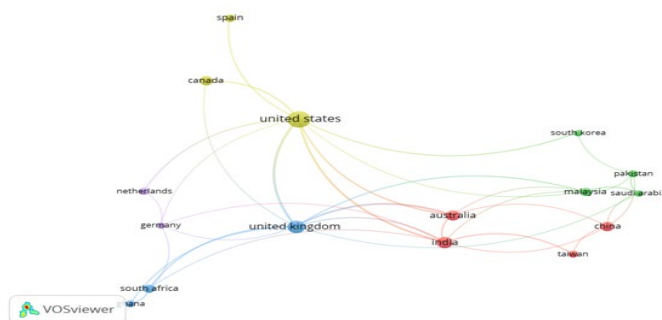
Fig. 9. The country co-authorship network.

4. Discussion

This study analysed and visualised the bibliometric data for articles on leadership-related Scopus using emotional intelligence. Investigations into important findings have taken place, and the results can be summed up as follows: To set out the components of Emotional intelligence in Leadership research. As a consequence, goals were achieved and research questions were answered. The research names the leading contributors to the topic, including the top authors, papers, nations, journals, and connections[25]. Once the field's intellectual structure had been unravelled, important clusters were then presented. In its last section, the report summarises the studies on emotional intelligence and leadership, points out significant gaps in the literature and outlines various future directions[26]. This conceptual framework can help in the development of relevant research publications in the future to fill in known research gaps. The workplace may get insights from the data and

concentrate on cutting-edge, specialised themes like supporting leaders and improving their emotional intelligence[17,18]. Since emotional intelligence may be viewed as a continuum, it highlights the need to be cognizant of the idea. EI offers a crucial instructional way of thinking and being in the world, even if there is disagreement over future theoretical and empirical frameworks. Using self-leadership as a lifetime journey and learning from experience, improves personal and professional growth[19]. There are several issues with the study. First, we made an effort to organise journals, publications, authors, affiliations, and subjects using logical techniques based on prior research. On the other hand, the Scopus database does not index all potential entries. Future studies may include a bibliometric analysis of papers published in journals with a WOS index. The second problem is that certain papers on emotional intelligence in leadership may have been unintentionally overlooked in the journals examined[20]. Third, even though we believe the citation data to be trustworthy, we can't completely rule out the potential that the influence of certain publications may be exaggerated by self-citations. These restrictions indicate further study areas that are covered in more depth below. Future research may delve beyond simple counts to examine the relationships between writers and ideas using techniques like co-citation analysis. It may be possible to find any gaps in the next research that need to be addressed with further trend analysis[21]. It should be investigated in the study if theories from other contexts are used in the works or if a novel theory is created that has never been used in leadership research on emotional intelligence. A combination of one's own and other people's expressions and emotions, emotional intelligence is a set of talents that allows one to make educated assumptions and accurately visualise entities[22]. It then uses these feelings to make appropriate plans and accomplish success in one's life. Its goal is to identify, impact, and comprehend the input of emotions. Due to the significant role that emotional artificial intelligence is playing in the many industries in which people labour, society has improved dramatically and is still improving. AEI assists in addressing the fundamental underlying issues and global accessibility[23,24]. It contributes to providing equitable opportunities and results for the world's most distant regions. Given its intelligence, it has the power to upend existing entities and demonstrate a different way of life. The potential of emotional artificial intelligence today is demonstrated by a replication of itself that increases efficiency in several fields, including business, healthcare (classified cancers), and consultation (using virtual assistance to provide simple interactions and suggestions of various emotional states).

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