



RESEARCH ARTICLE

Unveiling scholarly insights: A bibliometric analysis of literature on gender bias at the workplace

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Abstract

Gender bias and discrimination in the workplace remain significant global challenges, impacting individuals and organizations. Despite heightened awareness and scholarly focus, a comprehensive, up-to-date evaluation of the literature's scientific impact and citation trends is missing. This research article addresses this gap through a bibliometric analysis from 2000 to 2023, assessing gender bias's scientific significance, citations, and pre-publication information. Utilizing tools like RStudio, VOSviewer, Dimensions analytics, and MS Excel, the study analyzes manuscripts from the Dimensions database. The analysis reveals notable trends, showing a steady rise in publications from 2003, with fluctuations in 2002 and 2008–2011, stability from 2012–2015, and a significant surge from 2016–2023, peaking in 2019–2022. The United States leads in publication quantity and collaboration. Key topics such as "Economics and Identity," the "glass cliff phenomenon," and the "climate for women in academic science" dominate citations. Prominent journals like "Building A New Leadership Ladder" and "Plos One" highlight the interdisciplinary nature of gender bias research. Influential contributors like Geffner CJ, Kim S, and Ryan MK are acknowledged for their dedication. This study underscores the interdisciplinary reach of gender bias research across human society, commerce, law, biomedical sciences, and psychology, offering valuable insights into publication trends, collaborative networks, and thematic developments. The findings emphasize the need for continued exploration and collaboration to address gender-related challenges in professional settings.

Keywords: Gender bias, Gender discrimination, Bibliometric analysis, Systematic literature review, Data visualization.

Introduction

Gender bias, as defined by the Cambridge Dictionary, is an "unfair difference in the way men and women are treated." This systemic disparity distorts objectivity and skews the perception of scientific evidence. Psychological literature extensively documents this phenomenon, with notable contributions from researchers such as Ceci and Williams (2011), AlGazali (2013), and Shen (2013). Gender bias involves treating individuals inequitably based on their gender, leading to significant disparities between men and women. Sociologically, it manifests in social systems that

fail to provide equal opportunities for upward mobility for both genders (Sumi, 2012). Gender stereotypes, generalized beliefs about the characteristics and behaviors of men and women, often reinforce these biases. Social role theory explains that these stereotypes arise from the differential allocation of men and women into distinct social roles in both domestic and professional settings (Eagly, 1987, 1997; Koenig and Eagly, 2014). Historically, women have primarily been responsible for domestic tasks and caregiving, while men have dominated competitive, things-oriented occupations (Lippa *et al.*, 2014). This division has perpetuated workplace environments where women frequently encounter gender inequalities (Abrams, 1991). Psychological research has explored the behavioral impacts of gender bias, showing how these biases can disadvantage women and favor men in various contexts. For instance, Handley *et al.* (2015) found that perceptions of gender bias in STEM fields differ significantly between men and women. Budden *et al.*'s (2008) study on journal acceptance rates revealed that female-authored manuscripts had a 7.9% higher acceptance rate in blind peer reviews, highlighting subtle gender biases in academic publishing. This has spurred extensive research into subtle gender biases across various sectors, including industry, sports, social activities, and academia (Handley *et*

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et al., 2015). Recognizing gender bias has prompted substantial research into employment opportunities, expectations, and career progression across different industries and academic disciplines (Annabi & Lebovitz, 2018; Hengel & Moon, 2020; James *et al.*, 2019). In academia, gender biases influence hiring decisions (Moss-Racusin *et al.*, 2012), perceptions of publication quality (Knobloch-Westerwick *et al.*, 2013), research publications (Hengel & Moon, 2018), peer review processes (Helmer *et al.*, 2017), citation patterns (Lariviere *et al.*, 2013), and tenure prospects (Jaschik, 2014). These biases significantly impact women's career development and recognition. Workplace discrimination affects women's earnings and opportunities, as exemplified by the gender wage gap (Peterson and Morgan, 1995), underrepresentation in leadership roles (Eagly and Carli, 2007), and slower career progression compared to men (Blau and DeVaro, 2007). These discriminatory practices contribute to women's lower socio-economic status and are influenced by human resources policies and decision-making processes. Additionally, workplace discrimination can negatively impact women's psychological and physical health, job satisfaction, organizational commitment, and overall performance (Goldenhar *et al.*, 1998; Adler *et al.*, 2000; Schmader *et al.*, 2008; Borrel *et al.*, 2010; Hicks-Clarke and Iles, 2000; Cohen-Charash and Spector, 2001). The Global Gender Gap Report 2023 by the World Economic Forum reveals that the global gender gap remains significant, with a score of 68.4% and a projected 131 years to achieve full gender parity at the current pace. To protect women's rights in the workplace, nations need to implement legislation and policies ensuring equal employment rights and prohibiting gender-based discrimination (Lin, 2021). This study aims to shed light on workplace gender biases through statistical analysis and interpretation of bibliometric data. Examining research patterns and trends it contributes valuable insights to the ongoing discourse on gender equality and workplace inclusivity.

Literature Review

The phenomenon of gender bias and its implications have been extensively studied across various fields. Gender bias, as a concept, is deeply rooted in the differential treatment of men and women, often leading to systemic disparities (Ceci & Williams, 2011; AlGazali, 2013; Shen, 2013). Carnes (2012), as cited in Handley *et al.* (2015), elaborates on how gender bias can compromise objectivity and distort scientific evidence. Social role theory provides a framework for understanding how gender stereotypes arise from the traditional allocation of men and women into specific social roles (Eagly, 1987, 1997; Koenig and Eagly, 2014). This theory posits that the persistent gendered division of labor observed historically and across various socio-economic structures, reinforces these stereotypes (Wood and Eagly, 2012). In the domestic sphere, women have traditionally taken on the majority of

routine household tasks and caregiving roles, while in the professional sphere, they have gravitated towards people-oriented, service-based occupations (Lippa *et al.*, 2014). These roles contrast with the competitive, things-oriented occupations typically dominated by men. The impact of gender bias in the workplace has been a focal point of psychological research, revealing how these biases can lead to systemic disadvantages for women. Handley *et al.* (2015) conducted experiments that highlighted differing perceptions of gender bias between men and women, particularly in STEM fields. These findings underscore the subtle and pervasive nature of gender biases, which can be challenging to identify and address. In academia, gender biases are well-documented and influence various aspects of career progression. Studies have shown that gender biases affect hiring decisions (Moss-Racusin *et al.*, 2012), perceptions of publication quality (Knobloch-Westerwick *et al.*, 2013), research publications (Hengel & Moon, 2018), peer review processes (Helmer *et al.*, 2017), citation patterns (Lariviere *et al.*, 2013), and tenure prospects (Jaschik, 2014). For example, Budden *et al.*'s (2008) study on journal acceptance rates revealed that female-authored manuscripts were more likely to be accepted in blind peer reviews, suggesting the presence of bias when reviewers are aware of the author's gender. The workplace environment itself often perpetuates gender inequalities, impacting women's earnings, leadership opportunities, and career progression (Peterson and Morgan, 1995; Eagly and Carli, 2007; Blau and DeVaro, 2007). These disparities are partly due to human resources policies and decision-making processes that disadvantage women. Additionally, workplace discrimination can have detrimental effects on women's psychological and physical health, job satisfaction, organizational commitment, and overall performance (Goldenhar *et al.*, 1998; Adler *et al.*, 2000; Schmader *et al.*, 2008; Borrel *et al.*, 2010; Hicks-Clarke and Iles, 2000; Cohen-Charash and Spector, 2001). The Global Gender Gap Report 2023 underscores the slow progress towards gender parity, highlighting the need for robust legislative and policy measures to protect women's rights in the workplace (Lin, 2021). Ensuring equal employment rights and prohibiting gender-based discrimination are crucial steps towards achieving workplace gender equality. This study aims to contribute to the understanding of workplace gender biases by employing statistical analysis and interpreting bibliometric data. By identifying patterns and trends in the existing research, this study seeks to provide valuable insights into the ongoing efforts to promote gender equality and inclusivity in the workplace.

Research Gap

The study on "Gender Bias" and "Workplace" identifies a research gap due to its reliance on the Dimensions database for bibliometric analysis. To address this, future

research should incorporate additional databases such as Scopus, Web of Science, Science Direct, and ERIC for a more comprehensive overview. While acknowledging the limitations of qualitative analysis in bibliometric research, the study recommends using various techniques for a better understanding of research production and impact. Future studies should explore methodologies beyond qualitative analysis, including case studies, interviews, surveys, or mixed-method approaches, to provide nuanced perspectives on initiatives addressing gender bias. There is a notable gap in emphasizing the need for additional empirical research on "Gender Bias," "Gender Discrimination," and "Workplace" goals. Longitudinal studies tracking changes in gender dynamics over time could offer a more dynamic understanding of workplace equality. Combining empirical studies with bibliometric analysis would provide practical insights into the challenges and successes of initiatives addressing gender-related issues in professional settings. The research gap is also evident in the broad reference to "the role of" within the context of "Gender Bias" or "Gender Discrimination" and "Workplace." Future research should investigate specific aspects such as organizational culture, leadership styles, or interventions, contributing to a detailed understanding of factors influencing gender dynamics. Additionally, assessing the effectiveness of interventions and policies designed to mitigate gender bias and promote inclusive organizational cultures is crucial. This analysis lays the groundwork for future research endeavors to address the complexities of gender bias in the workplace, fostering more equitable and diverse professional environments.

Research Methodology

Selection of Database

The Dimensions database is a comprehensive research information platform ideal for bibliometric studies. It integrates diverse data sources, including publications, grants, patents, clinical trials, and policy documents, offering extensive coverage across disciplines. Its advanced analytical tools and metrics facilitate in-depth analysis of research outputs, trends, and impact, supporting a wide range of research evaluation and strategic planning needs.

Search Protocol Used for the Extraction of Data

This ensures a focused dataset on gender-related issues in the workplace over a 24-year span, covering various types of scholarly outputs while addressing potential data overload from hyper-authored publications. The research article-related data collected from the Dimensions database is utilized for conducting the bibliometric analysis. The search term employed was as follows: "Gender Bias" OR "Gender discrimination" AND "Workplace" from the year 2000 to 2023. Using the aforementioned search terms, 572 records were found. Using the specified inclusion and exclusion

criteria, the researchers included 518 documents, i.e., 415 research articles, 90 book chapters, and 13 proceedings. For bibliometric analysis 36 preprints, 13 monographs, and 5 edited book chapters were eliminated. The acquired data were saved as tab-delimited files, encompassing the complete record and cited references.

Data Cleaning

Once the data is extracted from the Scopus database, the process of data cleaning is performed. During this process, all inadequate or duplicate entries are deleted. Entries with missing values or inappropriate data are discarded to ensure effective results for the study. Microsoft Excel is used for data cleaning purposes.

Selection of Software for the Analysis

In this study, Biblioshiny from RStudio and VOSviewer were utilized for performance analysis, science mapping, and network analysis of bibliometric data. Biblioshiny, leveraging the bibliometrix R package, provided an interactive web interface to analyze and visualize performance metrics, such as publication counts, citation analysis, and author productivity. VOSviewer was employed to create and visualize bibliometric networks, including co-authorship, citation, and keyword co-occurrence networks. These tools facilitated a comprehensive examination of research trends, relationships, and the overall impact of studies on gender bias and discrimination in the workplace, offering valuable insights into the academic landscape over a specified period.

Main Information of the Data

The search produced a total of 500 documents from 392 sources, authored by 1213 individuals. Among these, 141 documents were single-authored, and there was an average of 2.72 co-authors per document. International co-authorship accounted for 8.4% of the collaborations, with an average citation count of 20.1. These results revealed an annual growth rate of 15.27% and 267 different keywords were used. For a thorough bibliometric analysis, tools such as RStudio, VOSviewer, and MS Excel were employed. The summary of the Scopus data, prepared by researchers using the biblioshiny application in RStudio, is presented in Figure 1.

Findings and Results of the Study

As shown in Figure 2, the dataset represents the number of articles published in each year from 2000 to 2023. The



Figure 1: Main information about data

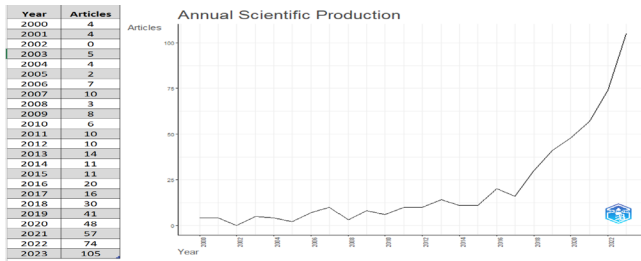


Figure 2: Annual publications trend

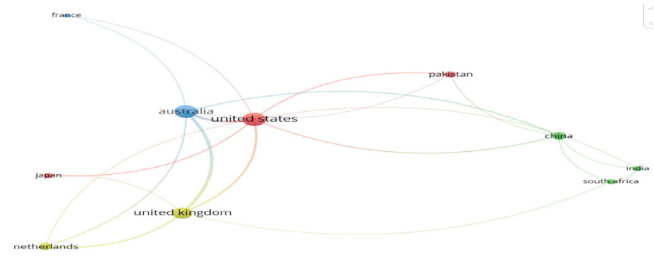


Figure 4: Country wise researcher's co-authorship network

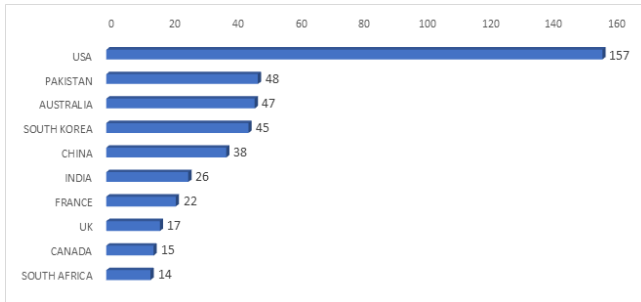


Figure 3: Top 10 most productive countries in domain

number of articles seems to have fluctuated in the early years (2000-2002) but started to rise consistently from 2003 onwards. In 2002, there is a noticeable dip with zero articles, indicating a potential change in publishing or data collection practices during that year. From 2003 to 2007, there's a gradual increase in the number of articles, peaking in 2007. However, fluctuations occur in the years 2008 to 2011, with some years showing a decrease compared to the previous years. The number of articles remains relatively stable from 2012 to 2015. A significant and consistent increase is observed from 2016 to 2023, indicating a surge in publication activity during this period. The peak years are 2019 to 2022, with 2022 having the highest number of articles (74). However overall highest research articles i.e. 105 are published in the year 2023.

The Most Prolific Countries

The dataset from dimensions database presented the chart of the top 10 most prolific countries contributing the highest number of publications from the year 2000 to 2023.

Figure 3 illustrates the top 10 countries based on the quantity of published documents, providing insights into the global distribution of research output. The United States emerges as the dominant contributor with 157 articles, indicating a substantial influence on the represented content. This suggests a robust presence in the realms of research, publications, or media output related to the subject matter. Following the United States, Pakistan follows with 48 articles, showcasing a significant presence in the field, albeit with a notably smaller output compared to the U.S. Australia and South Korea closely trail with 47 and 45 articles, respectively, highlighting their considerable

contributions to the subject matter. China and India exhibit a noteworthy presence in the dataset, contributing 38 and 26 documents, respectively, underscoring their strong representation in the research landscape. France and the UK follow suit with 22 and 17 articles, respectively, indicating varying levels of engagement. While China and India demonstrate a substantial presence, Canada's contribution is comparatively smaller. Additionally, Canada and South Africa each contribute 15 and 14 articles, respectively, suggesting a moderate but relatively consistent representation from these countries in the publication.

The network map of country co-authorship, depicted in Figure 4, showcases the collaboration patterns among nations. The criteria for generating the map include the top 10 countries, each with a minimum of 5 published documents. These selected countries are grouped into four clusters on the network map. The United States takes the lead in the red cluster concerning published documents, China leads the green cluster, Australia leads the blue cluster, and the United Kingdom leads the yellow cluster.

Notably, the United States emerges as the most collaborative country overall, boasting a total link strength (TLS) of 18. Australia closely follows as the second most collaborative nation, with a TLS of 17. Additionally, the United Kingdom and China exhibit TLS values of 13 and 7, respectively.

The Most Cited Publications

The Table 1 presents highly cited articles revealing notable trends and topics within the field. "Economics and Identity" by Akerlof Ga (2000, The quarterly journal of economics) has gained significant attention with 3498 citations. Its enduring impact suggests that the exploration of economics and identity has remained relevant over the years. "Think crisis–think female: The glass cliff..." by Ryan Mk (2011, Journal of Applied Psychology) delves into the glass cliff phenomenon. With 286 citations, it highlights the enduring interest in understanding gender stereotypes and their contextual variations, particularly during times of crisis. "The Climate for Women in Academic Science..." By Settles I.H. (2006, Psychology of Women Quarterly), focusing on the academic science environment for women, was published in 2006 and has accumulated 267 citations. It suggests ongoing

Table 1: Most prolific publications of the domain

Sr. No.	Row Labels	Author	Year	Journal	Citations
1	"Economics and Identity"	Akerlof Ga	2000	"The Quarterly Journal of Economics"	3498
2	"Think crisis—think female: The glass cliff and contextual variation in the think manager—think male stereotype"	Ryan Mk	2011	"Journal of Applied Psychology"	286
3	"The climate for women in academic science: the good, the bad, and the changeable"	Settles Ih	2006	"Psychology of Women Quarterly"	267
4	"How Women Engineers Do and Undo Gender: Consequences for Gender Equality"	Powell A	2009	"Gender Work and Organization"	245
5	"Gender and the labor market: What have we learned from field and lab experiments?"	Azmat G	2014	"Labour Economics"	224
6	"Gender Discrimination at Work"	Bobbitt-Zeher D	2011	"Gender & Society"	204
7	"Gender inequalities in the workplace: the effects of organizational structures, processes, practices, and decision makers' sexism"	Stamarski Cs	2015	"Frontiers in Psychology"	191
8	"Gender fatigue: The ideological dilemma of gender neutrality and discrimination in organizations"	Kelan Ek	2009	"Canadian Journal of Administrative Sciences / Revue Canadienne Des	165

concerns and interest in gender dynamics within academic settings. "How Women Engineers Do and Undo Gender..." by Powell A (2009, Gender Work and Organization) explores the actions and consequences for gender equality among women engineers. With 245 citations, it indicates sustained interest in understanding gender dynamics within specific professional domains. "Gender and the labor market: What have we learned..." by Azmat G (2014, Labour Economics), published in 2014, has gathered 224 citations, showcasing ongoing interest in understanding gender-related aspects in the labor market through field and lab experiments. "Gender Discrimination at Work" by Bobbitt-Zeher D (2011, Gender & Society), the 2011 publication on gender discrimination at work, with 204 citations, reflects sustained attention to the issue within the social context. "Gender inequalities in the workplace: the effects..." by Stamarski Cs (2015, Frontiers in Psychology), published in 2015, explores gender inequalities in the workplace, accumulating 191 citations. The attention to organizational structures and decision makers' sexism indicates ongoing interest in addressing workplace gender disparities. "Gender fatigue: The ideological dilemma..." by Kelan Ek (2009, Canadian Journal of Administrative Sciences), published in 2009, has 165 citations and addresses the ideological challenges related to gender neutrality and discrimination in organizations. "A 'Ton of Feathers': Gender Discrimination in Academic Medical Careers..." By Carr PL (2003, Journal of Women's Health), this 2003 article on gender discrimination in academic medical careers, with 130 citations, suggests enduring concerns and discussions about gender-related challenges in academia. "The Current Status of Women in Surgery" by Stephens Eh (2020, Jama Surgery), the most recent article on the list, published in 2020, has garnered 126 citations. It sheds light on the current status of women in surgery, indicating a contemporary interest in understanding gender dynamics in specific professional fields.

Most Prolific Sources

The most notable sources spanning the years 2000 to 2023 are depicted in Figure 5, highlighting journals that contribute significantly to the research theme under examination. Among the most contributing journals based on the number of documents, "Building A New Leadership Ladder" leads With 11 documents. Following closely are "Advances in Social Science, Education and Humanities Research," "Lecture Notes in Education Psychology and Public Media," And "Plos One," Each Contributing 8 documents. "Communications in Humanities Research" follows with 7 documents, while "Equality Diversity and Inclusion an International Journal" has contributed 6 documents. "Gender Work and Organization" and "Sex Roles" both have 5 documents each. Additionally, "Advances in Economics Management and Political Sciences" and "Frontiers in Psychology" are notable contributors with 4 documents each. These journals collectively represent a diverse range of disciplines, reflecting their significance in the scholarly landscape.

Publications by Most Prolific Researchers

In Figure 6, it is evident that the researchers who have produced the highest number of publications in the realm of "Gender Bias" or "Gender Discrimination" and "Workplace," several researchers have produced a significant number of publications, showcasing their dedication to advancing knowledge in this field. The leading contributors, in terms of publication count, include Geffner Cj with 11 publications, Kim S and Ryan MK with 8 publications each, Kim J with 6 publications, and Peters K with 5 publications. Additionally, Haslam Sa, Li S, M. Schilperoord MS, P. Spiegel PS, Patterson L, and Temkin SM have all contributed substantially with 4 publications each. These scholars have exhibited a considerable dedication to enhancing the comprehension

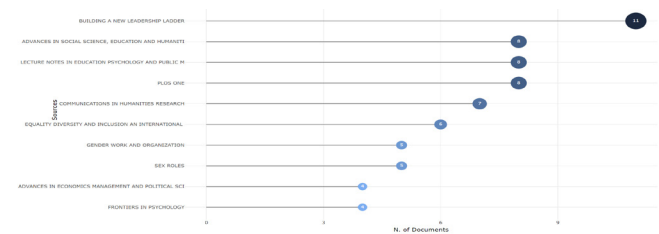


Figure 5 : Top 10 sources in domain

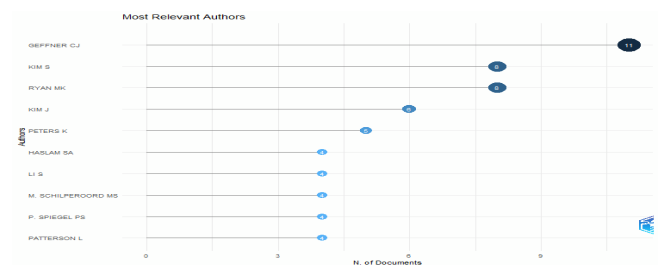


Figure 6: Major contributing researchers in the domain

of gender bias and workplace discrimination through their extensive publication histories. Their contributions highlight the importance of ongoing research in this critical area, emphasizing the need for continued exploration and awareness of gender-related issues in professional settings.

Publications by Subject Area

The chart presented in Figure 7 visually represents the distribution of subject areas within international publications on “Gender Bias” or “Gender Discrimination” and “Workplace” showcase a broad and multidisciplinary approach, spanning various subject areas. The distribution of subject areas and their respective publication counts illustrates the extensive reach of research in this field. In the domain of human society, there are 253 publications, emphasizing the societal implications of gender bias. Commerce, management, tourism and services contribute significantly with 168 publications, highlighting the relevance of these issues in professional and managerial contexts. Law and legal studies follow closely with 99 publications, addressing the legal aspects of gender discrimination. Biomedical and clinical sciences, with 57 publications, delve into the health-related dimensions of workplace gender bias. Health sciences, with 44 publications, further explores the impact on overall well-being in professional settings. Psychology contributes 32 publications, shedding light on the psychological aspects of gender bias. Philosophy and religious studies bring in 22 publications, offering insights into the philosophical and ethical considerations of gender issues at the workplace. Education, with 18 publications, explores the educational aspects of addressing and preventing gender bias. Language, communication and culture, with 17 publications, delve into the communicative and cultural dimensions of workplace gender dynamics. Finally, economics, with 16 publications, examines the economic implications and considerations related to gender bias in professional environments. This diverse distribution underscores the interdisciplinary nature of research on gender bias and discrimination in the workplace. The significant number of publications across various subject areas reflects the comprehensive exploration of gender-related issues, emphasizing their profound impact on both professional and societal contexts.

Most Prominent Publication Affiliates

Figure 8 offers a detailed insight into the key affiliates within the field of research related to publications on “Gender Bias” or “Gender Discrimination” and “Workplace”. The University of Michigan–Ann Arbor emerges as a notable contributor with 6 articles, showcasing a dedicated focus on gender-related research in the workplace. Following closely is the University of Washington with 5 articles, indicating a significant presence in the scholarly discourse on gender bias. Kyung Hee University, with 4 articles, represents a notable contribution from an international perspective, suggesting a global

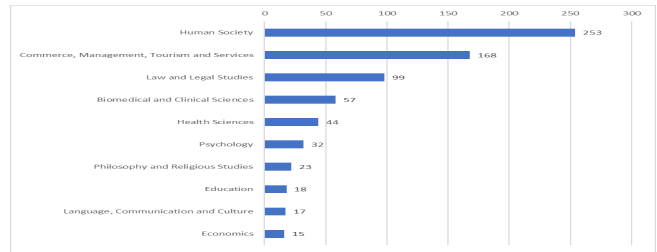


Figure 7: Frequency of publication by subject area

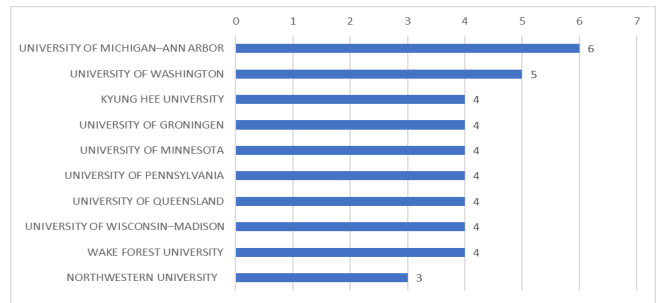


Figure 8: Publication count on by affiliates



Figure 9: Keyword tree map

engagement in the study of gender dynamics in professional settings. Similarly, the University of Groningen, the University of Minnesota, the University of Pennsylvania, and the University of Queensland each have 4 articles, signifying their active involvement in advancing knowledge on gender-related issues. Other key affiliates include the University of Wisconsin–Madison and Wake Forest University, both with 4 articles, emphasizing their commitment to research in this field. Additionally, Northwestern University is recognized with 3 articles, further contributing to the collective body of knowledge on gender bias and discrimination in the workplace. These affiliations highlight the diverse range of institutions actively engaged in research on gender-related issues, emphasizing the collaborative and widespread nature of scholarly efforts to address and understand gender dynamics in professional environments.

Most Commonly Used ‘Author Keywords’ and ‘Indexed Keywords’

In the depicted Figure 9, a keyword treemap provides researchers with valuable insights into the most frequently occurring words within “Gender Bias” or “Gender

Discrimination” and “Workplace” related publication documents. In examining the landscape of “Gender Bias” or “Gender Discrimination” and “Workplace,” a keyword treemap has surfaced critical insights by highlighting the most frequently occurring words. The terms and their respective frequencies are noteworthy as the term “humans” appears 71 times, suggesting a comprehensive exploration of gender dynamics encompassing both genders. Similarly, “female” and “male” are prominent with frequencies of 66 and 47, respectively. A significant focus on “sexism” and “workplace” is evident with frequencies of 39 and 36, emphasizing a critical examination of discriminatory practices within professional settings. Methodological considerations come to the forefront with terms like “surveys and questionnaires” registering 22 occurrences, underscoring the importance of empirical data collection in researching gender bias. The term “sexual harassment” appears 18 times, pointing to a specific area of concern within the dynamics of gender bias within the workplace. The nuanced exploration of age-related aspects is suggested by the frequencies of “adult” (27) and “middle aged” (17). Furthermore, a geographic focus on the “united states” is indicated with a frequency of 17, possibly delving into variations in gender bias within this specific region. This keyword treemap provides researchers with a visual representation of the prevalent themes and concepts in studies related to gender bias and discrimination in the workplace. It offers valuable insights into the most frequently addressed topics, contributing to a nuanced understanding of this field of research.

Figure 10 presents the analysis of topic trends within the realm of “Gender Bias” or “Gender Discrimination” and “Workplace” and reveals dynamic patterns over different years. Notable key terms, such as “humans,” “female,” and “male,” exhibit distinct temporal distributions as the topic term “humans” has seen a significant increase in frequency, peaking in 2022, indicating a growing emphasis on the human aspect in discussions related to gender bias and workplace dynamics. The term “female” has consistently maintained a high frequency, with a peak in 2020, highlighting sustained attention to the experiences and challenges faced by women in the workplace, and

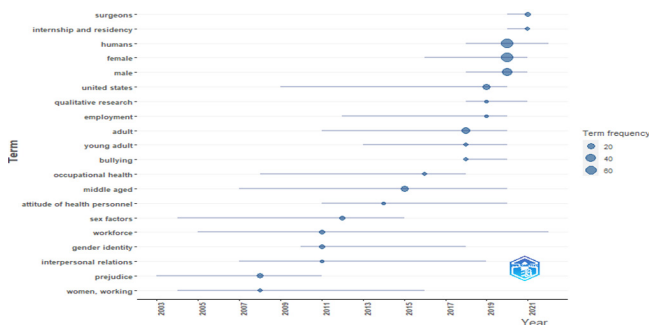


Figure 10: Trending topics over the years

“male” mirrors the pattern of “female,” maintaining a steady presence and reaching its highest frequency in 2020. This suggests a balanced exploration of gender dynamics involving both genders. Further, “adult” shows a fluctuating pattern, with increased attention in 2018 and 2020, reflecting a nuanced examination of age-related aspects in the context of gender bias. Furthermore, “middle-aged” indicates sporadic attention, peaking in 2020, suggesting intermittent exploration of age-related dimensions within the realm of gender bias. The country “United States” exhibits a gradual increase, reaching its highest frequency in 2020, possibly signifying a growing interest in understanding variations in gender bias within the United States. Further, “prejudice” experiences fluctuations, with a peak in 2011, suggesting periods of heightened focus on prejudicial aspects within the context of gender bias. The word “sex factors” shows variations, with peaks in 2004 and 2015, reflecting changing perspectives on the role of biological factors in gender-related discussions. Furthermore, “gender identity” experiences fluctuations, with peaks in 2011 and 2018, indicating evolving considerations of identity within the discourse on gender bias. The “workforce” shows a fluctuating pattern, with increased attention in 2011 and 2022, suggesting periodic exploration of gender dynamics within the broader context of the workforce. In summary, the evolution of these key terms suggests dynamic shifts in focus over the years, reflecting changing priorities and perspectives within the field of research on gender bias and workplace dynamics.

Discussion

The comprehensive bibliometric analysis covering 2000 to 2023, utilizing Dimensions database data, provides valuable insights into “Gender Bias,” “Gender Discrimination,” and “Workplace” research. Employing meticulous methodology ensures a rigorous examination. Temporal analysis uncovers intriguing publication patterns. Early fluctuations give way to a consistent rise from 2003 onwards, with dips in 2002 and fluctuations in 2008-2011. Stability from 2012 to 2015 is followed by a significant surge from 2016 to 2023, peaking in 2019-2022, indicating growing scholarly interest. Analysis of prolific countries highlights U.S. dominance, emphasizing global collaboration patterns. The country network map shows clusters led by the United States, China, Australia, and the United Kingdom, underlining the global nature. Collaborative strength, measured by total link strength (TLS), positions the U.S. as the most collaborative country, closely followed by Australia. Examining most cited articles reveals enduring interest in key topics, emphasizing their ongoing relevance and significance in the scholarly landscape. Prolific journals like “Building A New Leadership Ladder” and “Plos One” contribute significantly, showcasing a diverse disciplinary landscape. Examination of prolific researchers, including Geffner Cj, Kim S, and Ryan MK, emphasizes their

dedication to advancing knowledge. The distribution of subject areas underscores the interdisciplinary nature of research on gender bias. Affiliations of key contributors, involving institutions worldwide, reflect global engagement. The analysis of keywords and topic trends provides nuanced understanding, highlighting critical areas of focus and dynamic shifts. In summary, this analysis significantly contributes to knowledge of gender bias in the workplace, offering an overview of trends, contributors, networks, and evolving themes. These insights can inform future research agendas, policy discussions, and interventions, contributing to ongoing efforts to advance gender equality. Insights from the analysis guide future research agendas, focusing on evolving themes and critical areas within gender bias and workplace dynamics. Findings inform policymakers, ensuring nuanced policies address gender bias challenges in workplaces. The study serves as a foundation for designing interventions, allowing organizations to tailor strategies based on identified patterns and influential contributors. Emphasis on global collaboration encourages international cooperation in addressing gender bias, recognizing the influential role of key countries. Information on prolific researchers and affiliations enhances global educational initiatives, deepening understanding of gender dynamics in professional settings. Highlighted subject areas underscore the importance of interdisciplinary approaches for a holistic understanding of gender bias. Findings contribute to ongoing efforts for gender equality, guiding awareness, and advocacy initiatives. Understanding cited articles informs communication strategies.

Conclusion

This study presents a detailed bibliometric analysis of gender bias and discrimination in the workplace from 2000 to 2023, revealing significant trends and influential publications. Despite increasing scholarly attention, a comprehensive evaluation of scientific impact and citation trends remains necessary. The analysis highlights the United States' dominance in publication quantity and collaboration, with key topics including "Economics and Identity" and the "glass cliff phenomenon. The study also identifies limitations, such as reliance on the Dimensions database. Future research should incorporate additional databases like Scopus and Web of Science and utilize methodologies beyond bibliometric analysis, including case studies and mixed-method approaches. Examining specific factors like organizational culture and leadership styles, along with longitudinal studies, can provide deeper insights. This study lays a foundation for future research to address gender bias in the workplace, promoting more equitable and inclusive professional environments.

Practical Implications of the Study

The practical implications of this study that can benefit the various stakeholders are defined below:

Policy Development and Implementation

Organizations can use the insights from this study to develop and implement policies that specifically address gender bias. This includes creating equitable hiring practices, ensuring fair pay, and providing equal opportunities for career advancement.

Training and Awareness Programs

The findings highlight the importance of training programs that educate employees and management about the existence and impact of gender bias. Awareness campaigns can help mitigate unconscious biases and promote a more inclusive workplace culture.

Diversity and Inclusion Initiatives

Companies can leverage the study's insights to strengthen their diversity and inclusion initiatives. This includes setting measurable diversity goals, fostering an inclusive work environment, and regularly assessing progress.

Leadership Development

By understanding the role of gender bias, organizations can tailor their leadership development programs to support women in leadership roles. Mentorship and sponsorship programs can be particularly effective.

Evaluation of HR Practices

Human resources departments can use the study to evaluate and improve their practices related to recruitment, promotion, and performance evaluations. Implementing blind review processes can reduce bias, as evidenced by the findings on journal acceptance rates.

Longitudinal Tracking

Organizations can benefit from longitudinal tracking of gender dynamics to understand the long-term impact of implemented changes. Regular assessments and adjustments ensure sustained progress toward gender equality.

Research and Collaboration

Academic and industry collaborations can be strengthened to further explore gender bias. Joint research projects and sharing of best practices can lead to innovative solutions and broader systemic change.

By applying these practical implications, organizations can create more equitable, inclusive, and productive workplaces that leverage the full potential of their diverse workforce.

Limitations

While the analysis offers valuable insights, there are certain limitations to consider. The dataset's reliance on publication counts may not fully capture the quality or impact of the articles, and variations in citation practices across disciplines can skew the results. Additionally, the analysis does not delve

into the specific content of the articles, missing nuances in the research themes. The data's temporal nature may also limit the examination of real-time developments, and the inclusion of more recent publications may provide a more accurate representation of the current state of research in this domain. Finally, the analysis does not consider regional or cultural variations, which could significantly influence the dynamics of gender bias in the workplace.

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