

A DECADE OF RESEARCH ON EMPLOYEE PERFOMANCE AND LEADERSHIP: A BIBLIOMETRIC SYNTHESIS FROM SCOPUS (2014-2024)

Andi Adawiah*

Universitas Lamappapoleonro, Indonesia

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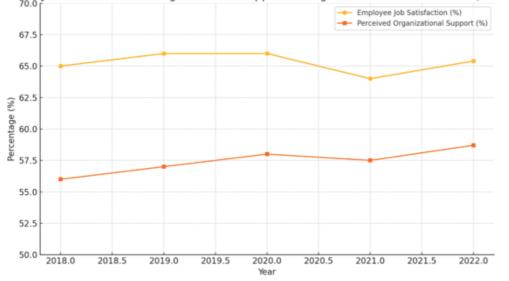
ABSTRACT: This study maps the intellectual architecture surrounding Transformational Leadership, Competence, Work Motivation, Organizational Culture, and allied constructs across a decade of scholarly discourse (2014-2024). Through the dissection of 318 Scopus-indexed articles via VOSviewer, it unveils patterns of collaboration, thematic prominence, and lacunae in the literature. Notably, scholarly fervor peaked between 2017 and 2020, only to taper markedly by 2024-a curious attenuation worth reflection. While perennial topics-performance and satisfaction-dominate the canon, emergent themes such as mental health, innovation, and sustainability linger at the periphery. This bibliometric lens offers researchers a compass to navigate future inquiry and urges HR practitioners to reconsider the epistemic weight behind the models they borrow. In a field enamored with frameworks, this study reminds us that even theoretical orthodoxy benefits from a periodic audit.

Keywords: Bibliometrics; Employee Performance; Transformational Leadership; Work Motivation; Organizational Culture

INTRODUCTION

In the era of globalization and increasingly fierce competition, organizations are required to continue to adapt and innovate to improve employee performance and organizational effectiveness (Akdere & Egan, 2020). Employee performance is one of the crucial factors that determine the success of an organization (Khan et al., 2021). To achieve optimal performance, various elements such as leadership, competence, work motivation, organizational culture, job satisfaction, and organizational support need to be considered and managed properly (Eliyana & Ma'arif, 2019).

Figure 1 shows that job satisfaction among Indonesian civil servants (ASN) remained stagnant at around 60–70%, while only approximately 55–60% felt they received adequate organizational support. These findings suggest that despite increasing awareness of the importance of human resource management, the quality of the work environment and internal support systems has not improved significantly. Furthermore, the 2022 Indonesian Civil Service Agency (BKN) report identified leadership as one of the top three factors influencing employee motivation and loyalty. This underscores the urgency to examine how leadership styles, organizational culture, and institutional support influence employee satisfaction and performance. Through a bibliometric approach, this study aims to map global and national research trends to identify gaps and guide evidence-based policy development. The lack of exploration of mental health, innovation, and sustainability within organizational contexts also highlights the need for a more integrative and multidisciplinary research agenda.



Trends in Job Satisfaction and Organizational Support among Indonesian Civil Servants (2018-2022)

Figure 1. Trends in Job Satisfaction and Organizational Support among Indonesia Civil Servants (2018-2022)

This research focuses on the importance of understanding the dynamics of transformational leadership, competencies, work motivation, organizational culture, and employee performance in relation to job satisfaction and organizational support (Lasrado & Kassem, 2021). Appropriate transformational leadership and competencies are key to improving employee effectiveness and productivity (Al-Shibami et al., 2019). In addition, strong work motivation and organizational culture can create a more productive and satisfying work environment (Gaviria-Rivera & López-Zapata, 2019). By exploring the relationship between these factors, this study aims to identify strategies that can improve employee performance and job satisfaction.

Research shows that job satisfaction is positively related to employee performance. Employees who are satisfied with their jobs tend to be more motivated, work more effectively, and show greater commitment to the organization. Job satisfaction can also reduce absenteeism and turnover, which in turn can increase organizational stability and productivity.

Organizational Support refers to an employee's perception of the extent to which the organization provides the support necessary to achieve success. This support can be in the form of emotional support, instrumental support, and informational support. Eisenberger et al. (1986) developed the concept of Perceived Organizational Support (POS) which describes the extent to which employees believe that the organization values their contributions and cares about their well-being. Strong organizational support can increase job satisfaction, organizational commitment, and employee performance. When employees feel supported by the organization, they tend to be more motivated to give their best performance. Organizational support can also help reduce job stress and improve employee well-being, which ultimately has a positive impact on organizational performance and productivity.

Within the realm of research on transformational leadership, competencies, work motivation, organizational culture, employee performance, job satisfaction, and organizational support, various gaps and areas of novelty can be pointed out based on existing references. One important gap in current research is the need to investigate the interaction between transformational leadership and employee work outcomes in a specific context, such as the South African mining sector Sibindi (2024). This gap emphasizes the importance of conducting more industry-specific studies to understand how transformational leadership can be tailored for different sectors to achieve optimal outcomes.

Moreover, there is a gap in understanding the correlation between transformational leadership and follower creativity, considering follower dependence on the leader as a potentially adverse consequence (Eisenbeiß & Boerner, 2011). This gap underscores the importance of exploring the potential drawbacks or constraints of transformational leadership to offer more comprehensive insights into its impact on employee outcomes. Moreover, research on the relationship between transformational leadership, job design, and human resource practices on job satisfaction in the banking sector in Pakistan emphasizes the need for an integrated framework that simultaneously analyzes various precursors of employee outcomes (Nasreen & Mehmood, 2018). This approach can provide a more holistic perspective on the factors that influence job satisfaction and organizational buy-in.

Regarding novelty, research that concentrates on the mediating role of organizational climate on the effect of transformational leadership style on organizational performance in the electric power sector in Indonesia provides an innovative contribution (Odeh et al., 2023). This study explains the importance of organizational climate as a mediator in strengthening the influence of transformational leadership style on organizational performance. In addition, the exploration of the relationship between transformational leadership and disruptive innovation through the mediation of knowledge acquisition and sharing to generate novelty presents a new approach to understanding the role of leadership in driving innovation (Nurlina, 2022). This research offers a unique perspective on how transformational leadership can drive disruptive innovation through the knowledge management process. As such, gaps in the research landscape include the need for sectoral investigations, exploration of the potential negative effects of transformational leadership, and integrated frameworks to study employee outcomes comprehensively. New contributions arise from research focusing on mediating factors such as organizational climate and knowledge management in the context of transformational leadership and its impact on organizational performance and innovation.

Over the past decade, publications have significantly increased, addressing transformational leadership, organizational culture, and employee performance. A bibliometric analysis of 318 Scopus-indexed articles from 2014 to 2024 reveals a rising trend between 2017 and a peak in 2020, followed by a sharp decline in 2024. This reflects the dynamic academic interest in these topics, which may be influenced by shifting global priorities such as the pandemic or institutional restructuring. Furthermore, the geographical distribution of publications shows that the United States and Indonesia are the leading contributors, publishing approximately 250 and 175 documents, respectively. This underscores that employee performance and organizational leadership issues are globally relevant, highlighting regional disparities in knowledge production.

In addition, findings indicate that most research focuses on the medical field (28.5%), followed by social sciences (13.6%), nursing (13.2%), and management (10.9%). This dominance

of health-related disciplines reflects the critical role of leadership and performance in high-risk work environments like hospitals. However, key themes, such as mental health, innovation, and sustainable development, remain underexplored, signaling potential research gaps that future studies could address.

This article offers a bibliometric review of 318 articles from the Scopus database published between 2014 and 2024. It focuses on transformational leadership, competence, work motivation, organizational culture, employee performance, job satisfaction, and organizational support. Through this approach, the study aims to map the research landscape, identify gaps, and formulate relevant directions for conceptual advancement in organizational and human resource development.

This article contributes to the academic literature in three keyways: (1) presenting a comprehensive mapping of trends and scholarly collaboration across disciplines, (2) identifying dominant and underexplored themes such as mental health and innovation, and (3) recommending future research directions that are more integrative and cross-disciplinary. Thus, the study provides a strong conceptual foundation for advancing theory and practice in employee performance and organizational leadership.

LITERATURE REVIEW

Transformational leadership has been identified as an effective leadership style in inspiring and motivating employees to achieve higher performance (S. U. R. Khan et al., 2020). Transformational leaders can create a clear vision, build strong relationships with employees, and provide the support and development needed to achieve organizational goals (Paais & Pattiruhu, 2020). Bass (1985) defines transformational leadership as a process in which leaders and followers boost each other's morale and motivation. This leadership includes four main components: idealistic influence, inspirational motivation, intellectual stimulation, and individualized consideration (Curado & Santos, 2022).

Idealistic influence refers to the leader's ability to be a role model that employees can rely on and respect (Engelbrecht & Samuel, 2019). Inspirational motivation is the leader's ability to inspire and motivate employees through clear vision and goals. Intellectual stimulation refers to the leader's efforts to encourage employees to think critically and creatively in solving problems (Rachman, 2021). Finally, individualized consideration reflects the leader's attention to employees' individual needs and development.

Research shows that transformational leadership is positively related to employee performance through increasing employee motivation and commitment to the organization. A study from (Joo & Nam, 2019) found that transformational leaders can improve team effectiveness and organizational performance by creating a supportive work environment and motivating employees to reach their full potential.

Employee competencies also play an important role in determining their performance. Competencies include the knowledge, skills and abilities possessed by employees to carry out their duties and responsibilities effectively. According to (Nguyen et al., 2020), competencies are the basic characteristics of an individual that are associated with superior performance on the job. These competencies can be in the form of technical skills, interpersonal skills, and job-relevant knowledge and experience.

Employees who have high competence tend to show better performance and can contribute more significantly to the achievement of organizational goals (Amin et al., 2023). Competence can also increase employees' confidence in carrying out their tasks, which in turn can increase work motivation and job satisfaction (S. U. R. Khan et al., 2020). Developing employee competencies through training and career development is an important investment for organizations to improve their performance and competitiveness.

Work Motivation is another factor that affects employee performance. High work motivation encourages employees to work harder, smarter, and more creatively (Al'Fattah & Rahayu, 2023). Motivation can come from a variety of sources, including financial incentives, recognition, and career development opportunities. According to (Muizu & Sari, 2019) individual motivation is influenced by a hierarchy of needs, ranging from basic physiological needs to self-actualization needs.

Strong motivation is often associated with high levels of job satisfaction, which in turn has a positive impact on employee performance. Herzberg (1959) developed a two-factor theory that distinguishes between factors that lead to job satisfaction (motivators) and factors that lead to job dissatisfaction (hygiene factors). Motivator factors include achievement, recognition, the work itself, responsibility, and career advancement. Meanwhile, hygiene factors include company policies, supervision, interpersonal relationships, working conditions, and salary. By understanding and managing these motivational factors, organizations can create a more productive work environment that supports employee performance. Concrete examples of this are implementing a fair reward and recognition system, providing career development opportunities, and creating a conducive and pleasant work environment.

Organizational culture also plays an important role in creating a supportive and productive work environment. Organizational culture refers to the values, norms, and practices shared by members of an organization(Amin et al., 2023). A strong and positive culture can encourage collaboration, innovation and team spirit, all of which contribute to improved employee performance. (Erniwati et al., 2020)defines organizational culture as a pattern of basic assumptions discovered, created, or developed by a group of people in an organization to cope with problems of external adaptation and internal integration.

A positive organizational culture can also increase employee job satisfaction and reduce turnover rates (Saifuddin, 2020). For example, an organizational culture that supports work-life balance, provides fair rewards, and values diversity can increase employee commitment to the organization. Conversely, a negative organizational culture can hinder productivity and lower employee morale, which ultimately has a negative impact on organizational performance.

In addition to these factors, Job Satisfaction is an important element that can mediate the relationship between leadership, competence, work motivation, organizational culture, and employee performance. Job satisfaction reflects how employees feel about their jobs, which include various aspects such as salary, working conditions, relationships with coworkers and superiors, and career development opportunities. Locke (1976) defines job satisfaction as a positive emotional state resulting from a person's assessment of their job or work experience.

Thus, this article contributes academically through bibliometric mapping that not only identifies current research trends but also offers an integrative conceptual model that links leadership, motivation, organizational culture, and job satisfaction to employee performance in a more holistic manner. This study provides direction for further research and a basis for developing evidence-based organizational strategies.

RESEARCH METHOD

This study used a qualitative research design with a bibliometric approach to analyze relevant literature. This approach was chosen because it allows researchers to explore and understand trends, collaboration patterns, and dominant topics in the literature related to transformational leadership, competence, work motivation, organizational culture, employee performance, job satisfaction, and organizational support.

The secondary data in this study were taken from the Scopus and Citespase databases. The Scopus database is widely recognized as a comprehensive and reliable source of international scientific data (Fan et al., 2021). The time span of data retrieval was limited from 2014 to 2024 to ensure that the analysis covered the latest developments in relevant research fields.

The data collection procedure involved searching the literature in the Scopus database using specific keywords: "Transformational Leadership", "Competence", "Work Motivation", "Organizational Culture", "Employee Performance", "Job Satisfaction", and "Organizational Support". A total of 318 articles were analyzed. The data collected included titles, abstracts, keywords, author names, author affiliations, and other bibliographic information. The inclusion criteria consisted of peer-reviewed journal articles indexed in Scopus that contained at least one of the search keywords in the title, abstract, or keywords section. Articles without abstracts, conference proceedings, and duplicate entries were excluded from the analysis. All these data were then exported from Scopus in formats compatible with VOSviewer software, such as CSV or RIS, for further analysis.

Data analysis was conducted using VOSviewer, a tool specifically designed to analyze and visualize bibliographic data. Several types of analysis were conducted to achieve the research objectives, including co-authorship analysis to look at collaboration between researchers, co-occurrence analysis to identify the frequency of co-occurrence of keywords, and citation analysis to identify the most influential papers (Fachada et al., 2022; Yanti et al., 2022). In addition, bibliographic coupling analysis was used to see the relationship between documents based on the references used, and co-citation analysis to understand the relationship between references that are frequently cited together (Ciampi et al., 2021). By using these methods, this research seeks to provide a comprehensive picture of the research landscape in the field under study. The detailed data collection process in this research can be seen in the figure 1.

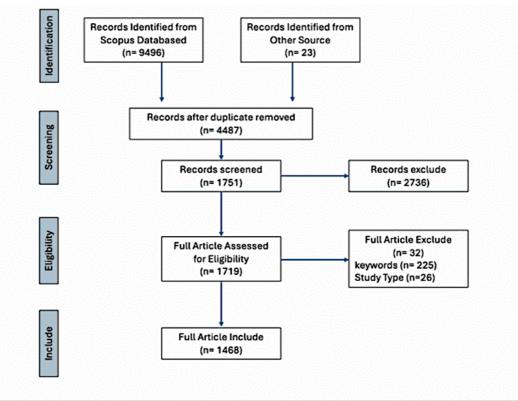


Figure 1. Data Collection Process. Source: Processed Scopus data by author, 2025

RESULTS

Research Trend Analysis

Figure 2 shows the trend of research based on the number of published documents per year from 2014 to 2024 which shows fluctuations. This study revealed that there was an increase in the number of documents published from 2014 to 2020. In 2014, the number of documents published was around 80 documents, which then increased significantly to a peak of around 180 documents in 2020. However, after 2020, the number of documents issued fluctuated. There was a decline in 2021, then an increase again in 2022, followed by stabilization in 2023, before finally experiencing a very sharp decline in 2024, back to around 80 documents, almost the same as the number of documents issued in 2014. A sharp increase in the number of documents published is evident between 2017 and 2018, where the number of documents grew significantly. This upward trend continued until it peaked in 2020. This period shows very high productivity in research, reflecting increased interest and investment in topics related to Transformational Leadership, Competence, Work Motivation, Organizational Culture, Employee Performance, Job Satisfaction, and Organizational Support.

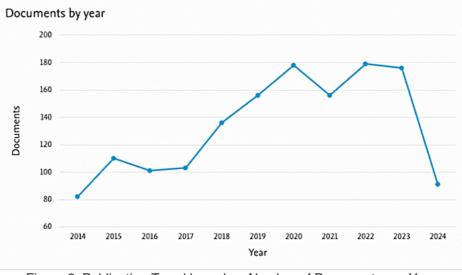


Figure 2. Publication Trend based on Number of Documents per Year Source: (Data Processed by Author, 2025)

In 2021, there was a significant decrease in the number of documents compared to 2020. Although the number of published documents increased again in 2022, and stabilization occurred in 2023 with the number of documents close to the 2020 figure, it did not reach the same peak. These fluctuations indicate instability in research interest after a period of high increase. The year 2024 shows a very sharp decline in the number of documents published, dropping to around 80 documents, almost the same number as in 2014. This significant drop can be interpreted as the impact of various external factors.

The significant decline in 2024 could be due to various external factors such as changes in publishing policies, a decrease in research funding, or the impact of global events that affect research productivity. The period of increase between 2017 to 2020 may reflect increased interest and investment in research topics related to Transformational Leadership, Competence, Work Motivation, Organizational Culture, Employee Performance, Job Satisfaction, and Organizational Support. This period suggests that these topics are gaining significant attention from the academic and industry communities. The fluctuations that occur after 2020 to 2023 show a stabilization of research interest, with the number of documents remaining high but not consistently reaching previous peaks. This suggests that while research interest remains, there are factors that inhibit a further increase in the number of publications. The authors analyzed the number of publications based on the dominant countries, which can be seen in the following figure.

Figure 3 shows the number of documents published by different countries or regions, comparing up to 15 countries/regions. The countries listed include the United States, Indonesia, the United Kingdom, Australia, China, Canada, the Netherlands, Brazil, Sweden and Germany. The United States tops the list with the highest number of documents published, reaching around 250. This shows the dominance of the United States in research in the areas of Transformational Leadership, Competence, Work Motivation, Organizational Culture, Employee Performance, Job Satisfaction, and Organizational Support. Indonesia came in second with around 175 documents published, signaling the country's significant contribution to research on these topics.

The UK comes in third with around 150 documents, showing that the country is also one of the main contributors to research. Australia and China have almost the same number of documents, around 125 each, indicating high research activity in the field under study. Other countries such as Canada, the Netherlands, Brazil, Sweden and Germany have a lower number of documents compared to the top five, but still show significant contributions with the number of documents varying between 75 and 100.

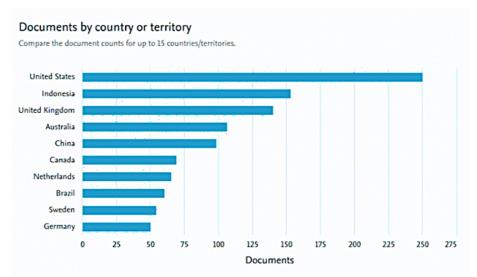
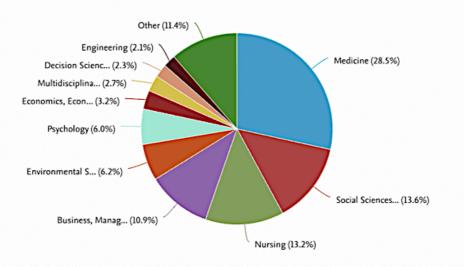


Figure 3. Trends in the number of document publications by country Source: (Data Processed by Author, 2025)

The United States' dominance in the number of publications may be due to its high number of strong educational and research institutions, as well as substantial funding support for research. Significant contributions from Indonesia indicate increased interest and research activity in these topics, reflecting national priorities towards human resource development and improved organizational performance. The UK, Australia and China also showed large contributions, indicating that these topics have global relevance and attract researchers from different countries.

The variation in contributions from countries such as Canada, the Netherlands, Brazil, Sweden and Germany suggests an even distribution of research across the globe, with a focus on improving organizational performance and culture. Differences in the number of published documents can be influenced by factors such as national research policies, the number and quality of research institutions, research funding levels, international collaboration, and access to reputable journals. The subject is presented in Figure 4.



Documents by subject area

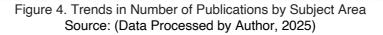


Figure 4 shows the distribution of documents by subject area. The field of medicine dominates with 28.5% of the total documents published, indicating that research in this field makes up the bulk of the overall publications. This may be due to the high need and interest in the development of health sciences and medicine. The fields of social science and nursing also had significant contributions, accounting for 13.6% and 13.2% of the total documents, respectively. These contributions signify the importance of social and healthcare aspects in the broader context of research.

The management and business field accounted for 10.9% of the total documents, indicating a great interest in management, business, and organization-related research. This is relevant to the main research topics of Transformational Leadership, Competence, Work Motivation, Organizational Culture, and Employee Performance. The fields of environmental science and psychology accounted for 6.2% and 6.0% respectively, indicating considerable interest in research related to the environment and psychology.

Economics and econometrics contributed 3.2%, while multidisciplinary, decision sciences, and engineering contributed 2.7%, 2.3%, and 2.1%, respectively. Despite their smaller contributions, these fields remain relevant in the broader context of research. In addition, the "Other" category accounted for 11.4% of the total documents, indicating the existence of various other subject areas that also contributed to the overall research.

The dominance of medicine indicates a heavy focus on health and medicine, which may be influenced by the global need for medical research. Fields such as social sciences, nursing, and management show significant contributions, reflecting attention to social, healthcare, and organizational aspects. This distribution is relevant to research topics on Transformational Leadership, Competence, Work Motivation, Organizational Culture, and Employee Performance, especially in the context of management and business.

The contributions from fields such as psychology, environmental science and economics show that the research is multidisciplinary, which is important for a comprehensive and integrative understanding of the topic under study. Future research could consider exploring more deeply less dominant but still relevant fields, such as engineering, decision science, and economics, to gain broader and deeper insights.

Inter-Researcher Collaboration Pattern

The co-authorship analysis revealed that there are several researchers and institutions at the center of collaboration in this field (see Figure 5). These PIs often collaborate with a wide range of institutions, demonstrating a strong and extensive research network.

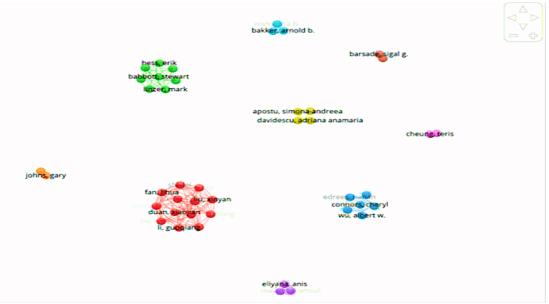


Figure 5. Co-Authorship Analysis Source: (Data Processed by Author, 2025)

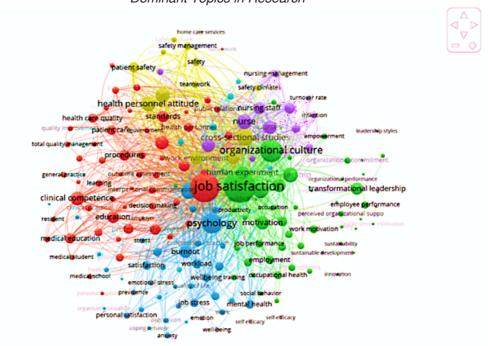
Figure 5 shows the visualization of the collaboration network between researchers generated using VOSviewer software. Each node represents a researcher, and the lines connecting the nodes (edges) indicate collaboration between the connected researchers. Different colors in groups of nodes indicate different clusters based on the frequency of collaboration.

The green group consists of researchers such as Erik Hess, Stewart Babbott, and Mark Linzer, indicating a close collaborative relationship between them. The red group, which is one of the largest clusters, includes researchers such as Lihua Fan, Xinyan Liu, Xiaolian Duan, Guoqiang Li, and several others, indicating strong and extensive collaboration. The blue group consists of researchers such as Cheryl Connors and Albert W. Wu, which also shows strong collaboration among its members.

In contrast, some researchers appear more isolated in this network. For example, Gary Johns and Sigal G. Barsade show little to no collaboration with other researchers in this visualization. The purple cluster, which includes Teris Cheung, and the yellow cluster, which includes Simona Andreea Apostu and Adriana Anamaria Davidescu, also show collaborations, albeit smaller than the other clusters.

Green, red and blue clusters indicate strong and close collaboration networks among researchers in their group. Researchers in these clusters may be working on similar projects or research areas, suggesting there is good synergy between them. Researchers who are more isolated or with limited collaboration may be due to specialization in very specific topics or a lack of collaborative networks.

This visualization shows the importance of collaboration in research. Researchers who are in larger networks are likely to have access to more resources, ideas and support, which can improve the quality and impact of their research. Isolated researchers or smaller clusters may benefit from greater collaborative efforts with researchers from other clusters, expanding their networks and increasing research productivity. This figure provides insights into how researchers in each field collaborate, showing strong networks and collaborative clusters, as well as identifying researchers who may be able to enhance their collaboration for greater benefit.



Dominant Topics in Research

Figure 6. Analysis of Dominant Topics in Research by Keyword Source: (Data Processed by Author, 2025)

Transformational Leadership, Competence, Work Motivation, Organizational Culture, Employee Performance, Job Satisfaction, and Organizational Support are the main topics analyzed in this research network visualization. Transformational Leadership emerged as an important topic that is closely connected with employee performance, work motivation, and organizational performance. This suggests that transformative leadership style is often researched in the context of improving employee performance and work motivation. Competence, especially in the clinical context (clinical competence), is a topic that often appears and is connected to health care quality and patient safety. This indicates that employee competence, especially in the healthcare field, is a key focus for improving service quality and patient safety.

Work Motivation is another big topic that is highly related to job satisfaction, organizational culture, and employee performance. Work motivation is often influenced by organizational culture and has a direct impact on employee satisfaction and performance(Aryani & Widodo, 2020). Organizational Culture itself is one of the most dominant topics, closely related to job satisfaction, work environment, and transformational leadership. Organizational culture is considered a key factor affecting job satisfaction, work environment, and leadership effectiveness in organizations.

Employee Performance is the focus connected to transformational leadership, work motivation, and job satisfaction, showing that employee performance is often studied in the context of how leadership, work motivation, and job satisfaction influence each other. Job Satisfaction is the most prominent topic, connected to almost all other major keywords such as organizational culture, work motivation, and employee performance. Job satisfaction is often used as an important indicator in assessing the effectiveness of various organizational factors (Dung & Hai, 2020; Eliyana & Ma'arif, 2019; Gaviria-Rivera & López-Zapata, 2019). Organizational Support is an important topic that is connected to employee performance and job satisfaction, suggesting that support from the organization can improve employee performance and satisfaction.

Overall, the linkages between topics such as transformational leadership, organizational culture, and job satisfaction reflect that research often explores how leadership styles and organizational culture affect employee satisfaction and performance. The focus on employee performance and job satisfaction indicates that this research seeks to understand how various organizational factors can improve employee performance and job satisfaction. The role of organizational support is also emphasized as a key element to creating a productive and satisfying work environment. In addition, competencies in the healthcare context demonstrate the importance of employee competencies in delivering quality services and maintaining patient safety. This visualization in Figure 7 provides an in-depth insight into the complex interactions between various factors that influence employee performance and satisfaction in organizations.

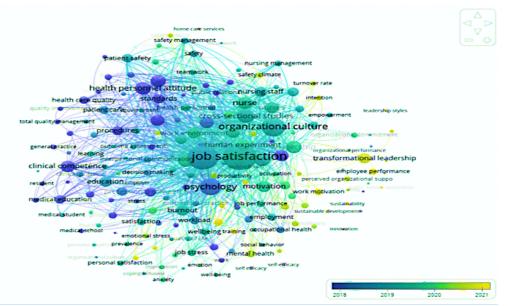


Figure 7. Keywords Network Vizualization Source: (Data Processed by Author, 2025)

The figure is a keyword network visualization showing the relationship between various research topics in the fields of Transformational Leadership, Competence, Work Motivation, Organizational Culture, Employee Performance, Job Satisfaction, and Organizational Support from 2018 to 2021. The colors of the nodes indicate the year of appearance of the topic, with gradations from blue (2018) to yellow (2021), and the size of the nodes reflects the frequency with which the keywords appear in the literature. Job satisfaction remains a dominant topic, closely linked to organizational culture, psychology, and motivation, suggesting that job satisfaction is central to many studies. Organizational culture also stands out and is closely linked to job satisfaction, work environment, and transformational leadership, underscoring the importance of organizational culture in influencing job satisfaction and leadership effectiveness. Transformational leadership remains a key topic that is strongly related to employee performance and work motivation, suggesting that research continues to explore how transformative leadership can improve work performance and motivation. Competence, especially clinical competence, emerged in the healthcare context and is closely related to health care quality and patient safety. emphasizing a focus on improving competence to improve healthcare services. The link between work motivation and employee performance with transformational leadership and job satisfaction shows that work motivation and employee performance remain important areas in the study of leadership and organizational culture. This visualization corroborates previous findings that these topics are central to research, emphasizing the complex interactions between organizational and health factors in influencing employee performance and satisfaction.

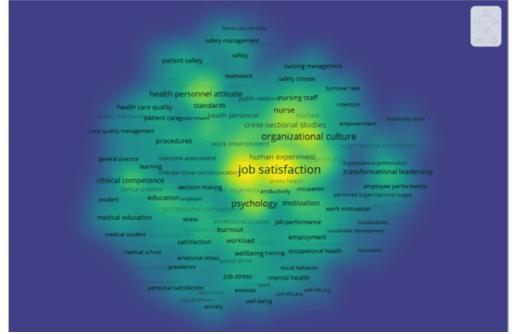


Figure 8. Heatmap Visualization Source: (Data Processed by Author, 2025)

The figure 8 is a heatmap visualization of the research keyword network showing the intensity and distribution of topics in the areas of Transformational Leadership, Competence, Work Motivation, Organizational Culture, Employee Performance, Job Satisfaction, and Organizational Support. Lighter colors indicate areas with higher research frequency. Job satisfaction is the most dominant topic, closely connected to organizational culture, psychology, and motivation. Organizational culture and transformational leadership also stand out, showing the importance of organizational culture and leadership style in shaping employee job satisfaction and performance. Clinical competence emerged in relation to health care quality and patient safety, emphasizing the importance of competence in healthcare.

Topics such as interpersonal communication, decision making, workload, burnout, mental health, well-being, innovation, and sustainable development show lower intensity, indicating research gaps and opportunities for further exploration. This visualization reinforces previous

findings that job satisfaction, organizational culture, and transformative leadership are the focus of research, as well as identifying areas that require more attention in future research.

- 1. Lack of Research in Specific Subjects:
 - a) Interpersonal Communication and Decision Making: This topic has a lower research intensity, suggesting that the role of interpersonal communication and decision making in leadership and organizational contexts needs to be explored more.
 - b) Workload and Burnout: Although connected to job satisfaction, these aspects seem to receive less attention in relation to organizational culture and transformational leadership.
- 2. Further Research Opportunities:
 - a) Mental Health and Well-being: Topics such as employee mental health and wellbeing present opportunities for further research into their interactions with job satisfaction and organizational support.
 - b) Innovation and Sustainable Development: The relationship between innovation, sustainable development, and transformative leadership can still be explored in more depth.

This heatmap reinforces the findings that job satisfaction, organizational culture, and transformational leadership are the focus of research, while identifying gaps in topics such as interpersonal communication, decision making, mental health, well-being, innovation, and sustainable development that require further research. Future research can provide new insights into the complex interactions between organizational and health factors in improving employee performance and satisfaction (see Appendix 1 for the specified papers).

Research in various fields shows a significant focus on topics such as Transformational Leadership, Competence, Work Motivation, Organizational Culture, Employee Performance, Job Satisfaction, and Organizational Support. In medicine (28.5%), the dominant topic is the relationship between transformative leadership, employee empowerment, and job satisfaction. Key articles such as "Transformational leadership, empowerment, and job satisfaction: The mediating role of employee empowerment" by Choi et al. (2016) with 154 citations, and "The relationship between transformational leadership, job satisfaction, and organizational commitment in Jordanian nurses" by Othman and Khrais (2022) with 5 citations show the importance of leadership style in influencing job satisfaction and organizational commitment.

In the field of social sciences (13.6%), many studies discuss how transformative leadership affects employee performance through organizational culture and job satisfaction. Articles such as "A mediation-moderation model of transformational leadership and intrinsic work motivation for nurturing employee performance" by Udin (2023) without citations, and "The Role of Transformational Leadership on Employee Performance Through Organizational Learning Culture and Intrinsic Work Motivation" by Udin et al. (2023) with 8 citations emphasized the important role of leadership and organizational culture in improving employee performance and satisfaction.

Within the field of nursing (13.2%), research often explores the impact of leadership styles on nurses' job satisfaction and mental health. Key articles such as "Influence of toxic and transformational leadership practices on nurses' job satisfaction, job stress, absenteeism and turnover intention" by Labrague et al. (2020) with 109 citations shows how leadership style can affect nurses' well-being and performance, which is important for human resource management in hospitals.

In business, management and accounting (10.9%), research focused on the relationship between transformative leadership, job satisfaction and employee performance. Articles such as "Job satisfaction as a mediator between transformational leadership and employee performance" by Rawashdeh et al. (2020) with 8 citations, and "Effect of Motivation, Leadership, and Organizational Culture on Satisfaction and Employee Performance" by Paais and Pattiruhu (2020) with 164 citations emphasize the importance of job satisfaction as a mediator in the relationship between leadership and employee performance.

However, there are research gaps identified, such as the lack of exploration on the topics of interpersonal communication and decision making, as well as workload and burnout in relation to job satisfaction and organizational culture. Topics such as mental health and well-being also

show opportunities for further research on their interactions with job satisfaction and organizational support. In addition, the relationship between innovation, continuous development, and transformative leadership can still be explored in more depth.

Overall, this research shows that job satisfaction, organizational culture, and transformational leadership are a key focus in fields such as medicine, social sciences, nursing, and management. The identified research gaps indicate the need for further exploration on topics such as interpersonal communication, decision making, mental health, well-being, innovation, and sustainable development to provide new insights into the complex interactions between organizational and health factors in improving employee performance and satisfaction.

DISCUSSION

Integration of Leadership and Organizational Variables

The results of this bibliometric study reveal that transformational leadership, organizational culture, and job satisfaction are consistently positioned as core variables in enhancing employee performance. These findings reaffirm the interdependence between leadership style and internal organizational dynamics. Transformational leadership is not only a driver of individual motivation but also a shaping force for the cultural environment within organizations. A supportive and value-driven culture amplifies the effects of leadership, encouraging employees to engage meaningfully and contribute at higher levels. This synergy between leadership and culture ultimately fosters a high-performance climate.

The centrality of job satisfaction also suggests its mediating role between leadership and performance. Satisfied employees are more likely to display organizational citizenship behaviors, exhibit greater creativity, and stay longer in their roles. Organizations that align leadership development with efforts to enhance job satisfaction, such as transparent communication, fair reward systems, and autonomy are better positioned to retain talent and sustain competitiveness.

Sectoral Relevance and Cross-Disciplinary Insights

The dominance of research from the medical and healthcare sectors underscores the critical importance of leadership and organizational practices in high-stakes environments. In these contexts, employee performance is directly linked to patient safety, treatment quality, and institutional reputation. For instance, clinical competence and transformational leadership significantly influence nurse retention, job satisfaction, and burnout prevention.

The presence of leadership research across various fields, ranging from business to social sciences and education indicates that the principles of organizational effectiveness are universally relevant. This cross-sectoral visibility supports the argument that foundational constructs such as motivation, competence, and support transcend industry boundaries and should be studied in diverse organizational settings.

Underexplored Themes: Innovation and Mental Health

Despite the growing relevance of innovation and mental health in organizational discourse, these topics remain peripheral in the current research landscape. Innovation is vital in dynamic and uncertain environments where adaptability and creative problem-solving are necessary for survival. However, the bibliometric findings suggest that innovation is not yet fully embedded within leadership-performance frameworks.

Mental health, on the other hand, has emerged as a critical concern in the wake of global disruptions such as the COVID-19 pandemic. Yet, its integration with leadership research is limited. This indicates a pressing need for future studies to examine how leadership styles, particularly transformational and empathetic leadership, can mitigate stress and promote psychological resilience. Integrating mental health into organizational performance models would provide a more holistic understanding of what drives sustainable productivity and engagement.

Geographic Distribution and Collaboration Gaps

Although countries like the United States and Indonesia are leading contributors in this field, the overall geographic distribution remains skewed. Regions such as Africa, Latin America, and parts of Asia are underrepresented, potentially overlooking contextual variations in leadership practices and organizational norms. Given that organizational dynamics are often shaped by cultural and institutional contexts, a more balanced geographic representation is necessary to enrich the theoretical generalizability of findings.

Moreover, co-authorship analyses indicate that collaboration tends to occur in national or regional silos. Increasing international and interdisciplinary partnerships could improve methodological diversity and theoretical innovation. Such collaboration would also enable comparative studies that reveal how leadership impacts performance differently across institutional and cultural environments.

CONCLUSION AND FURTHER STUDY

This bibliometric cartography affirms that transformational leadership, competence, motivation, and culture remain lodestars in the constellation of human resource scholarship—especially between 2017 and 2020, when scholarly zeal reached its zenith. Yet, the precipitous decline post-2020 suggests either thematic fatigue or the ascendance of new intellectual fashions. While the dominance of performance and satisfaction is hardly surprising, the comparative silence around mental health, innovation, and sustainability reveals a disconcerting lacuna. Practically, the findings urge organizations—particularly in healthcare, education, and governance—to recalibrate leadership strategies toward empathy, adaptability, and congruence with institutional ethos. Fostering organizational support and cultivating a vibrant culture may well be the modern talisman for employee engagement and endurance.

Nonetheless, this study is not without its cartographic constraints. Bibliometric methods privilege presence over depth, and Scopus alone cannot claim cartographic sovereignty over all meaningful research. The geographic concentration of author networks further limits generalizability, leaving much of the global south as mere marginalia. Future research ought to probe neglected themes—mental wellness, sustainability, and digital leadership—while embracing methodological pluralism and drawing voices from less-visible academic enclaves. Only then can the field shed its Eurocentric varnish and evolve toward a genuinely polyphonic theory of organizational flourishing.

ETHICAL DISCLOSURE

Not applicable.

CONFLICT OF INTERESTS

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Subject	Article Tittle	Authors	Source	Year	Citation
	Transformational leadership, empowerment, and job satisfaction: The mediating role of employee empowerment	Choi, S.L., Goh, C.F., Adam, M.B.H., Tan, O.K.	Human Resources for Health, 14(1), 73	2016	154
Medicine (28.5%)	Transformational leadership and employee job satisfaction: The mediating role of employee relations climate and the moderating role of subordinate gender	Chen, C., Ding, X., Li, J.	International Journal of Environment al Research and Public Health, 19(1), 233	2022	8
	The relationship between transformational leadership, job satisfaction, and organizational commitment in Jordanian nurses	Othman, T., Khrais, H.	Anaesthesia , Pain and Intensive Care, 26(3), pp. 304-309	2022	5
	A comparative study of the relationship among antecedents and job satisfaction in taiwan and mainland china: Employability as mediator	Peng, M.Y., Chen, CC., Yen, HY.	International Journal of Environment al Research and Public Health, 16(14), 2613	2019	6
	The relationship between leadership style and health worker motivation, job satisfaction and teamwork in Uganda	Musinguzi, C., Namale, L., Rutebemberwa, E.,Nahirya- Ntege, P., Kekitiinwa, A.	Journal of Healthcare Leadership, 10, pp. 21- 32	2018	45
Social Science (13.6%)	A mediation-moderation model of transformational leadership and intrinsic work motivation for nurturing employee performance	Udin, U.	Journal of Social Economics Research, 10(2), pp. 22-33.	2023	0

Appendix 1. Mapping the Research Landscape

Subject	Article Tittle	Authors	Source	Year	Citation
	The Role of Transformational Leadership on Employee Performance Through Organizational Learning Culture and Intrinsic Work Motivation	Udin, U., Dharma, R.D., Dananjoyo, R., Shaikh, M.	International Journal of Sustainable Developmen t and Planning, 18(1), pp. 237-246. Humanities	2023	8
	Employees' performance: Organizational culture and leadership style through job satisfaction	Ratnasari, S.L., Sutjahjor, G., Adam	and Social Sciences Reviews, 7(5), pp. 597-608.	2019	6
	The role of leadership styles in organizational citizenship behavior through the mediation of perceived organizational support and job satisfaction I Le rôle des styles de direction dans le comportement de citoyenneté organisationnelle. Le soutien organizationnel perçu et la satisfaction au travail en tant que médiateurs	Asgari, A., Mezginejad, S., Taherpour, F.	Innovar, 30(75), pp. 87-98	2020	34
	The influence of competence, motivation, and organizational culture to high school teacher job satisfaction and performance	Muhammad Arifin, H.	International Education Studies, 8(1), pp. 38- 45.	2015	69
	Transformational leadership, empowerment, and job satisfaction: The mediating role of employee empowerment	Choi, S.L., Goh, C.F., Adam, M.B.H., Tan, O.K.	Human Resources for Health, 14(1), 73	2016	154
Nursing	Influence of toxic and transformational leadership practices on nurses' job satisfaction, job stress, absenteeism and turnover intention: A cross-sectional study	Labrague, L.J., Nwafor, C.E., Tsaras, K.	Journal of Nursing Managemen t, 28(5), pp. 1104-1113	2020	109
(13.2%)	Impact of leadership styles adopted by head nurses on job satisfaction: A comparative study between governmental and private hospitals in Jordan	Abdelhafiz, I.M., Alloubani, A.M., Almatari, M.	Journal of Nursing Managemen t, 24(3), pp. 384-392	2016	41

Subject	Article Tittle	Authors	Source	Year	Citation
	Moderating Role of Communication Competence in the Association between Professionalism and Job Satisfaction in Korean Millennial and Generation Z Nurses: A Cross- Sectional Study	Lee, Y.J., Lee, H., Choi, EH.	Healthcare (Switzerland), 11(18), 2547	2023	1
	Relationships among communication competence, self-efficacy, and job satisfaction in korean nurses working in the emergency medical center setting.	Park, M.S., Jeoung, Y.Lee, H.K., Sok, S.R.	Journal of Nursing Research, 23(2), pp. 101-108.	2015	28
	Improving nurses' organizational commitment by participating in their performance appraisal process	Sepahvand, F., Mohammadipou r, F.Parvizy, S., Skerrett, V., Atashzadeh- Shoorideh, F.	Journal of nursing managemen t, 28(3), pp. 595-605	2020	18
	Job satisfaction as a mediator between transformational leadership and employee performance: Evidence from a developing country	Rawashdeh, A.M., Elayan, M., Shamout, M.D., Saleh, M.H.	Managemen t Science Letters, 10(16), pp. 3855-3864.	2020	8
Business, Managem ent, and Accountin g (10.9%)	The effects of human resource flexibility, employee competency, organizational culture adaptation and job satisfaction on employee performance.	Sabuhari, R., Sudiro, A., Irawanto, D.W., Rahayu, M.	Managemen t Science Letters, 10(8), pp. 1777-1786.	2020	47
	Effect of Motivation, Leadership, and Organizational Culture on Satisfaction and Employee Performance	Paais, M., Pattiruhu, J.R.	Journal of Asian Finance, Economics and Business, 7(8), pp. 577-588.	2020	164
	The effect of transformational leadership and organizational culture towards employees' innovative behavior and performance	Rizki, M., Parashakti, R.D., Saragih, L.	International Journal of Economics and Business Administrati on, 7(1), pp. 227-239.	2019	21

Adawiah

Subject	Article Tittle	Authors	Source	Year	Citation
	Effects of work motivation and leadership toward work satisfaction and employee performance: Evidence from Indonesia	Pancasila, I., Haryono, S., Sulistyo, B.A.	Journal of Asian Finance, Economics and Business, 7(6), pp. 387-397.	2020	74

Source: (Data Processed by Author, 2024)