DECODING TOXIC LEADERSHIP: A COMPREHENSIVE BIBLIOMETRIC ANALYSIS OF TRENDS AND IMPLICATIONS

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Abstract

This comprehensive study examines the complex dynamics of toxic leadership and its many implications within organizational contexts. This study presents a comprehensive bibliometric review aimed at synthesizing existing literature on toxic leadership. Utilizing systematic methodologies, major academic databases were searched, and bibliometric mapping techniques were employed to analyze the intellectual structure of the field. This allows for a thorough knowledge of how these behaviours shape and affect employees. The significance of this research lies in its contribution to understanding toxic leadership's multifaceted nature and its implications for organizational dynamics and individual wellbeing. By synthesizing existing knowledge, this study provides insights into emerging trends, identifies gaps in the literature, and offers recommendations for future research and practice. The findings of this review serve as a valuable resource for scholars, practitioners, and stakeholders interested in addressing toxic leadership behaviors and fostering healthier organizational cultures.

Keywords: Organizational Behavior; Leadership Impact; Employee Wellbeing; Workplace Dynamics; Employee Emotional Depletion

Introduction

In today's rapidly evolving organizational landscape, leadership dynamics play a pivotal role in shaping employee experiences and overall organizational wellbeing (Kamal et al., 2024; Taşkan et al., 2024). Among the myriad of leadership styles and behaviors, toxic leadership stands out as a significant challenge that organizations must grapple with. Toxic leadership, characterized by toxic behaviors and detrimental impacts on subordinates and the organization at large, has garnered increasing attention in scholarly discourse and practical organizational settings (Bhandarker & Rai, 2019; Milosevic et al., 2020; Wolor et al., 2022). Toxic leadership and toxic organizational cultures have a damaging impact on both organizations and their employees. The formation of toxic cultures is a gradual process and is not deliberate, yet it can result in significant damage to an organization's reputation (Yordanova, 2023). Leaders that are toxic demonstrate detrimental behaviours and approaches that can have an adverse effect on both the organization and its employees. The impact of these detrimental leadership styles may significantly shape the organizational culture, employee morale, and work conditions (Okpala, 2023; Sippio, 2023). Research has investigated the consequences of toxic leadership on organizational performance,

revealing a substantial adverse influence. Identifying and resolving toxic leadership is essential for organizations to preserve a thriving and constructive work environment (Saleem et al., 2021; Zaabi et al., 2018).

The impact of toxic leadership on organizational culture, employee morale, and the work environment is well-documented (Dwita et al., 2023). Toxic behavior in organizations is important to address because it can have negative impacts on employee engagement, performance, productivity, motivation, health, and wellbeing (Arun, 2022; Pimenta, 2022). It can lead to major reputational failures and negatively affect the people who work for these organizations (Yordanova, 2023). Toxic leaders can create a toxic work environment, leading to dissatisfaction, a lack of initiative, and an unwillingness to take action (Farghaly Abdelaliem & Abou Zeid, 2023). Toxic leaders can be hazardous to the organization and its staff, as they may exhibit harmful behavior and leadership styles (Yordanova, 2023). Additionally, toxic leadership can lead to emotive fatigue and silence among employees, which can further hinder organizational performance (AKBULUT & YAVUZ, 2022). Research has shown that toxic leadership can result in decreased job satisfaction and work motivation among employees (Wolor et al., 2022). However, the effects of toxic leadership on employee performance are inconclusive (Watkins & Walker, 2022). It is crucial for organizations to identify and address toxic leadership to prevent the creation of toxic cultures and to protect the wellbeing and productivity of their employees.

The consequences of toxic cultures on employees include increased stress levels, decreased wellbeing, and a negative impact on their physical and psychological health (Gordon et al., 2023; Rasool et al., 2021). Furthermore, toxic cultures can also have a detrimental effect on organizational performance, leading to reputational failures and a decline in overall success (Hattab et al., 2022). It is crucial for organizations to address toxic cultures and implement interventions to create a healthy and positive workplace environment. It is crucial to create a work environment that encourages open communication and eliminates toxic leadership behaviors to improve organizational performance. Addressing toxic behavior is also important for maintaining organizational trust, reducing burnout cynicism, and promoting concepts such as organizational commitment and psychological capital.

Conducting a comprehensive bibliometric review of existing scholarly literature on toxic leadership is imperative due to several key factors. Firstly, while toxic leadership and organizational cultures have gained recognition for their detrimental impact on individuals and organizations, there may still exist gaps in understanding the full scope of the phenomenon, its underlying mechanisms, and its implications. Secondly, the field of toxic leadership is dynamic and evolving, with new research, theories, and perspectives constantly emerging. A bibliometric review can provide an up-to-date snapshot of the current state of the field, including emerging trends and evolving methodologies. Thirdly, evidence-based practice in fields such as organizational psychology and management relies on robust empirical evidence and scholarly research. By synthesizing and analyzing existing literature, researchers can provide a foundation of knowledge that informs evidence-based interventions and practices aimed at addressing toxic

leadership. Additionally, toxic leadership can have far-reaching consequences for individuals, teams, and organizations, making it crucial to impact stakeholders by providing insights and recommendations for mitigating its negative effects.

This study aims to conduct a comprehensive bibliometric review of existing scholarly literature on toxic leadership. By systematically analyzing the academic landscape, the study seeks to provide insights into the current state of research, identify key themes and trends, and highlight influential authors, journals, and concepts in the field of toxic leadership. The paper provides an overview of the sections and data analysis methods used. It includes detailed descriptions of the evolution of scientific production in studies on toxic leadership, thematic analysis of work envisaged on toxic leadership, author contributions to articles on toxic leadership, and implications of the findings.

Methodology

This bibliometric review adopted a systematic methodology to comprehensively analyze the existing scholarly literature on toxic leadership. The study begins with a thorough literature search across major academic databases, employing keywords such as "toxic leadership," "destructive leadership," "abusive supervision," and "leadership toxicity" to ensure comprehensive coverage of relevant literature without restrictions on publication date. This study utilized Bibliometrix, a powerful R package designed for bibliometric analysis. Articles are included if they address the concept of toxic leadership, its antecedents, consequences, or mitigation strategies, while non-peer-reviewed sources such as dissertations and non-academic publications are excluded. Following the initial screening based on titles and abstracts, full-text articles are reviewed to determine eligibility for inclusion, with any discrepancies resolved through discussion. Bibliometric mapping techniques such as co-citation analysis and co-authorship analysis were employed to map the intellectual structure of the field and identify influential authors, journals, and concepts.

Evolution of scientific production in studies on toxic leadership

Table 1 offers insights into the landscape of studies on toxic leadership, spanning from 1966 to 2024. The data covers a considerable timespan, indicating sustained interest and research activity in toxic leadership over the years. With nearly a thousand sources drawn from journals, books, and other documents, it reflects a diverse range of literature on the subject. The majority of the documents are journal articles (610), suggesting that scholarly research serves as a primary avenue for investigating toxic leadership. However, the presence of books (112), book chapters (255), and proceedings articles (59) highlights a multidisciplinary approach to studying this phenomenon, incorporating insights from various fields. Notably, there are 2,902 unique authors involved in the study of toxic leadership. This high number indicates a broad range of perspectives and expertise contributing to the field. With 3,825 total author appearances, it suggests that many authors have contributed to multiple documents on toxic leadership. This indicates ongoing engagement and sustained interest from a diverse group of scholars. Among the documents, 532 were authored by

individuals alone, while 2,370 were collaborative efforts involving multiple authors. This indicates a prevalent trend toward collaboration in toxic leadership research, with a majority of documents being the result of joint efforts. On average, each author contributed to approximately 0.639 documents. This suggests a relatively low level of individual productivity among authors. On average, each document had 1.57 authors. This indicates a common practice of collaboration, with most documents being the product of joint authorship. Each document had an average of 2.06 co-authors, further emphasizing the collaborative nature of research on toxic leadership. With a collaboration index of 2.27, it suggests that, on average, authors collaborated with more than two other authors on documents related to toxic leadership.

Table 1: Main information about studies related to toxic leadership

Description	Results
Timespan	1966:2024
Sources (Journals, Books, etc)	995
Documents	1853
Average years from publication	7.46
Average citations per documents	0
Average citations per year per doc	0
References	1
Document types	
Book	112
Book-chapter	255
Journal-article	610
Proceedings-article	59
Authors	
Authors	2902
Author Appearances	3825
Authors of single-authored documents	532
Authors of multi-authored documents	2370
Authors collaboration	
Single-authored documents	809
Documents per Author	0.639
Authors per Document	1.57
Co-Authors per Documents	2.06
Collaboration Index	2.27

Figure 1 provides an overview of the annual scientific production of studies related to toxic leadership from 1966 to 2024. The production of studies related to toxic leadership was relatively low during 1966-1990, with only sporadic contributions. There were occasional peaks in certain years, such as 1987 and 1996, but overall, the volume of research remained limited. There was a

noticeable increase in research output during the 1990s and early 2000s, with a steady upward trend in the number of articles published annually. This period saw a growing recognition of the importance of toxic leadership and its impact on organizations and individuals. The mid-2000s marked a significant surge in scientific production, with a notable increase in the number of articles published each year. This period witnessed a heightened focus on toxic leadership, possibly driven by increasing awareness within the academic community and among practitioners. The production of studies related to toxic leadership continued to rise throughout the 2010s, reaching peak levels in the latter half of the decade. This period saw a proliferation of research addressing various aspects of toxic leadership, including its antecedents, consequences, and mitigating strategies. The figure shows a fluctuation in research output in the most recent years, with a peak of 267 articles in 2023 followed by a decrease to 27 articles in 2024. This fluctuation may be attributed to various factors, including shifts in research priorities, funding availability, and external events such as the COVID-19 pandemic, which could have influenced research activities.
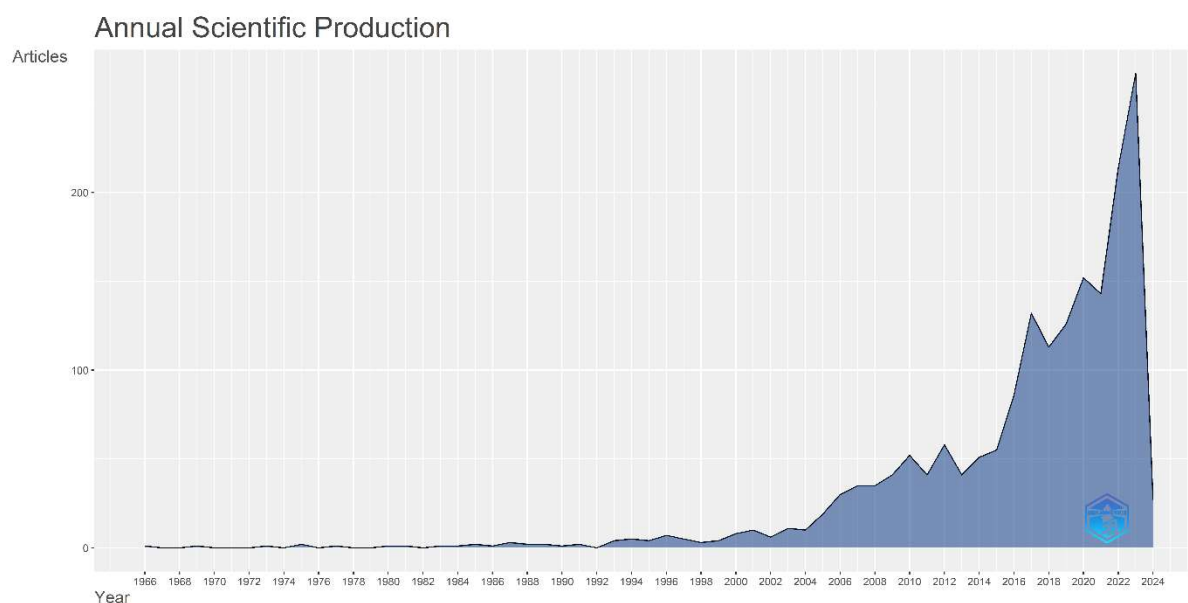

Figure 1: An overview of the annual scientific production of studies related to toxic leadership

Table 2 presents the number of articles (N) and their corresponding citable years, reflecting the evolution of scientific production in studies on toxic leadership over time. The "CitableYears" column indicates the number of years since publication during which the articles are considered citable. This metric provides insights into the longevity and relevance of the research findings. In the early years (1966-1990s), the citable years generally ranged from 58 to 25, indicating that research on toxic leadership had enduring relevance over time. However, there were sporadic years with lower citable years, possibly indicating a slower uptake or impact of research during those periods. From the 1990s onwards, there appears to be a consistent trend of decreasing citable years as the number of articles published annually increases. This suggests that newer research findings

in the field of toxic leadership are being cited more rapidly, possibly due to the growing interest and relevance of the topic. Notably, there are peaks in both the number of articles published and the corresponding citable years in the mid to late 2010s. For instance, in 2016, there were 86 articles with 8 citable years, indicating a period of heightened productivity and impact in toxic leadership research during this time. The data indicates a decline in citable years for articles published in the most recent years (2020-2024) despite a relatively high number of articles being produced. For example, in 2023, there were 267 articles with only 1 citable year. This trend could be indicative of either a shift towards more immediate impact and relevance in recent research or a potential decrease in the longevity of findings. Interestingly, while there is variation in the number of articles published annually, the citable years seem to follow a somewhat inverse pattern, with fewer citable years associated with higher article output.

Table 2: Evolution of citable years in studies on toxic leadership

Year	N	CitableYears
1966	1	58
1967	0	0
1968	0	0
1969	1	55
1970	0	0
1971	0	0
1972	0	0
1973	1	51
1974	0	0
1975	2	49
1976	0	0
1977	1	47
1978	0	0
1979	0	0
1980	1	44
1981	1	43
1982	0	0
1983	1	41
1984	1	40
1985	2	39
1986	1	38
1987	3	37
1988	2	36
1989	2	35
1990	1	34

1991	2	33
1992	0	0
1993	4	31
1994	5	30
1995	4	29
1996	7	28
1997	5	27
1998	3	26
1999	4	25
2000	8	24
2001	10	23
2002	6	22
2003	11	21
2004	10	20
2005	19	19
2006	30	18
2007	35	17
2008	35	16
2009	41	15
2010	52	14
2011	41	13
2012	58	12
2013	41	11
2014	51	10
2015	55	9
2016	86	8
2017	132	7
2018	113	6
2019	126	5
2020	152	4
2021	143	3
2022	214	2
2023	267	1
2024	27	0

Source analysis of articles on toxic leadership

With 36 articles, The Leadership Quarterly emerges as the leading source for research on toxic leadership (Table 3). This journal likely serves as a prominent platform for scholars to publish their findings and contribute to the discourse on toxic leadership. The data showcases a range of

sources contributing to the literature on toxic leadership, including academic journals like the Journal of Business Ethics and Leadership, as well as specialized publications such as Tarnished and Toxic Leadership. The inclusion of sources like the Indonesian Journal of Law and Economics Review suggests a global interest and engagement with the topic of toxic leadership, indicating its significance beyond specific geographical boundaries. The distribution of articles across different sources may also reflect specific publication trends, editorial priorities, and the academic community's evolving interests in understanding and addressing toxic leadership in various contexts.

Table 3: Distribution of articles on toxic leadership by source

Sources	Articles
The Leadership Quarterly	36
Journal of Business Ethics	17
Leadership	17
Bringing Leadership to Life in Health: Leads in a Caring Environment	16
Tarnished	15
Toxic Leadership	14
Scandinavian Journal of Work Environment & Health	12
Leadership & Organization Development Journal	11
Academic Libraries and Toxic Leadership	10
SSRN Electronic Journal	10
Sustainability	10
Toxic Cultures at Work	10
Management and Leadership in Social Work	9
Indonesian Journal of Law and Economics Review	8
The Leadership	8

Table 4 provides information on the frequency of articles and their corresponding ranks by source. The sources are ranked based on the number of articles they contribute to the literature on toxic leadership. The "Zone" column categorizes the sources based on their cumulative frequency, likely indicating different tiers or levels of contribution to the overall body of research on toxic leadership. The top-ranking sources, such as The Leadership Quarterly and Journal Of Business Ethics, contribute significantly more articles compared to lower-ranking sources. There appears to be a concentration of articles from certain sources within Zone 1, suggesting that a handful of journals or platforms make substantial contributions to the literature on toxic leadership. This may indicate specialization or expertise in this particular area of research. While some sources are more prominent in terms of article frequency, the data also includes a diverse range of sources, including academic journals, specialized publications, and online platforms. This diversity reflects the interdisciplinary nature of research on toxic leadership and the varied perspectives and methodologies employed in studying this phenomenon. Sources with higher rankings and

frequencies may have a greater influence and visibility within the academic community, shaping discussions and debates surrounding toxic leadership. Conversely, lower-ranking sources may still provide valuable insights but may have a more limited reach or audience.

Table 4: Analysis of article frequency and ranking by source (Top 20 Journals)

Source	Rank	Freq	cumFreq	Zone
The Leadership Quarterly	1	36	36	Zone 1
Journal of Business Ethics	3	17	79	Zone 1
Leadership	4	17	96	Zone 1
Bringing Leadership to Life in Health: Leads in a Caring Environment	5	16	112	Zone 1
Tarnished	6	15	127	Zone 1
Toxic Leadership	7	14	141	Zone 1
Scandinavian Journal of Work, Environment & Health	8	12	153	Zone 1
Leadership & Organization Development Journal	10	11	175	Zone 1
Academic Libraries and Toxic Leadership	11	10	185	Zone 1
SSRN Electronic Journal	12	10	195	Zone 1
Sustainability	13	10	205	Zone 1
Toxic Cultures at Work	14	10	215	Zone 1
Management and Leadership in Social Work	17	9	242	Zone 1
Indonesian Journal of Law and Economics Review	19	8	259	Zone 1
Academy of Management Proceedings	21	7	274	Zone 1
European Journal of Business and Management	22	7	281	Zone 1
Frontiers in Psychology	23	7	288	Zone 1
Journal of Leadership Studies	25	7	302	Zone 1
Toxic Humans	26	7	309	Zone 1
Environment International	27	6	315	Zone 1

Analysis of author contributions to articles on toxic leadership

Figure 2 presents a list of authors along with the number of articles they have contributed to in the field of toxic leadership. The authors vary in terms of their level of contribution, with some having a substantial number of articles attributed to them, while others have fewer contributions. Authors

such as Walker SM, Watkins DV, and Cannon J emerge as key contributors, with significant numbers of articles attributed to them. Their contributions may indicate expertise or specialization in the field of toxic leadership, as well as a consistent track record of scholarly output. While some authors have contributed to a large number of articles, others have fewer contributions. This distribution may reflect variations in research focus, publication output, and level of involvement in the field of toxic leadership among different authors.
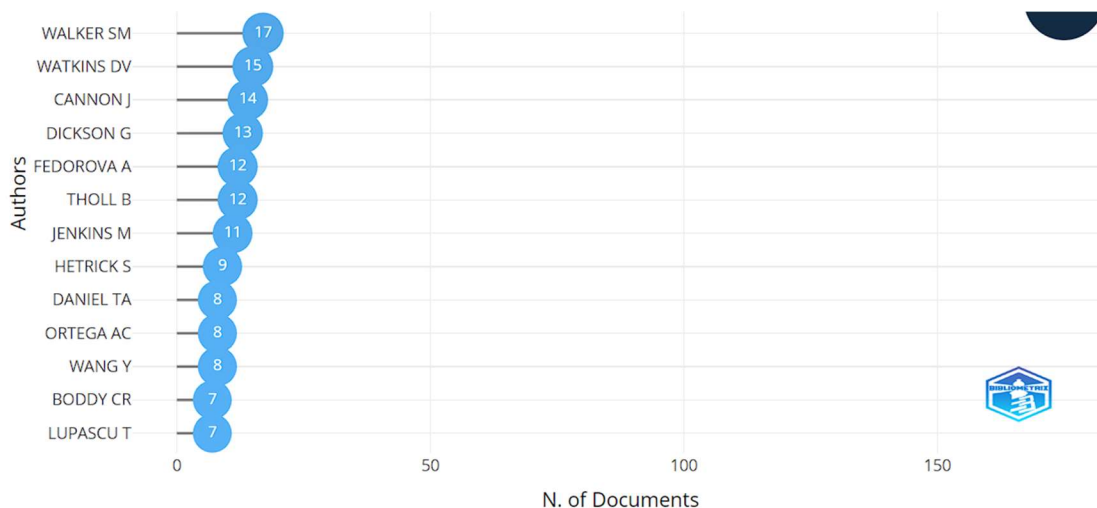
Figure 2: Author contributions to articles on toxic leadership

Figure 3 provides information on the frequency of articles authored by different individuals across various years. The data reveals the publication frequency of several authors across different years, showing their ongoing contributions to the field of toxic leadership research. Notable authors like Boddy CR, Cannon J, Daniel TA, Dickson G, Fedorova A, Hetrick S, Jenkins M, Lupascu T, Ortega AC, Tholl B, Walker SM, Wang Y, and Watkins DV are observed to have contributed articles in multiple years, demonstrating their sustained engagement with the topic. On the other hand, authors like Jenkins M and Walker SM have exhibited concentrated bursts of activity in specific years, suggesting focused periods of research output or possibly shifts in research focus during those times. There is considerable variation in the publication frequency among authors. Authors like Dickson G and Fedorova A show an increasing trend in publication frequency over the years, indicating a growing presence and possibly deeper engagement with the topic of toxic leadership. Authors with higher publication frequencies, such as Jenkins M and Dickson G in recent years, may have a significant impact on the field of toxic leadership through their research contributions and possibly leadership roles within the academic community.
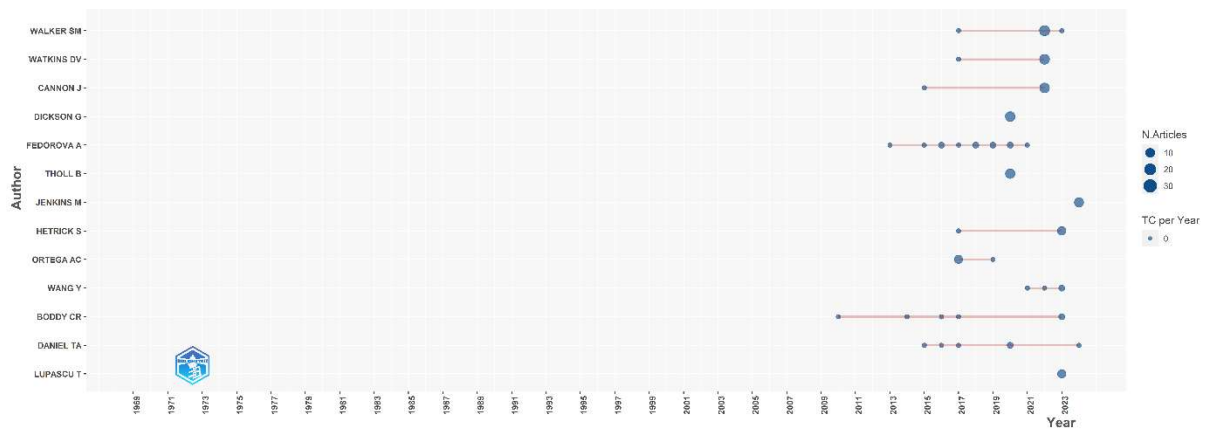
Figure 3: Author contribution over time to articles on toxic leadership

Table 5 presents a compilation of works by different authors addressing various aspects of toxic leadership and organizational cultures. Jenkins explores the concept of "toxic humans" from various angles, offering insights into mitigating their effects, managing toxic colleagues, understanding their impact on organizational levels, addressing toxic behavior from early childhood, and examining real-life experiences of toxic behavior in the workplace. Each work focuses on a specific aspect of toxic human behavior and provides practical strategies for individuals and organizations to cope with or address these challenges. Boddy's contributions revolve around toxic leadership, with one work featured in the Encyclopedia of Business and Professional Ethics and another in the Business and Society Review. The first work likely provides an overview or definition of toxic leadership, while the second discusses the critical role of toxic leadership in hindering sustainability efforts and suggests moving towards a flourishing environment for all. Hetrick's works delve into toxic organizational cultures, focusing on the drivers behind such cultures. The author identifies cognitive dissonance and the normalization of deviance as two key drivers contributing to toxic cultures. By delineating the stages and drivers of toxic cultures, Hetrick sheds light on the underlying mechanisms that perpetuate toxic behavior within organizations.

Table 5: Recent contributions by authors on toxic leadership

Year	Author	Title	Source	References
2024	Jenkins M	So what approaches do we need to adopt to mitigate the effect of toxic humans?	Toxic Humans	(Jenkins, 2024e)
		Now what can individuals do to manage or live with a toxic colleague?	Toxic Humans	(Jenkins, 2024c)
		What effect do toxic humans have at board level, in senior	Toxic Humans	(Jenkins, 2024h)
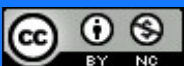
		teams and on the business or organisation?		
		Now what can be done from early childhood to address human toxicity?	Toxic Humans	(Jenkins, 2024b)
		So what experiences have real people had of toxic humans at work?	Toxic Humans	(Jenkins, 2024a)
		Now what can organisations do to address and manage the influence of toxic leaders and toxic humans?	Toxic Humans	(Jenkins, 2024d)
		What causes humans to be or to become toxic?	Toxic Humans	(Jenkins, 2024g)
		So what does 'toxic human behaviour' look like in real workplace life?	Toxic Humans	(Jenkins, 2024f)
2023	Boddy CR	Toxic leadership	Encyclopedia of Business and Professional Ethics	(Boddy, 2019)
		Moving sustainability towards flourishing for all: the critical role of (toxic) leadership	Business and Society Review	(Boddy, 2023)
2023	Hetrick S	The four stages of a toxic culture	Toxic Organizational Cultures and Leadership	(Hetrick, 2023b)
		The second driver of toxic culture – Cognitive dissonance	Toxic Organizational Cultures and Leadership	(Hetrick, 2023c)
		The first driver of toxic culture – The normalization of deviance	Toxic Organizational Cultures and Leadership	(Hetrick, 2023a)

Table 6 appears to be based on Lotka's Law, which is a principle in bibliometrics that describes the distribution of scientific productivity among authors. Lotka's Law suggests that the number of authors publishing a certain number of papers follows a certain pattern. The majority of authors (88.6%) have written only one document, which is consistent with Lotka's Law. This phenomenon reflects the common occurrence of one-time authors or individuals who contribute to a single publication. As the number of documents written per author increases, the number of authors

decreases sharply. This is also in line with Lotka's Law, which suggests that the number of authors decreases exponentially as productivity increases. Only a small proportion of authors have written multiple documents, with a decreasing number of authors as the number of documents per author increases. This reflects the trend where a smaller subset of authors is highly productive while the majority contribute minimally. The presence of authors who have written a significantly larger number of documents (e.g., 175) is relatively rare and represents outliers in the distribution.

Table 6: Analysis of author productivity distribution according to Lotka's Law

Documents written	No. of Authors	Proportion of Authors
1	2572	0.886
2	228	0.079
3	56	0.019
4	19	0.007
5	10	0.003
6	2	0.001
7	2	0.001
8	3	0.001
9	1	0
11	1	0
12	2	0.001
13	1	0
14	1	0
15	1	0
17	1	0
175	2	0.001

Thematic evolution of work envisaged on toxic leadership

Figure 4 provides a frequency analysis of keywords related to studies on toxic leadership. "Leadership" appears 1205 times, indicating a strong emphasis on leadership dynamics within the context of toxic work environment. "Toxic" is a prominent term with 693 mentions, highlighting the central focus on toxic behaviors and environments. "Environment" is mentioned 432 times, suggesting a significant interest in the organizational and social contexts in which toxic leadership manifests. "Impact" is cited 338 times, reflecting an exploration of the consequences and effects of toxic leadership on individuals and organizations. "Performance" and "Employee" are mentioned 206 and 202 times, respectively, indicating a focus on how toxic leadership affects individual and organizational performance and employee wellbeing. "Organizational" is mentioned 164 times, suggesting an examination of toxic leadership within the broader organizational structure. Other notable terms include "role," "effect," "job," "workplace,"

"motivation," and "culture," each indicating different facets and dimensions of toxic leadership research.
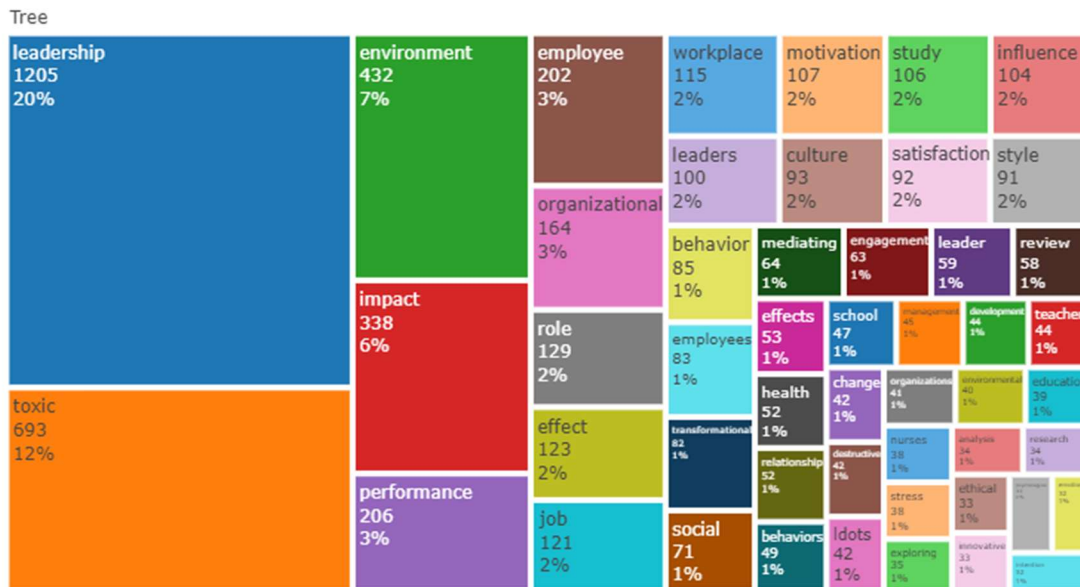

Figure 4: Frequency analysis of keywords related to studies on toxic leadership

Figure 5 illustrates thematic evolution over time in studies related to toxic leadership, highlighting shifts in focus and terminology from different periods. Initially, from the late 1960s to the early 2000s, there was a predominant emphasis on environmental factors and the toxic effects they might have within organizational settings. However, as research progressed into the 21st century, particularly from the early 2000s to 2010, there was a discernible transition towards exploring the cultural dimensions of toxicity, with an increased emphasis on understanding organizational culture's role in shaping toxic behaviors. This shift was accompanied by a broader consideration of the impact of toxic leadership on various aspects of organizational life, evident from the transition towards themes like impact and leadership effectiveness. Moreover, the evolution from toxic-centric terms to broader leadership-related concepts underscores a deeper understanding of toxic behavior within the context of organizational leadership. Furthermore, the focus on workplace dynamics and the broader implications of toxic leadership behavior highlights the growing recognition of toxic leadership as a multifaceted phenomenon with far-reaching consequences for organizational health and performance. The progress made between 2011 and 2024 signifies a maturation in the understanding of toxic leadership, marked by a more holistic approach that considers cultural, organizational, and societal factors.
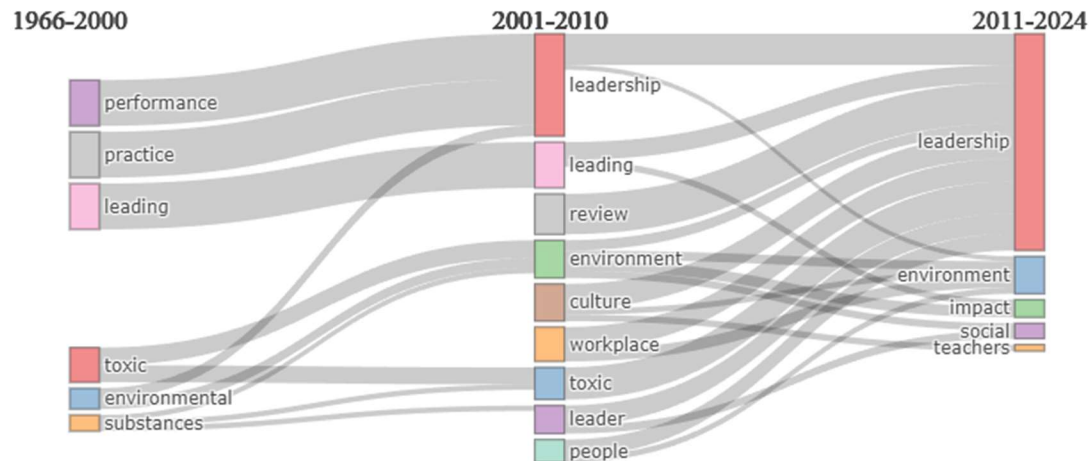
Figure 5: Thematic evolution in studies related to toxic leadership

A topic dendrogram analysis of studies related to toxic leadership reveals the hierarchical clustering of themes based on their similarity in content (Figure 6). Cluster 1 includes topics related to management, development, education, culture, and school. It also encompasses topics such as leadership and change, indicating a focus on leadership dynamics and organizational change processes. Additionally, there are topics related to social aspects, environmental factors, and health implications, suggesting a broad exploration of contextual influences on leadership and organizational behavior. Topics like analysis, environment, and teacher highlight the importance of analyzing environmental factors and their impact on educational settings. Stress, impact, employees, and organization are linked together, indicating a focus on the impact of stress on organizational dynamics and employee wellbeing. Other topics like motivation, style, and satisfaction suggest an examination of motivational factors, leadership styles, and employee satisfaction in relation to organizational performance and transformation. Cluster 2 revolves around topics related to mediating and innovation, indicating a focus on innovative approaches and mediation strategies in addressing toxic leadership issues. Relationships are emphasized, suggesting an exploration of interpersonal relationships and their role in mitigating toxic leadership effects. Psychological aspects, roles, behaviors, engagement, and intentions are grouped together, highlighting a focus on individual and group behavior, psychological mechanisms, and engagement strategies in toxic leadership research. Integration of these themes encourages interdisciplinary collaboration among researchers from fields such as psychology, sociology, organizational behavior, and management.
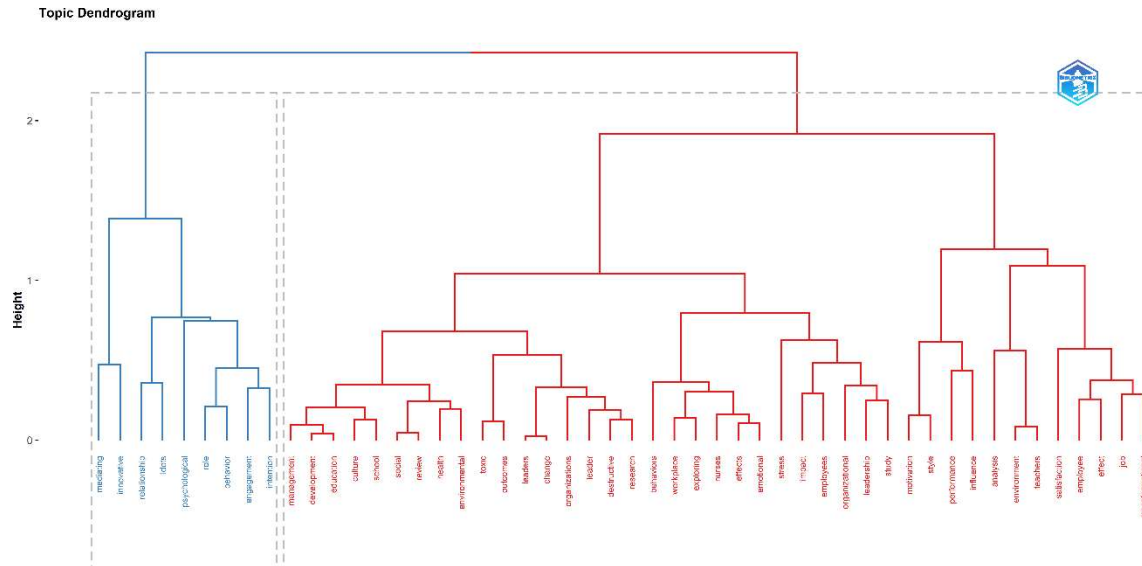
Figure 6: Topic dendrogram analysis of studies related to toxic leadership

In the factorial map analysis of studies related to toxic leadership, two dimensions (Dim.1 and Dim.2) were used to represent the relationships between words and their respective clusters (Figure 7). In this analysis, the Multiple Correspondence Analysis (MCA) method was applied to explore the underlying structure and associations between these variables. Dimension 1 (Dim.1) seems to capture the broader context of leadership-related terms, as evidenced by the positioning of words such as "leadership," "toxic," "impact," "performance," "employee," "organizational," and others. These terms are clustered together, suggesting a strong association with leadership studies. Dimension 2 (Dim.2), on the other hand, appears to capture specific behavioral and psychological aspects related to toxic leadership. Words like "role," "behavior," "mediating," "engagement," "relationship," "psychological," and "intention" are positioned along this dimension, indicating a focus on the underlying mechanisms, effects, and outcomes of toxic leadership behavior. Interestingly, certain terms like "culture," "style," and "satisfaction" appear to have influence from both dimensions, suggesting that they may have relevance in both the broader leadership context and the specific behavioral aspects associated with toxic leadership.
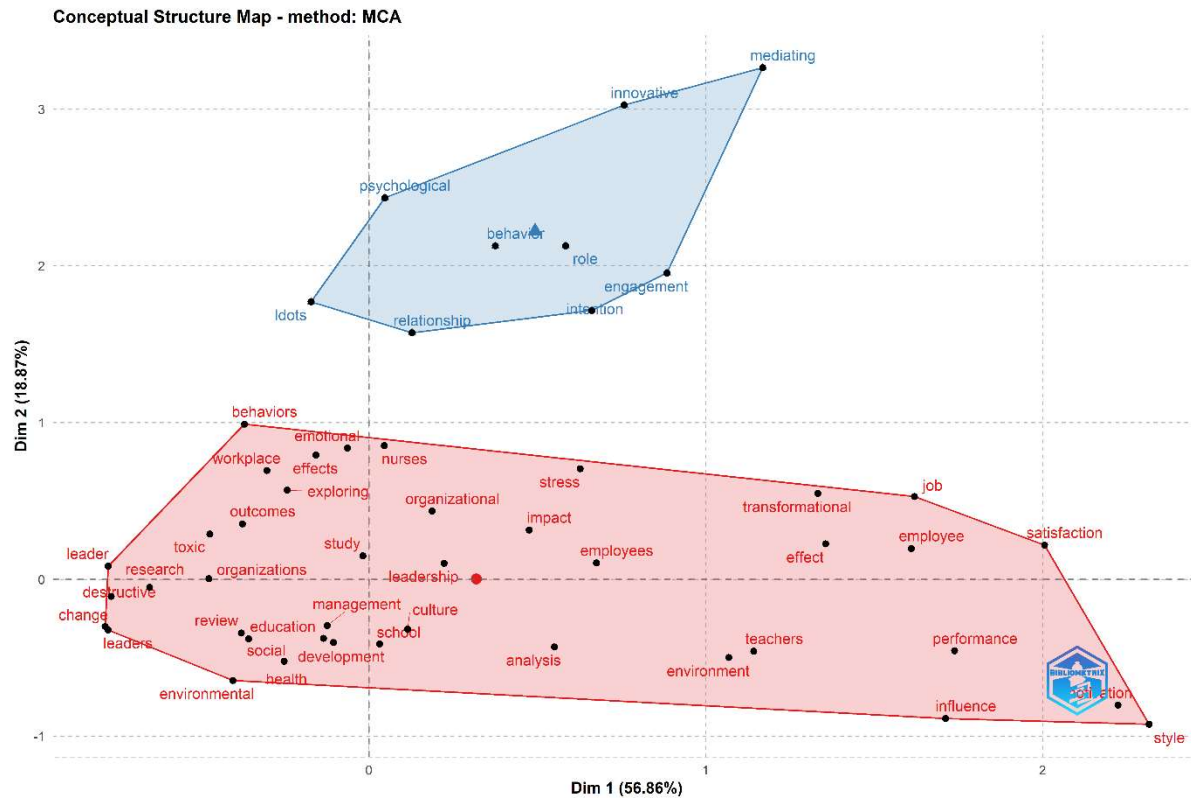
Figure 7: Factorial map analysis of studies related to toxic leadership

Trending topics in toxic leadership research

Figure 8 reflects the current trends and areas of interest within the field of toxic leadership research, highlighting the multifaceted nature of this phenomenon and its implications for individuals and organizations. This figure presents trends in research topics related to toxic leadership. There are topics with relatively low frequencies (e.g., "Toxic Chemicals," "Environmental Leadership") and those with high frequencies (e.g., "Toxic Leadership," "Transformational Leadership"). Many topics exhibit a consistent presence over time, with research spanning multiple decades (e.g., "Emotional Intelligence"). Some topics show more recent emergence, with significant research activity observed in the median and third quartile years (e.g., "Toxic Workplace," "Servant Leadership"). Topics like "Toxic Workplace," "Servant Leadership," and "Transformational Leadership" have seen increased attention in recent years, indicating emerging areas of interest. The median and third quartile years for these topics suggest ongoing research and growing importance in the field of toxic leadership studies. Certain topics like "Toxic Leadership," "Leadership Style," and "Employee Performance" demonstrate consistent research interest across all quartiles, indicating their enduring relevance. Stability in research frequency over time may suggest established areas of inquiry or persistent challenges in leadership and organizational behavior. Understanding temporal trends can guide researchers in identifying emerging areas for investigation and highlighting persistent research themes. The variability in quartile years

underscores the dynamic nature of research interests and the need for ongoing monitoring of scholarly developments.
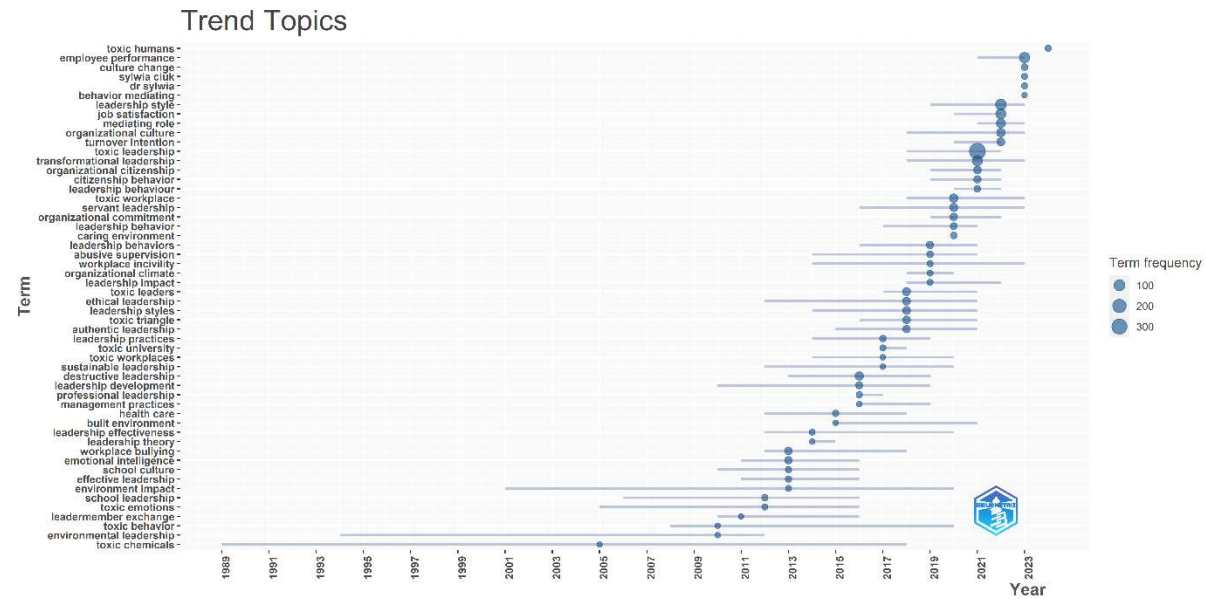

Figure 8: Trend topics related to studies on toxic leadership

The cluster "Motor Themes" encompasses diverse aspects of leadership, including styles, behaviors, effects, and organizational impacts. "Leadership" is the predominant theme, with various subtopics and related terms indicating a broad scope of inquiry. There is substantial interest in understanding leadership dynamics, with terms like "toxic," "emotional," "destructive," and "sustainable" reflecting specific areas of investigation. The cluster "Basic Themes" explores the impact of various factors on organizational dynamics and individual wellbeing. Terms like "engagement," "wellbeing," "climate," and "authentic" suggest a focus on positive organizational outcomes and employee experiences. There's an emphasis on understanding the role of different variables and their influence on organizational success and employee attitudes. The cluster "Emerging or Declining Themes" pertains to themes related to health and safety in organizational contexts. Terms like "toxicity," "safety," "quality," and "care" indicate concerns about workplace health, safety protocols, and employee wellbeing. There's a focus on developing frameworks and strategies to enhance health outcomes and create supportive work environments. The cluster "Niche Themes" centers on topics related to employee intentions, turnover, and behaviors. Terms like "turnover," "counterproductive," and "leave" suggest a focus on understanding factors influencing employee retention and behavior. There's likely a research interest in identifying strategies to reduce turnover rates and improve organizational commitment. This combination of all cluster focuses on topics related to the organizational environment and its impact on performance, satisfaction, and employee wellbeing. Terms like "performance," "motivation," "stress," and "satisfaction" highlight concerns about organizational effectiveness and employee

morale. There's a mix of generic environmental terms and specific organizational factors indicating a comprehensive examination of workplace environments, Figure 9.
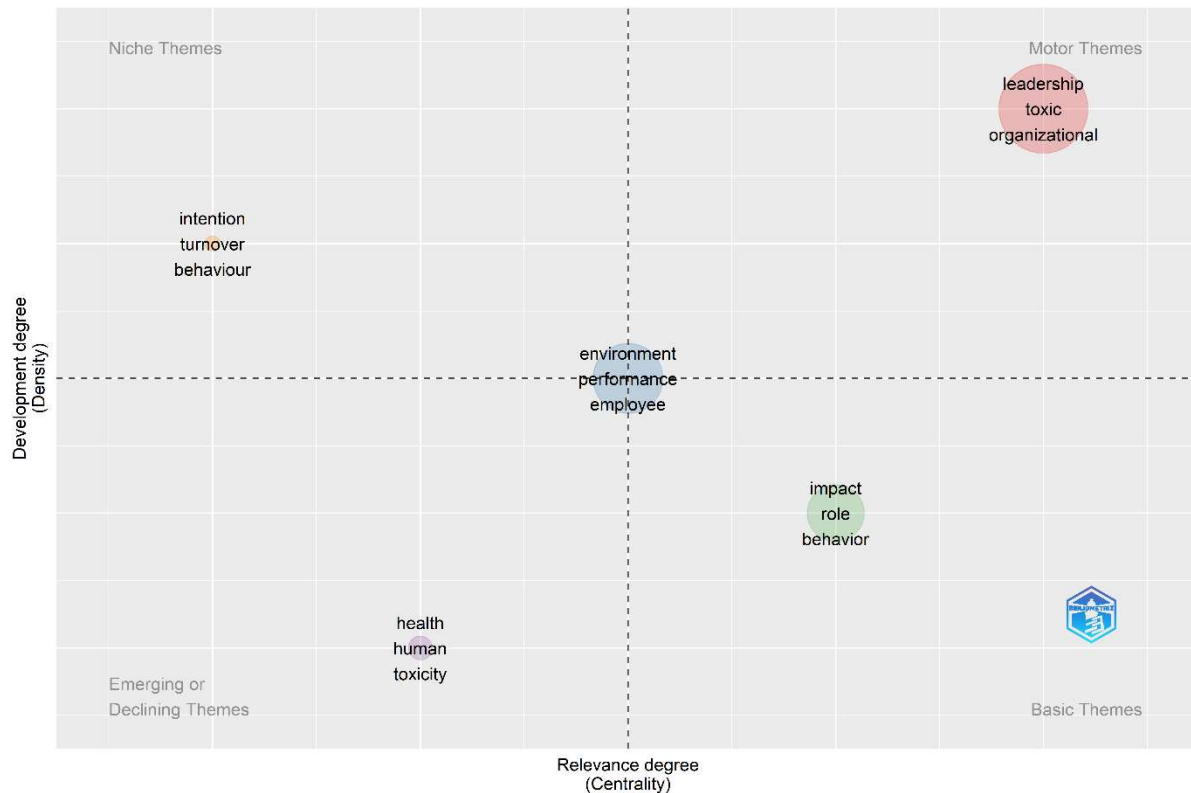

Figure 9: A comprehensive illustration of themes related to studies on toxic leadership

Discussion

The data provides a comprehensive overview of studies on toxic leadership, showcasing a sustained interest and multidisciplinary engagement with the subject. While it offers valuable insights into the breadth and depth of research in this field, there are also areas for improvement, particularly regarding citation metrics and keyword indexing. Table 1 underscores the importance of continued scholarly inquiry into toxic leadership and its implications for organizations and individuals. Figure 1 illustrates a clear upward trajectory in the scientific production of studies related to toxic leadership over the past several decades. This trend underscores the growing recognition of toxic leadership as a significant organizational issue and the increasing interest in understanding its dynamics and implications. The analysis of citable years provides valuable insights into the temporal dynamics of scientific production in studies on toxic leadership (Table 2). The decreasing citable years over time indicate a trend towards more immediate impact and relevance of research findings, highlighting the evolving nature of this field and the need for ongoing inquiry and engagement.

Findings from Table 3 suggest that the diverse range of sources contributes to the literature on toxic leadership, highlighting the interdisciplinary nature of research in this area and the global interest in understanding and addressing toxic leadership dynamics. The analysis of article frequency and ranking by source provides valuable insights into the distribution and impact of research on toxic leadership (Table 4). By identifying dominant sources and their contributions, researchers can gain a better understanding of the landscape of literature in this field and identify key platforms for disseminating and accessing relevant research findings.

The analysis of author contributions provides insights into the distribution of scholarly output in the field of toxic leadership, Figure 2. By identifying key contributors and their level of involvement, researchers can gain a better understanding of the individuals shaping the discourse and advancing knowledge in this field. Additionally, this analysis can help identify potential collaborators, mentors, or experts to engage with in further research endeavors. Figure 3 highlights the diverse patterns of author contribution and publication frequency within the field of toxic leadership research, shedding light on the individuals shaping the discourse and advancing knowledge in this important area of study. Publications enlisted in Table 5 collectively contribute to a deeper understanding of toxic leadership, its implications, and approaches for addressing and mitigating its effects within organizational contexts. Table 5 contributes to the scholarly discourse on toxic leadership and organizational cultures by offering insights, theoretical frameworks, and practical recommendations for addressing and mitigating toxic behavior at various levels of society and within organizations. They underscore the importance of understanding the root causes and manifestations of toxic behavior in order to foster healthier and more ethical work environments.

The frequency analysis, as shown in Figure 4, is a multidimensional exploration of toxic leadership, encompassing its effects on individuals, organizations, and broader societal contexts and reflecting a comprehensive understanding of its implications across various domains. Figure 5 demonstrates a progression from understanding toxic leadership as individual behavior to recognizing its broader organizational and societal implications. This evolution reflects a growing awareness of the complex interplay between leadership, organizational culture, and environmental factors in fostering or mitigating toxic behavior within organizations.

In Figure 6, Cluster 1 focuses on organizational dynamics, leadership styles, and environmental factors providing context for understanding the broader systemic influences on toxic leadership behavior. This theme emphasizes the importance of organizational culture, management practices, and the social environment in shaping leadership behavior and its impact on employees. Whereas, Cluster 2 centers around interpersonal relationships, psychological factors, and innovative strategies, complements the organizational perspective by delving into individual experiences and the mechanisms through which toxic leadership manifests. It underscores the significance of psychological resilience, effective communication, and innovative interventions in mitigating the harmful effects of toxic leadership. By collaborating and integrating insights from both clusters, researchers can foster a more comprehensive understanding of toxic leadership and develop

holistic strategies to promote healthier and more productive work environments. The factorial map analysis provides insights into the thematic relationships and dimensions within studies on toxic leadership, highlighting both the broad leadership context and the specific behavioral and psychological dimensions associated with toxic behavior in organizational settings (Figure 7).

Current research on toxic leadership highlights several trending topics (Figures 8 and 9). Scholars are examining the impact of toxic leaders on the workplace environment, delving into issues such as employee performance, satisfaction, and wellbeing. Destructive leadership behaviors are under scrutiny, with studies aiming to identify specific detrimental actions exhibited by toxic leaders. Additionally, there is a focus on the health implications of toxic leadership, exploring its effects on both physical and mental health outcomes among employees. Organizational culture is another area of interest, as researchers seek to understand how toxic leadership shapes norms, values, and employee attitudes within organizations. Leadership styles, particularly authoritarian, narcissistic, and abusive styles, are being investigated in relation to toxic leadership behaviors. Moreover, there is research on how toxic leadership affects employee motivation, performance, and job satisfaction. Workplace bullying facilitated by toxic leaders is also a prominent topic, with studies examining its prevalence and impact on individual wellbeing and organizational productivity. Ethical considerations are under scrutiny, with research exploring the absence of moral principles and integrity in toxic leadership behavior. Furthermore, scholars are investigating the potential of transformational leadership to mitigate the negative effects of toxic leadership and foster positive organizational outcomes. Finally, mediating factors such as organizational climate, employee engagement, and coping mechanisms are being studied to understand their influence on the relationship between toxic leadership and its outcomes. These research endeavors underscore the complex nature of toxic leadership and its implications for both individuals and organizations.

Conclusion

Toxic leadership is a pervasive issue in organizational settings, characterized by leaders who engage in destructive behaviors that harm both individuals and the overall performance of the organization. Analyzing data related to toxic leadership reveals several key trends and implications. Firstly, studies consistently show that toxic leaders often exhibit traits such as narcissism, machiavellianism, and psychopathy. These personality traits contribute to behaviors such as manipulation, bullying, and intimidation, which create a toxic work environment. Research by scholars such as Robert Hogan and Paul Babiak has shed light on the dark side of leadership, emphasizing the detrimental effects of leaders who prioritize their own interests over those of their team or organization. Secondly, the impact of toxic leadership on employees and organizational outcomes is well-documented. Employees working under toxic leaders report higher levels of stress, burnout, and job dissatisfaction. This leads to decreased morale, productivity, and innovation within the organization. Studies have also linked toxic leadership to higher turnover rates and lower organizational commitment, as employees are more likely to leave their jobs to escape a toxic work environment. Furthermore, research suggests that toxic leadership can have long-lasting effects on both individuals and organizations. Employees who experience abuse or

mistreatment from their leaders may suffer from psychological and physical health problems even after leaving the organization. Additionally, the negative reputation associated with toxic leadership can damage the organization's brand and make it difficult to attract and retain top talent in the future.

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