




Research Article

Bibliometric Analysis of Studies between 2010-2023 on Leadership in the Field of Educational SciencesGüler SHAIKH^{1,*}  Semra KIRANLI GÜNGÖR² ¹ Eskişehir Osmangazi University, Türkiye, gulershaikh@gmail.com² Eskişehir Osmangazi University, Türkiye, semk2009@gmail.com* Corresponding Author: gulershaikh@gmail.com**Article Info****Received:** 29 March 2024**Accepted:** 03 August 2024**Keywords:** Leadership, bibliometric analysis, scopus index, VOSviewer 10.18009/jcer.1461156**Publication Language:** English**Abstract**

This study analyzed articles on "leadership" published in the Scopus database and the Web of Science between the years 2010-2023. The search term "leadership" was used and the filter section included "education". After excluding non-article entries, a total of 5208 articles were reached. The research methodology -was qualitative, and the data were analyzed using Scopus Analysis Tools and the VOSviewer bibliometric analysis software. The highest density of leadership studies was found to be in the USA, UK, Australia, Canada, South Africa, Spain, Turkey, Indonesia, Malaysia, and the Netherlands. The year with the most studies on leadership was 2022, and the author Grint K. conducted the most studies on this topic. The University of Toronto had the highest number of leadership articles. 'Transformational Leadership' emerged as the most studied leadership type in education. The frequently used keywords included 'motivation', 'education reform', 'school effectiveness', 'higher education', and 'sustainability.'



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Introduction

Leadership has been a significant part of civilization since the beginning of written history (Antonakis & Day, 2018). There have been various types of leadership throughout history. Early leadership dates back to religious, spiritual and military authority that guided the communities to provide resources, protect the people, and navigate political alliances with figures such as pharaohs, priests, and shamans taking on important roles in shaping the course of human events (Grint, 2011). The types of leadership in human history have generally differed depending on time, geography, culture and social structure. Monarchy is a type of leadership where a single person rules. This leader is usually known as a king or queen and rule is usually based on family or lineage (Croft & Coleman, 2015). Tyranny

describes the arbitrary and oppressive rule of an authoritarian leader. As a rule, the despot usually has absolute power and controls the government alone. An oligarchy is a form of leadership in which a group of people rule collectively. This group usually consists of the rich, influential or a special class. Democratic leadership is a form of leadership with the participation of the people. The people determine leaders and contribute to government policies through elections or direct participation (Devi & Subiyantoro, 2021). Dictatorship is a type of leadership in which one person has absolute power and rules in an authoritarian way. The Dictator is usually not elected and obtains his or her authority by force. Military leadership is the type of leadership exhibited by commanders of military forces. Such leaders manage the army, develop military strategies and make decisions on the battlefield. Religious leadership describes the leader of a religious community or congregation. These leaders interpret religious teachings, may be responsible for the governance of the community and conduct religious ceremonies. Technocratic leadership is a form of leadership based on scientific and technical expertise. These leaders use their technical knowledge and skills to influence policy and management. Entrepreneurial leadership is the type of leadership exhibited by managers in institutions or organizations. The entrepreneurial leader sets the vision, manages teams and implements business strategies (Barnes, 1978).

Although leaders and leadership practices have always intrigued people, leadership as a focus of scientific research only started in the middle of the 20th century as part of work optimization studies in economics. From these origins, leadership studies have spread over to different disciplines, including education (Oplatka, 2012). Education management has an important place within the subject of leadership. Therefore, different types of leadership have emerged in this field. The types of leadership that have emerged in the field of educational administration include the following:

Transformational Leadership

A transformational leadership style refers to a leadership style in which the leader aims to influence team members to unlock and transform their potential (Bass & Riggio, 2006). In this way, transformational leaders motivate team members with an inspiring vision and help them to develop and transform themselves. They construct an inspiring vision. The vision offers a perspective of the future that challenges team members, encourages the achievement of big goals, and is aligned with the team's values (Berkovich, 2016).

Transformational leaders empathize with and understand the needs of team members. They have good interpersonal skills and communicate effectively with team members. They develop a solid rapport with team members by being open to listening and receiving feedback (Ghasabeh et al., 2015). They entrust them with responsibility, involve them in decision-making processes and make them confident in themselves. They allow team members to unleash their leadership potential and manage independently. Transformational leadership increases the motivation of team members (Bass, 1999).

Distributed Leadership

Distributed leadership refers to the fact that the leadership role in an organization or team is not focused on a single individual, but that leadership responsibilities are shared among different individuals. Distributed leadership aims to unlock the leadership potential of all members with different skills and knowledge to achieve the goals of the organization or team (Bush & Ng, 2019). In this leadership approach, everyone can be involved in leadership roles and contribute to decision-making processes based on their expertise and competencies in their field. Distributed leadership aims to be effective in fast-changing and challenging situations. It enhances team motivation, encourages creativity and builds a culture of collaboration (Hashem, 2020).

Humanistic Leadership

Humanistic leadership implies a people-oriented leadership style. In this leadership approach, the leader prioritizes the needs, well-being and development of team members (Cowan, 2007). Humanistic leaders provide a fair and equitable environment. They provide the same opportunities to all team members, show impartiality in evaluating performance and base decisions on objective criteria. Humane leaders communicate openly and effectively. They listen to team members' views, accept feedback, and promote cooperation and understanding among team members through communication (Colbert et al., 2018). They trust their team members, believe in their abilities and provide an open communication environment. The leader creates a healthy and supportive work environment for long-term success by emphasizing the personal and professional development of team members (Cowan, 2007).

Collaborative Leadership

Collaborative leadership refers to a leader's approach to leading based on cooperation, participation and equality. Interacting with team members, collaborative leaders evaluate different perspectives, encourage teamwork and support a culture of cooperation to achieve common goals. The collaborative leader establishes open and effective communication with team members. They emphasize listening, evaluate the views of team members and are open to feedback (Heck & Hallinger, 2010). They promote cooperation and understanding among team members through communication. Moreover, collaborative leaders stimulate the participation of team members. They involve team members in decision-making processes, listen to their ideas and give them responsibility. They build trust with team members and celebrate successes. Collaborative leaders intervene constructively in conflict situations. They mediate to resolve conflicts and achieve reconciliation. They encourage team members to see their differences as a source of strength (De Meyer, 2011).

Strategic Leadership

Strategic leadership is a leader's adoption and application of strategic management to shape the future of the organization, achieve goals and succeed (Davies, 2003). Strategic leadership involves the leader setting the vision, strategic planning, managing resources and leading teams towards these strategic goals. Strategic leaders create a vision that will shape the future of the organization. Moreover, they use analytical thinking skills, evaluate different scenarios and make the best decisions. Strategic leaders use communication skills to effectively communicate their vision and strategic goals (Hitt et al., 2010). They motivate team members, persuade different stakeholders and keep them focused on the organization's goals. Strategic leaders effectively manage the organization's change processes. They provide leadership in adapting to change, create a culture that supports change, and provide innovation and flexibility for the organization to be competitive. Strategic leaders enhance the organization's competitiveness, foster innovation and adapt to changing situations (Davies, 2003).

Servant Leadership

Servant leadership is a leadership philosophy based on the leader serving and meeting the needs of others. Servant leadership focuses on understanding, supporting and serving the needs of others, rather than the leader using power and authority to direct followers. Servant leaders try to understand other people's needs by using their empathy

skills. Empathy enables the leader to listen to followers, understand their emotional state and support them. Servant leaders prioritize serving others. They support teamwork, facilitate communication among team members and enable cooperation to achieve common goals. Servant leadership fosters teamwork, increases follower commitment and motivation, and creates a sustainable impact (Bavik, 2020).

Situational Leadership

Situational Leadership is a model of leadership approach that varies depending on the situation. This model argues that leaders should adopt different leadership styles in different situations. Leadership influence depends on the leader's ability to adjust his behavior to a particular situation. This model emphasizes that no single leadership style will be effective in all situations, and that leaders must be flexible according to the situation, task requirements, and followers' needs. Situational Leadership theory is based on two key components: leadership styles and the level of development of followers. Leadership styles are divided into two main categories: directive and supportive behaviors. The development level of the followers is determined according to their competence and commitment levels. This leadership identifies four different leadership styles: directing, coaching, supporting and delegating. These styles are applied according to the development level of the followers (Vroom & Jago, 2007).

Situational Leadership is a dynamic approach that emphasizes leaders' flexibility and adaptability. By adjusting their behaviors according to the situation and the needs of followers, leaders can increase the performance and commitment of their teams. This model guides leaders in choosing and applying the most effective leadership style appropriate to a particular situation. As a result, Situational Leadership allows leaders to better manage both themselves and their teams and contributes significantly to organizational success (Thompson & Glasø, 2015).

Instructional Leadership

Instructional Leadership is a leadership style in which the leader supports teachers, encourages their professional development and provides guidance to improve the learning environment. The instructional leaders guide teachers (Hallinger & Chen, 2014). They also create an environment where teachers can receive support from each other and where learning opportunities can be created. Instructional leaders monitor teachers' classrooms and provide feedback. They adopt a constructive and supportive approach in the feedback

process. Instructional leaders work to improve the learning environment. They provide teachers with resources to create a good learning environment, offer classroom management strategies and encourage student participation. Instructional leadership increases student achievement by supporting teachers' professional development (Skaalvik, 2020).

Educational Leadership

Educational leadership is a type of leadership that aims to provide effective leadership among teachers, students and other staff in educational institutions. Educational leadership can have positive effects on students' achievement and school improvement. There are different types of educational leaders. For instance, an educational leader is the person at the head of a school or educational institution. Headmasters, rectors or administrators usually take on this role. The educational leader sets the overall vision of the school, manages staff, allocates resources and monitors the academic and administrative performance of the school. These leaders manage school events, represent the needs of the students and positively shape the culture of the school (Dempster & Lizzio, 2007). They can also support teachers' professional development and provide them with feedback. They help students achieve their academic goals, support their personal and social development, improve their decision-making skills and help students discover their potential (Sims et al., 2017).

Pedagogical Leadership

Pedagogical leadership aims to improve the quality of teaching and learning and supports the professional development of teachers. By focusing on innovative and effective pedagogical methods, they increase student achievement and improve the quality of teaching. Through the process of lesson planning, pedagogical leaders guide teachers and contribute to the development of programs. Pedagogical leaders promote the use of data and monitor student achievement (Caingcoy, 2020). They make data-driven decisions, analyze data for instructional and curricular improvements, and share data with their followers. Pedagogical leadership promotes collaboration and sharing among teachers, ensures the exchanging of best practices and supports the dissemination of pedagogical knowledge and experiences. Pedagogical leadership guides teachers on how to improve the quality of teaching, increase student achievement and provide teachers with the necessary guidance they inquire about (Heikka & Waniganayake, 2011).

Teacher Leadership

Teacher leadership is a leadership style in which a teacher assumes a leadership role within the classroom and at the school level. Teacher leadership involves teachers effectively leading students' education, mentoring colleagues and contributing to change processes in the school (Wenner & Campbell, 2016). Teacher leaders prioritize students' needs and interests. They appreciate students' differences and personalize learning experiences. Teacher leaders foster a culture of collaboration and sharing. They work collaboratively with colleagues, share best practices and create opportunities for collaboration for professional development. They contribute to educational policies at the school and system levels. They offer new and innovative ideas, take part in setting school goals and decision-making, and represent the voice of teachers (Ripki et al., 2020).

School Leadership

School leadership refers to the style of leadership that undertakes the management and direction of a particular school. School leaders prioritize the success and well-being of students (Spillane et al., 2001). They understand the individual differences of students, tailor educational programs to student needs, and encourage student participation. School leaders ensure that the school builds strong relationships with the community. They collaborate with parents, local community leaders and other stakeholders, highlight the school as part of the community and strengthen the school's reputation. School leadership manages and coordinates the many factors that influence the success of the school. An effective school leader promotes teamwork, increases motivation and fosters a positive school climate (Johnston, 1996).

Effective Leadership

Effective leadership can be broadly defined as a leader's ability to effectively lead, motivate and manage people to achieve goals. It requires the leader to have the necessary skills to clearly communicate vision, communicate effectively with team members, build trust and respect, make decisions, and manage and solve problems (Cote, 2017). Effective leaders have clear and effective communication skills. Good communication is essential to convey the leader's vision, explain instructions, provide feedback and interact with team members. Effective leaders have a charismatic presence (Grimm, 2010). Effective leaders have a leadership style that empathizes with team members and understands their emotional needs.

There have been many types of leadership identified based on different criteria including the context in which it is being used and the strengths and weaknesses of the leaders and their followers (Van Seters & Field, 1990). Leadership which can be defined as the ability to mobilize a group of followers toward a shared goal can be analyzed through various perspectives and as a consequence, various theories explaining leadership have been propagated.

The behavioural theory asserts that correct behaviour shown by the leader is the key to successful leadership. Similarly, the Great Man Theory asserts that correct and naturally acquiring traits of the leader is the key to successful leadership. Theories that focus on followers are transformational theory and transactional theory. Transformational Theory holds that leaders' relationship with followers is key to successful leadership practice whereas transactional theory believes leaders' use of punishment and reward toward the followers is the main element (Bamberg et al., 2011).

Each of these leadership theories leads to different leadership styles. Leadership styles and their effects are what are especially studied in the field of education. Educational Leadership has grown to be its area of expertise. Heck and Hallinger (2005) note that leadership is the most researched topic in Educational Management and Administration. Oplatka (2012) notes that leadership is mostly researched on empirical studies with simple analysis without much scientific rigour. Leadership is often researched on principal leadership styles, with a comparatively limited focus on teacher leadership (Szeto, et al., 2015). *"Distributed leadership", "Culturally Sensitive" "Leadership", and "Women and Minorities as Leaders"* are also topics of much educational research in recent years.

Reviews allow researchers to see the current situation in the field and predict the trends of the field. In other words, to metaphorically create a map of the field. With its ever-growing both quantitatively and perspective-wise- body of research 21st-century leadership research review is important, especially considering what a central stage it occupies in educational management (Bush & Crawford, 2012). This article aims to review articles written in the past ten years to answer these questions;

1. What are the most common keywords in leadership research?
2. Which types of leadership have been studied the most?
3. Who has been the most cited author in the field of leadership?
4. Which publications are the most cited in the field of leadership?

5. What is the most cited year in the field of leadership?
6. Who are the most active authors and what are their demographics?
7. What is the year with the most leadership studies in education?
8. Which universities lead the most research in the field of leadership?
9. Which Universities cites the most in the field of leadership?
10. Which countries lead in the production of leadership studies in education?
11. Which countries cited the most in the field of leadership?

To answer these questions, a bibliometric analysis of the last ten years' corpus, accessed on the Web of Science will be done using the Scopus Analytics and the VOSviewer.

Method

Design and Procedure

In this study, the bibliometric analysis research method was used. Bibliometric analysis is a subfield of document analysis research method, specifically, it deals with the quantitative analysis of publications, such as journal articles, books, and conference proceedings. Bibliometric analysis is a quantitative method that measures the impact and influence of scholarly work. Moreover, it provides information about the number of citations a publication receives, the number of times it has been downloaded, or the number of times it has been listed in other publications (Roig-Tierno et al., 2017). Bibliometric analysis is used to identify publication trends and tendencies in a particular research field. This information can guide future research planning and strategic decisions.

In this research VOSviewer 1.6.20 package program was used. The VOSviewer includes a variety of tools for analyzing and interpreting the data, such as a clustering algorithm that identifies groups of related publications or authors, and a module for creating maps of research fields (Jeong & Koo, 2016).

Data Analysis

In the beginning, the researchers identified the research question and objectives of the study. The scope and boundaries of the study, including the databases and years were determined between 2010-2023. To identify relevant literature, a literature search using various databases was conducted. In the search field, the word leadership was typed first. 23191 results were obtained. Afterwards, only articles were selected by filtering and the subject area was limited to social science. After filtering, 2895 articles were obtained and then the analysis proceeded. Furthermore, the scope of the research was narrowed down by collecting and cleaning the data on authors, institutions, journals, citation counts and so on. Thus, the results of the research and its development were interpreted. Additionally, the results were visualized using diagrams and graphs.

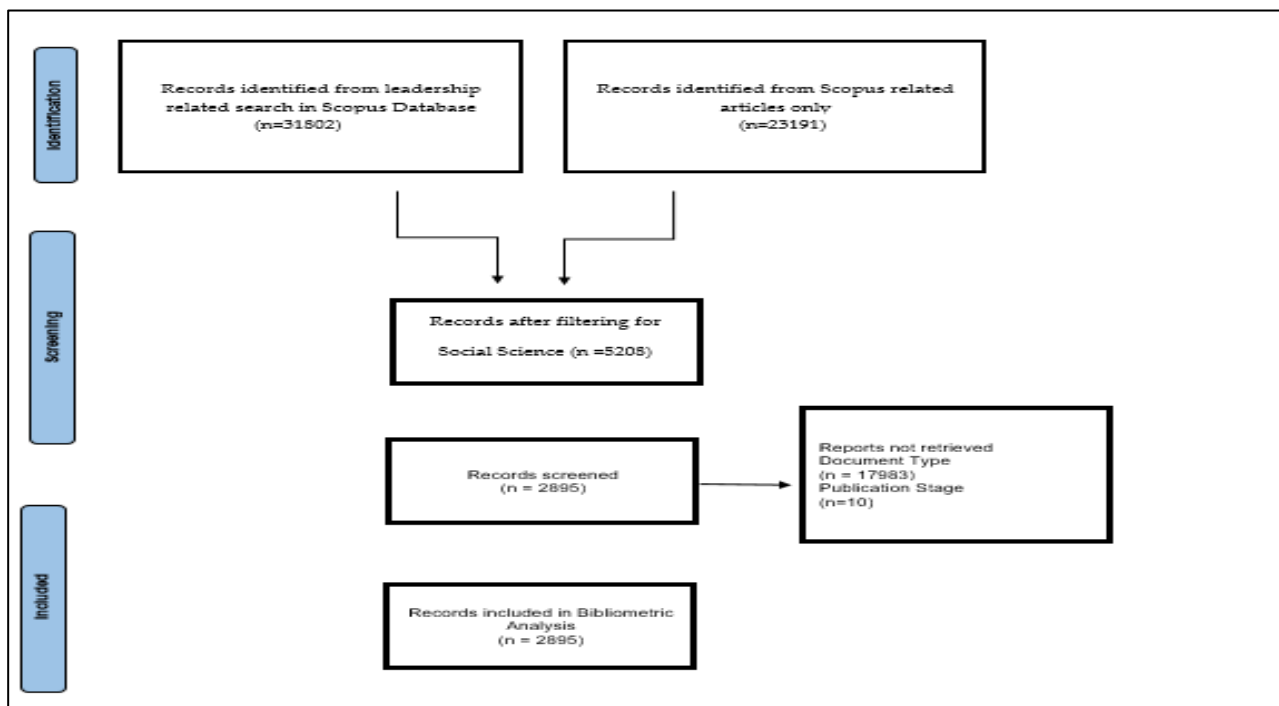


Figure 1. Prisma 2020 flow diagram for scopus search query process

Finding

After all documents were extracted, Scopus' inbuilt analysis search function and the VOSviewer were used to visualize the results.

Publication Year Analysis

The increase in research on leadership over the years is due to various reasons. Leadership is a subject of great importance in the corporate world, businesses and other organisations. Good leadership is a critical factor for a successful business or organization.

Therefore, there has been an increased interest in research on leadership. Researchers are working to understand and develop effective strategies in leadership, leadership styles, leadership development and leadership effectiveness. The concept of leadership has changed and evolved (Van Seters & Field, 1990). While the traditional understanding of leadership was based on an authoritarian and hierarchical structure, today participative, visionary and transformational leadership approaches have come to the fore. This changing understanding of leadership has led to the emergence of new topics and perspectives in leadership research. Therefore, measuring leadership effectiveness and leader performance has become a focus of leadership research.

First of all, within the scope of the research, we limited the studies conducted in the field of leadership to cover the years between 2010 and 2023. A total of 5208 articles with open access were published between 2010 and 2023, obtained from the Scopus database. Research data were collected on the 27th of June 2023. In line with the data obtained, while 107 studies were published in 2010, this number has started to increase over the years. The year 2022 is seen as the year with the most publications on “Leadership” with 822 articles. However, although the year 2023 has not yet been completed, it seems that it will surpass 2022 with 306 publications so far. Figure 2 shows the annual distribution of the articles published between the years 2010 to 2023.

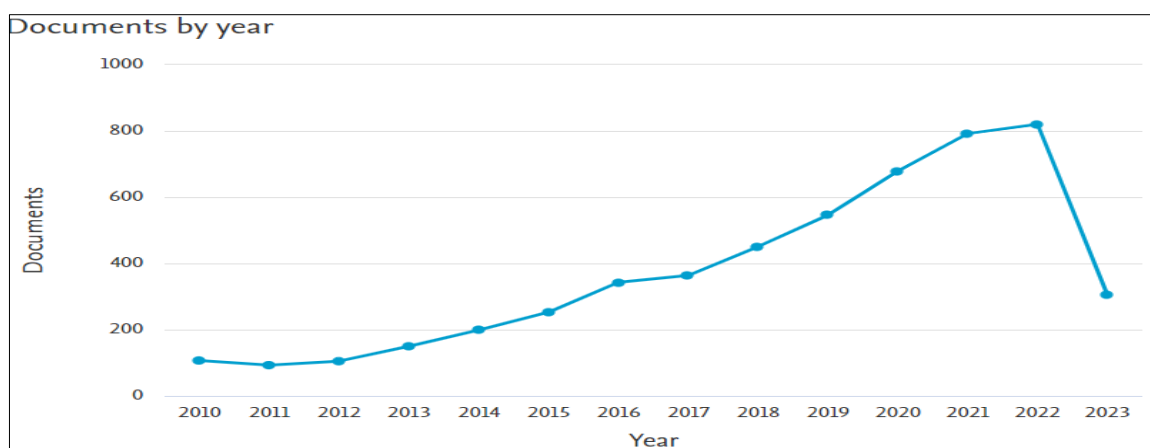


Figure 2. Annual distribution of publications according to the Scopus database (Search date: June 27, 2023).

Keywords Analysis

There are several reasons for using keywords in research. Keywords are used to determine the subject of the research and to distinguish the research from other studies. By

As a result of the findings obtained from VOSviewer, transformational leadership has been the most studied leadership type. Transformational leadership has been studied 85 times and 165 total strength links have been observed. It is seen that the same results are obtained in similar studies (Abdullah et al., 2020). Authentic leadership follows transformational leadership with 32 publications and 60 total strength links. Ethical leadership ranked third with 28 publications and 18 total strength links. Finally, the distributed leadership type ranked fourth with 23 publications and 28 total strength links. These are followed by transactional leadership, servant leadership and political leadership, sustainable leadership, school leadership, shared leadership, educational leadership and so on. Figure 5 also shows the density of leadership styles according to the VOSviewer database.

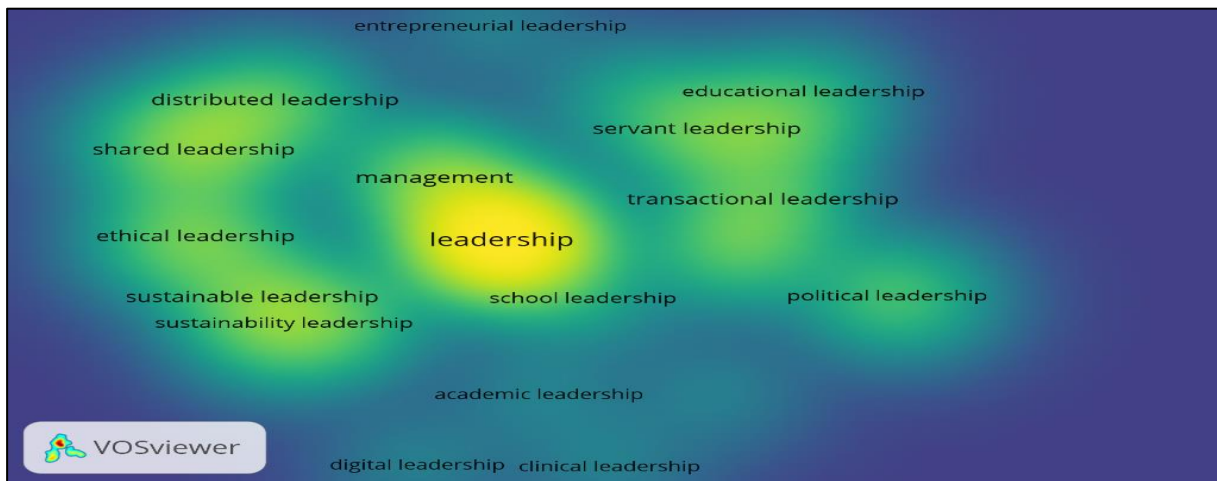


Figure 5. Density of the most studied leadership style in the field according to the VOSviewer database

Citation Analysis

In this part of the report, we have an analysis of the most cited authors. There are several important reasons for citation in research. Citation is important for identifying the sources of information used and for referencing the sources appropriately. It enables researchers to identify the sources used to support their work, to track relevant literature, and to draw on previous work in related fields (Frank et al., 2019).

Citation implies respect for the work and contributions of previous research. Research is often based on and influenced by the results of previous studies. Citation helps to avoid errors and misunderstandings. Citing previous studies prevents misinformation and the drawing of misleading conclusions (Nielsen & Andersen, 2021).

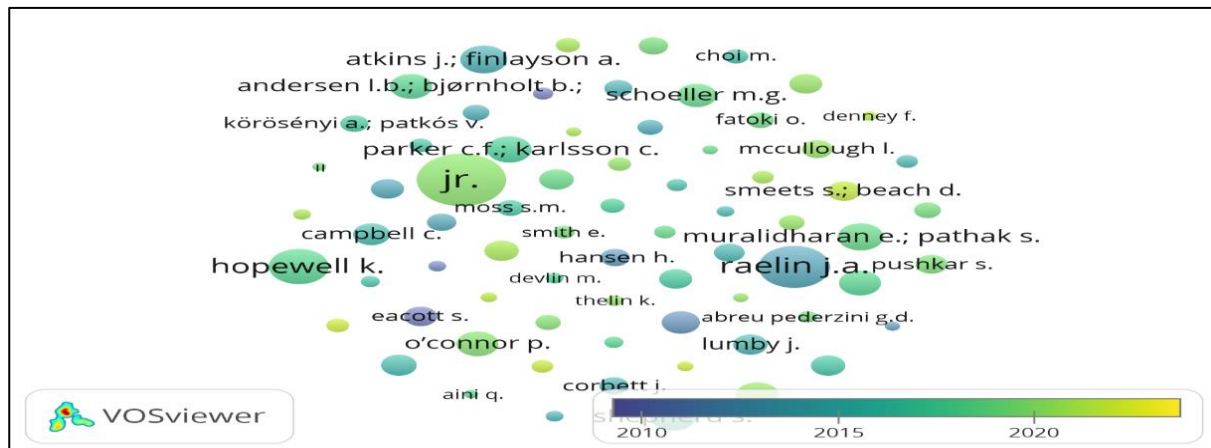


Figure 6. The most cited authors on leadership in the field according to the VOSviewer database

Figure 6 shows all of the researchers with the highest number of citations. Using a threshold of at least six citations and two publications, we identify the citation structure of researchers who have published studies on leadership. Out of 5112 authors, only 71 met the criteria. According to the results of the analysis obtained from VOSviewer, the most cited author is Jr. who is cited 241 times with 7 documents. He is followed by Raelin, Joseph A. with 154 citations, and thirdly by Hopewell K. with 109 citations.

Table 1. The most cited publications on leadership according to the scopus database

Rank	From 2010 to 2015		From 2016 to 2023	
	Documents	Citations	Documents	Citations
1.	(Bridges et al., 2011)	544	(Eva et al., 2019)	489
2.	(Alkire et al, 2011)	445	(Hughes et al., 2018)	396
3.	(Parris & Peachey, 2013)	425	(Hallinger, 2018)	265
4.	(Carsten et al., 2010)	298	(Cath et al., 2018)	238
5.	(Achtenhagen, Melin & Naldi, 2013)	287	(Gelfand et al., 2021)	211
6.	(Alvesson & Spicer, 2012)	260	(Prendeville et al., 2018)	193
7.	(Carpenter et al., 2012)	242	(Albertazzi et al., 2018)	164
8.	(Harms & Credé, 2010)	242	(Ansell et al., 2021)	163
9.	(Schaufeli, 2015)	207	(Raelin, 2016)	149
10.	(Davis et al., 2014)	200	(Ryan et al., 2016)	148

Table 1 shows the top ten influential authors regarding the “Leadership” topic, sorted by maximum number of citations. According to the data obtained as a result of filtering by selecting the keyword "leadership" in Scopus, the most cited document is the article titled "Interprofessional collaboration: Three best practice models of interprofessional education" published in 2011 by Bridges, D.R., Davidson, R.A., Odegard, P.S., Maki, I.V., Tomkowiak, J. This is followed by the article "Servant Leadership: A systematic review and call for future research" authored by Eva, N., Robin, M., Sendjaya, S., van Dierendonck, D., Liden, R.C. and published in 2019.

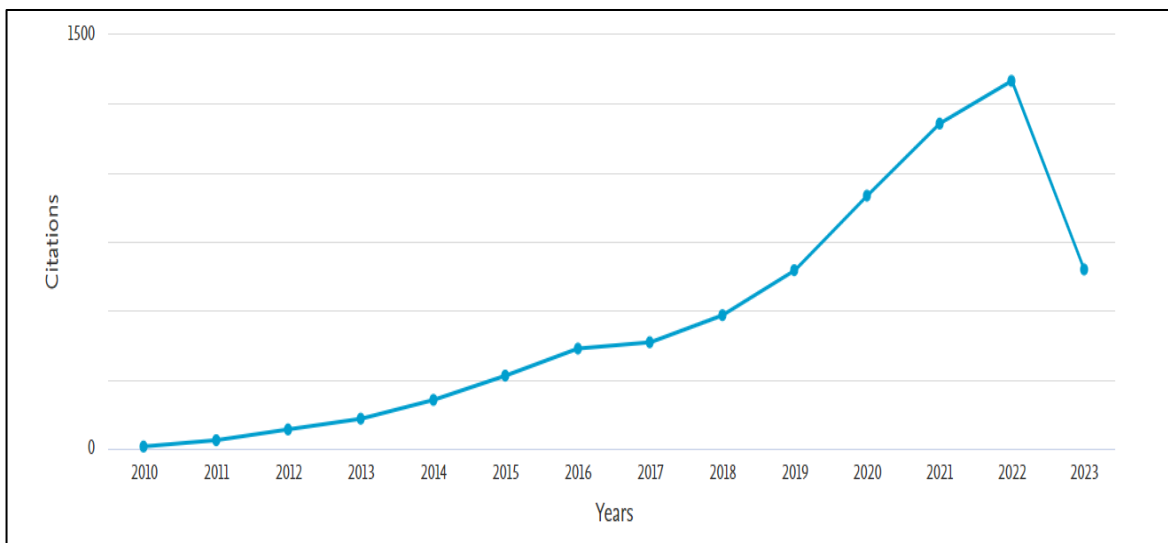


Figure 7. The most cited years on leadership according to the Scopus database

Figure 7 shows information about the most cited years obtained from Scopus. According to the data publications containing the keyword "leadership" received 21 citations in 2010, while the most cited year was 2022 with 6128 citations. In 2023, 3319 citations were made so far in the articles on "leadership".

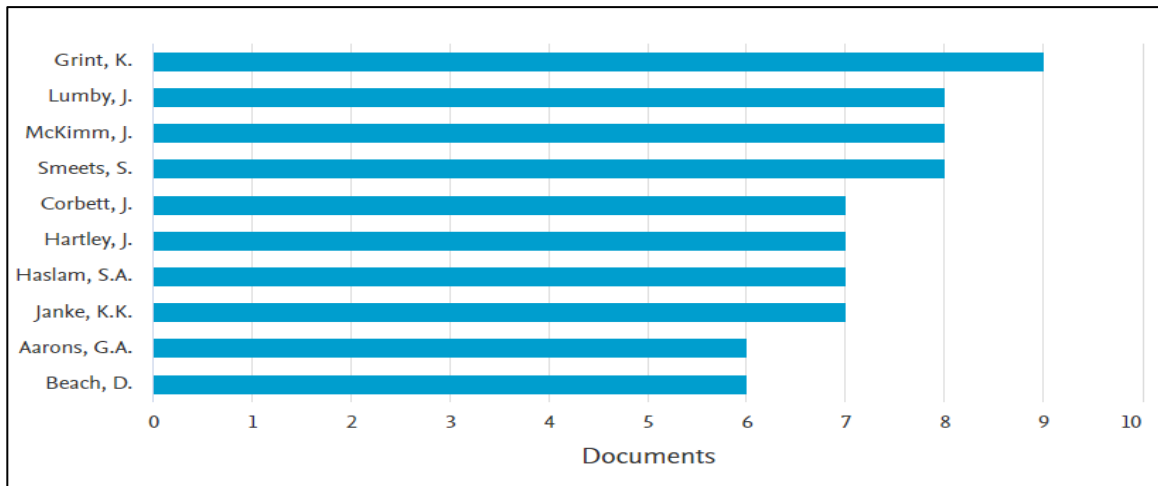


Figure 8. The most active authors on leadership according to the Scopus database

According to the data obtained after filtering in Scopus, Grint, Keith was the author who produced the most articles by publishing 9 articles in the field of "leadership". The author's article "Leadership, Management and Command in the Time of the Coronavirus" published in 2020 has been the most cited article which was cited 46 times so far. In this article, the researcher touched on the implications for leadership requirements during the Corona pandemic and suggested three modes of decision-making, which were leadership, management and command. Next is Lumby, Jacky with 8 articles. In 2016, the author published "Internationalisation and Culture in Higher Education" which has been cited 52 times. Lumby and Foskett, (2016) suggest that thoughtful and careful management of internationalization that maintains distinctness and encourages equality across cultures is in the long-term commercial interest of universities, as well as benefiting individuals and society.

Countries and Affiliations

Scientific research leads to the discovery of new knowledge, technological advances and innovative solutions. By leading scientific research, countries promote scientific and technological progress at the national level. This progress supports economic growth, provides a competitive advantage and promotes social development. Countries that lead the way by investing in scientific research can gain a competitive advantage in the international arena. Scientific achievements enhance a country's reputation and create opportunities for cooperation with other countries (Copeland et al., 2021).

From country administration to education, leadership continues to be an important phenomenon. Therefore, countries continue to attach importance to research in the field of leadership. Countries support research in leadership because leadership increases a country's influence and steering power. Leadership enables a country to position itself effectively in the international arena. Research to develop leadership capabilities supports a country to be at the forefront of policy-making processes and take a leadership role in international fora. This enhances a country's ability to protect national interests, steer foreign policy and influence global affairs. Leadership is closely linked to innovation and competitiveness. Research supports the innovation and competitive advantage that underpin leadership. A good research infrastructure is a source of new inventions and technological advances, which in turn boosts the country's economic growth and competitiveness (Contreras et al., 2020). Research studies support education and training processes to develop leadership skills and leadership potential. Countries promote leadership research and provide leadership training to support leadership capabilities. This enables leaders to develop their leadership skills and be effective in leadership positions. Leadership research plays an important role in understanding the inner workings of a country, public policies and societal transformation. It helps to identify best practices and strategies in leadership. Leadership research can inform a country's governance system, social services, economic policies and social transformation. This in turn promotes national prosperity and social development (De Bortoli et al., 2019).

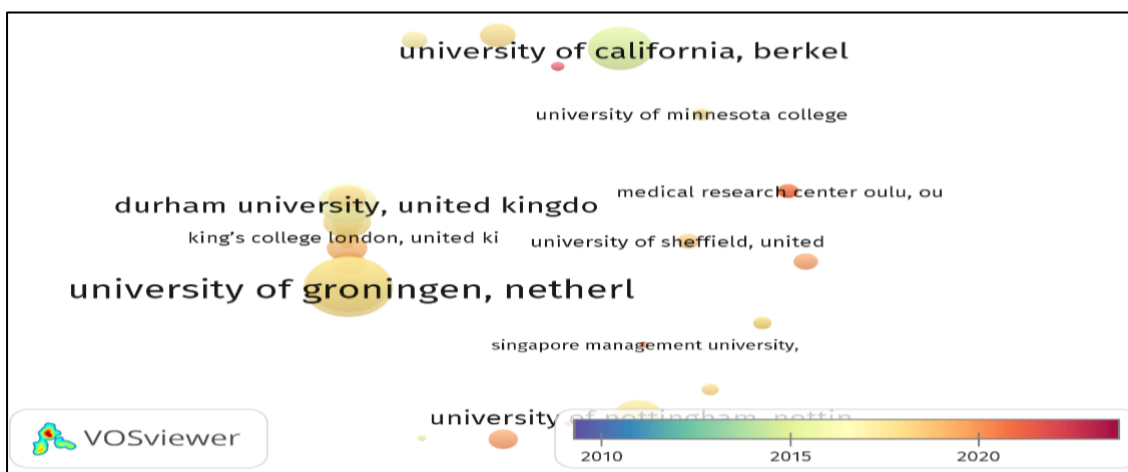


Figure 9. The most cited universities on leadership according to VOSviewer database

Universities are centers of scientific research and studies in the field of leadership increase academic knowledge. By supporting leadership research, universities contribute to the development of new theories, the understanding of leadership behaviours and the enhancement of leadership effectiveness. As a result, by supporting leadership research,

universities contribute to the development of leadership knowledge, the transfer of leadership skills to students, applied research and social impact (Fischer, & Sitkin, 2023). Table 8 shows the most cited universities in leadership-related research. As a result of the analysis, the University of Groningen in the Netherlands is the most cited institution with 12 articles and 383 citations. This is followed by the University of Exeter in the United Kingdom with 13 articles and 352 citations. This was followed by the University of California, Berkeley in the United States of America, Durham University in the United Kingdom, University of Nottingham in the United Kingdom and the University of Melbourne in Australia.

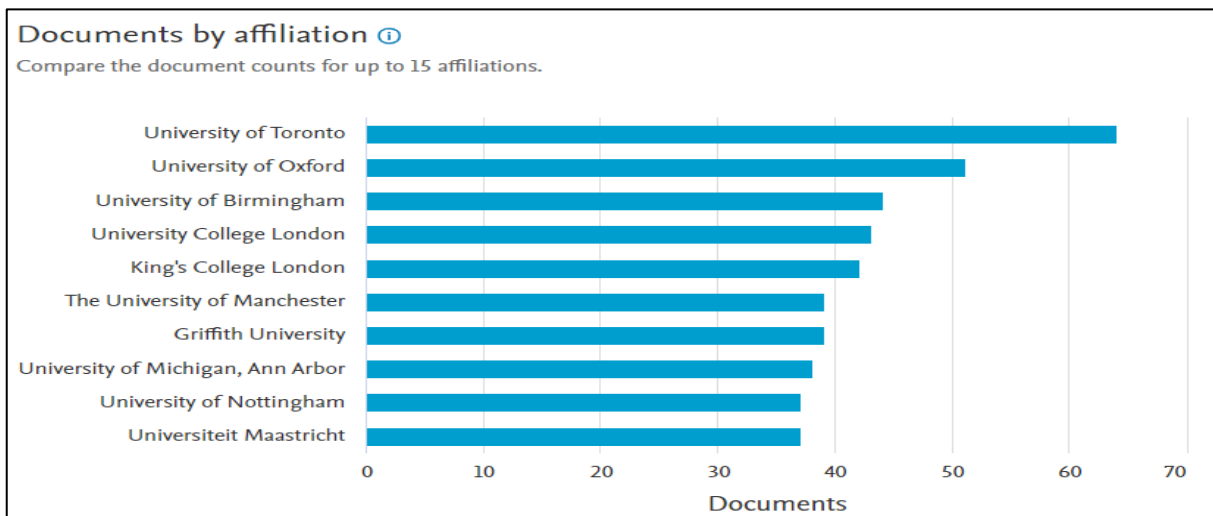


Figure 10. The most active universities on leadership according to the Scopus database

Figure 10 presents information on the 10 universities with the highest number of publications on leadership. It is seen that the University of Toronto has been actively involved in leadership and has published 64 publications on the subject. This is followed by the University of Oxford with 51 documents. In the third place is the University of Birmingham with 44 documents. These universities are efficient and productive in the field of "leadership" and have therefore contributed the most to the field.

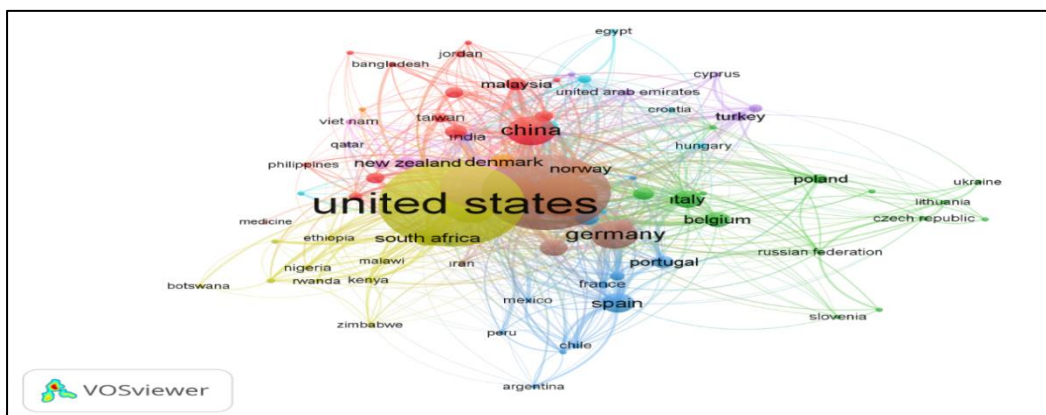


Figure 11. The most cited countries on leadership according to the VOSviewer database

Figure 11 shows the result obtained from the VOSviewer regarding the most cited countries on leadership-related research. According to the research results, the most cited country in the field of "leadership" was the United States of America with 20866 citations. Moreover, it ranked second with 620 co-authorships. The United Kingdom is next with 17008 citations, ranking second. In addition, the United Kingdom ranks 1st with 679 co-authorships. These two countries are followed by Australia, the Netherlands, Canada, China Germany, Switzerland and Spain, respectively. In Asian countries, China is the leading country, followed by Malaysia, Pakistan, Singapore and Turkey. According to the results "leadership" is heavily focused on the American and European continents. Other bibliometric analyses on leadership have yielded similar results.

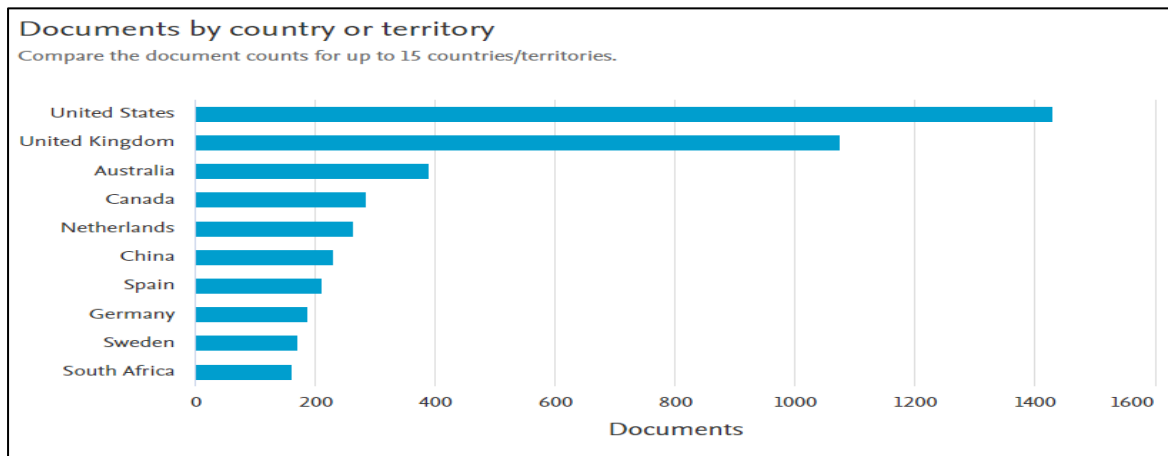


Figure 12. The most active countries in leadership-related research according to the Scopus database

The last analysis was to examine the country and academic affiliation of the researchers. This analysis was undertaken to obtain a greater insight into the geographical origin of the researchers contributing to the field. The variety of countries and academic institutions is striking. In the light of the data obtained from Scopus, the United States of America is the leading country with 1428 publications on "leadership". The United States is followed by the United Kingdom with 1037 publications. In addition, Australia ranks third with 388 publications. In most bibliometric studies conducted in the field of leadership, the United States of America ranks first and has published significantly in the field of leadership.

Discussion and Conclusion

Bibliometric analysis is a method that enables the evaluation and understanding of scientific research by performing statistical and quantitative analysis on scientific publications and citations (Roig-Tierno et al., 2017). In this study, we summarized the bibliometric information of the articles published in English in Scopus in the field of social sciences between 2010 and 2023. We tried to obtain an intellectual perspective by using different analysis methods such as VOSviewer and Scopus analysis tools. In sum, this research not only includes information on the most frequently used keywords but also the most cited researchers, countries and universities. In addition, the years, countries and universities with the highest number of publications and the figures related to this information were also included. In light of the data obtained from the research, it is seen that the research on leadership has increased since 2010 and continues to increase. Tigre, et al., (2023) also reported an increase over the years in their biometric research. The reason for this increase is that leadership is becoming increasingly important in the corporate world and other areas of society. Leadership is a subject linked to business management, organizational behaviour, psychology, sociology and other disciplines.

Leadership skills are increasingly in demand for effective leadership, leading to an increasing number of studies on leadership. In addition, leadership research includes practice-oriented studies to develop leadership skills and improve leadership practices. Consequently, there has been a noticeable increase in leadership studies (Alvesson, 1996).

It was seen that transformational leadership ranked first in the most studied leadership type. Transformational leadership is a leadership style that has an important position among leadership theories and approaches. This leadership style focuses on a process in which the leader leads by influencing and transforming followers. Transformational leadership aims to change followers by influencing and inspiring them to realise their potential. In similar studies, it is seen that transformational leadership studies have increased over the years (Contreras et al., 2020). Studies on leadership among countries have been increasing over the years. It has been observed that the United States of America is one of the countries where this increase is the most (Abdullah et al, 2020; Tigre et al., 2023). Moreover, according to the data obtained from the research, the University of Toronto was the university with the highest number of publications in the field of leadership. In addition, Grint, Keith was the author who produced the most articles by publishing 9 articles in the

field of "leadership". On the other hand, according to the results of the analysis obtained from the VOSviewer, the most cited author is Jr. who is cited 241 times with 7 documents.

Based on the results of our bibliographical research, several future recommendations can be proposed to enhance the depth and scope of leadership studies. Firstly, expanding the time frame of the research is essential. By including publications from years before 2010, a more comprehensive understanding of the evolution of leadership research in Turkey and globally can be achieved. Secondly, broadening the research areas to encompass related fields such as business, education, psychology, and political science is highly recommended. Including diverse perspectives can enrich the analysis and lead to more robust conclusions. Incorporating non-English publications is another critical recommendation. By including articles written in Turkish and other languages, the research can capture a broader spectrum of contributions that might be overlooked in an English-only search. Additionally, utilizing different types of publications, such as conference papers, theses, books, and book chapters, can enhance the study. These sources often contain valuable research that might not be available in journal articles. Including them can provide a more comprehensive view of the field and highlight important contributions from various types of scholarly work. Conducting comparative studies of leadership research trends in Turkey with those in other countries can provide valuable contextual insights. Lastly, engaging with the academic community through workshops or seminars to discuss findings and gather feedback is highly beneficial. Such engagement can provide new perspectives and enhance the quality and relevance of the research.

Appendix 1

TITLE-ABS-KEY-AUTH (leadership) AND PUBYEAR > 2009 AND PUBYEAR < 2024 AND (LIMIT-TO (OA, "all")) AND (LIMIT-TO (SUBJAREA, "SOCI")) AND (LIMIT-TO (PUBSTAGE, "final")) AND (LIMIT-TO (DOCTYPE, "ar")) AND (LIMIT-TO (EXACTKEYWORD, "Leadership"))

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Due to the scope and method of the study, ethics committee permission was not required.

Author Contribution Statement

Güler SHAIKH: *Conceptualization, literature review, methodology, implementation, data analysis, translation and writing*

Semra KIRANLI GÜNGÖR: *Conceptualization, literature review, methodology, implementation, data analysis, translation and writing*

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