

## Navigating the Labyrinth: A Bibliometric Analysis of Women's Career Advancement Research - Trends, Impacts, and Future Directions for Knowledge Management

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### Abstract

Examining 492 papers from 313 sources, this bibliometric study investigates research patterns in women's professional development during 1976–2024. According to the report, publications have an 8.2% yearly growth rate; Australia, the USA, and the UK top in contribution. Important topics are mentoring, gender equality, work-life balance, and the glass ceiling. Early study focused on differences between men and women. More recently, research has turned its attention to organizational culture, leadership, and global views. Highly referenced publications from several fields show the field's interdisciplinary character. The study notes both current issues like intersectionality and women in STEM as well as lasting subjects like the glass ceiling. For academics, this means giving understudied topics a priority, using mixed-methods methodologies, and following changing trends adaptation. Libraries should promote multidisciplinary research, strike a mix between historical and modern materials, and create specific information literacy initiatives to help this expanding subject prosper.

**Keywords:** Women, Career, Career advancement, bibliometric analysis, biblioshiny

### Introduction

Though the terrain of women's job involvement has changed significantly in recent years, women still have a difficult road ahead for career progression (Rath et al., 2019, Metz, 2003). Researchers, legislators, and businesses both now pay more and more attention to this complicated problem, which has resulted in a flood of studies analyzing the several obstacles and chances influencing women's paths of employment. For academics and practitioners trying to comprehend and solve the ongoing gender discrepancies in career development, the fast expansion in this area of study offers both possibilities and obstacles.

A useful technique for navigating this enormous body of knowledge is bibliometric analysis, which sheds light on popular publications, cooperative networks, and research trends (Manterola et al., 2024; Haustein & Larivière, 2014). The intellectual structure of a field and new areas of research can be uncovered through bibliometric studies that analyze citation trends, co-authorship, and keyword usage (Zupic & Čater, 2014). There is a lacuna in our comprehension of the changing research landscape that is specifically concentrated on the career advancement of women, despite the fact that bibliometric analyses have been conducted in a variety of domains (Deshpande et al., 2023).

By means of a thorough bibliometric analysis of studies on women's career development, this work seeks to close this discrepancy. With data taken from the Scopus database, our study covers 48-year period from 1976 to 2024 with 492 papers from 313 various sources. With an annual growth rate of 8.2%, this dataset reflects a varied and growing body of research reflecting the field's rising importance and scholarly interest.

The primary objectives of this research are to:

1. Identify key research themes and their evolution over time in the field of women's career advancement
2. Map the collaborative networks among researchers and institutions contributing to this area of study
3. Determine the most influential publications, authors, and countries shaping the discourse on women's career progression
4. Analyze emerging trends and potential future directions in research on women's career advancement

We use a variety of bibliometric methods—including citation analysis, co-authorship analysis, and keyword co-occurrence analysis—to meet these goals. We do a comprehensive and easily available bibliometric analysis using the R programming environment—more especially, the bibliometrix package and its matching biblioshiny library(Büyükkidik, 2022).

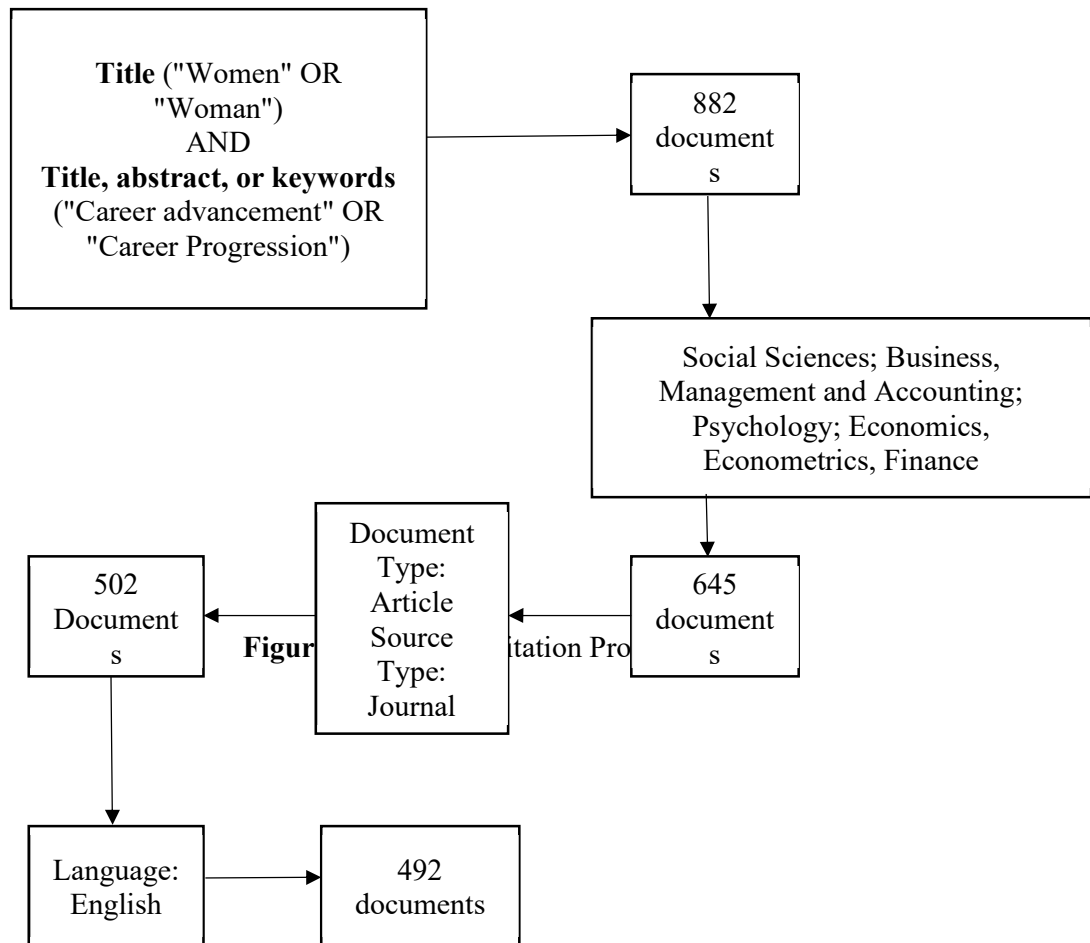
By means of a methodical review of the conceptual framework of research on women's professional development, identification of research frontlines, and highlighting of possible future directions of inquiry, this study adds to the corpus of information already in use. Our study provides insightful analysis by aggregating the great body of knowledge in this topic for those trying to grasp the present situation of research, find possible partners, and spot new study prospects. In addition, this bibliometric study is an important tool for organizations, practitioners, and legislators who are trying to find ways to help women advance in their careers and combat the chronic gender inequality that exists in the workplace.

This article is organized mostly as follows: We first introduce a thorough technique covering our analytical approach and data collecting procedure. We next give a general summary of the bibliometric findings together with author impact assessments, publication patterns, and citation analyses. We then explore major issues and their relationships by means of a theme study of the research field. At last, we address the consequences of our results, point up areas of study lacking, and suggest future possibilities for women's professional development.

### **Data Extraction Methodology**

The review methodology for delimiting data followed a systematic approach (MacFarlane et al., 2022)to ensure comprehensive and relevant results. To review the topic, the authors chose Scopus database for its huge collection of scientific articles. The initial search utilized specific keywords in the article title ("Women" OR "Woman") combined with terms in the title, abstract, or keywords ("Career advancement" OR "Career Progression"), yielding 882 results. To refine the scope, subject area filters were applied, focusing on Social Science, Business,

Economics, Econometrics and Finance, and Psychology, which reduced the dataset to 645 entries. Further delimitation was achieved by restricting the document type to articles only, resulting in 504 documents. The publication type was then narrowed to journal articles, yielding 502 results. Finally, to ensure consistency in analysis, the language was restricted to English, producing a final dataset of 492 articles for review. This multi-step filtering process allowed for a targeted and manageable corpus of literature directly relevant to women's career advancement across key disciplinary areas (Chapman, 2021).



The R programming environment was utilized to conduct the bibliometric study, with particular emphasis on the bibliometrix package and its corresponding biblioshiny library (Büyükkidik, 2022). For quantitative study in bibliometrics, this method provides a thorough and easily understandable framework. The first step was to collect data, which meant getting important bibliographic data from reliable academic sources (MacFarlane et al., 2022). The bibliometrix package was then used in R Studio to do a variety of bibliometric analysis on this imported data. The functionalities of the program made it possible to compute several bibliometric indicators: publishing trends, author impact measures, citation analyses, and cooperative networks (Zupic & Čater, 2014). The biblioshiny library was used to improve the interactive study of the findings and visualizing of them. Built on bibliometrix, this web-based interface offered a clear platform for creating dynamic charts, graphs, and tables, thereby enabling a more interesting and interactive study of the bibliometric data (González-Hernández et al., 2021). In addition to simplifying the analytical procedure, bibliometrix and biblioshiny allowed a more complex and aesthetically appealing display of the bibliometric results, therefore

providing insightful analysis of the structure and dynamics of the research topic under examination (Caputo & Kargina, 2021)

### Overview of information:

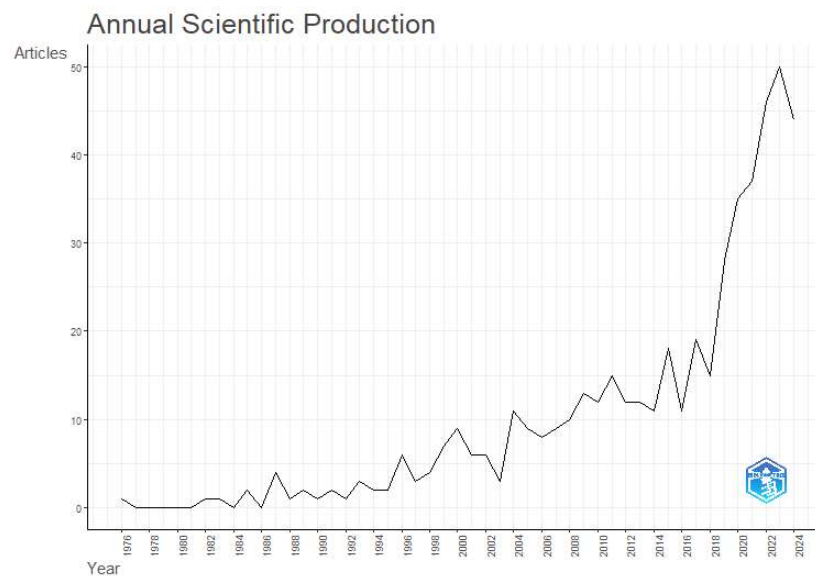
While perusing information on women's career progression, we came upon some quite captivating material. The research covers a period of 48 years, from 1976 to 2024. There is a total of 492 documents from 313 different sources, indicating that this discussion involves more than just a few individuals. The field is experiencing tremendous expansion at an annual pace of 8.2%. There is a strong desire among individuals to engage in a discussion on this topic. Research, on average, is quite recent as records typically have an approximate age of 9 and a half years. Additionally, there are 1142 authors included in the group. While a few brave individuals may write independently, the majority of articles involve the collaboration of two or three writers. I noticed that slightly more than sixteen percent of papers include international co-authors. It is advisable to increase global collaboration. Given that all the content consists of papers, it is considered relevant for research purposes rather than being just opinion pieces or any other type of content. Given the extensive study being conducted on many aspects of women's career progression, it is evident that this topic is currently a prominent concern in the research community. Indeed, it is commendable to witness such unwavering attention being given to this vital issue.

**Table 1: Overview of the Data Extracted from the database**

| Description                        | Results   |
|------------------------------------|-----------|
| <b>MAIN INFORMATION ABOUT DATA</b> |           |
| Timespan                           | 1976:2024 |
| Sources (Journals, Books, etc)     | 313       |
| Documents                          | 492       |
| Annual Growth Rate %               | 8.2       |
| Document Average Age               | 9.51      |
| Average citations per doc          | 22.2      |
| References                         | 26513     |
| <b>DOCUMENT CONTENTS</b>           |           |
| Keywords Plus (ID)                 | 570       |
| Author's Keywords (DE)             | 1126      |
| <b>AUTHORS</b>                     |           |
| Authors                            | 1142      |
| Authors of single-authored docs    | 119       |
| <b>AUTHORS COLLABORATION</b>       |           |
| Single-authored docs               | 128       |
| Co-Authors per Doc                 | 2.54      |
| International co-authorships %     | 15.85     |
| <b>DOCUMENT TYPES</b>              |           |
| article                            | 492       |

## Annual Scientific Production

The data on annual scientific production on women career advancement, as depicted in both the graph and the table, reveals several key trends over the decades. Starting from the year 1976, with a single article published, the early years show sporadic activity, with occasional years of no publications at all. For instance, the late 1970s and early 1980s were characterized by a relatively low level of scientific output, often with zero or just a few articles published annually. A notable change appears in the mid-1990s, where the number of published articles starts to increase gradually. This period marks the beginning of more consistent research activity, with figures oscillating between 3 and 9 articles per year. However, it is post-2000 that we observe a significant uptrend. The data from 2004 onwards reveals a more pronounced rise in scientific production, with publications regularly exceeding 10 articles per year. The most striking surge occurs from 2019 onwards. This period exhibits an exponential growth in the number of scientific articles, with the numbers escalating from 28 articles in 2019 to a peak of 50 articles in 2023. The year 2024, although incomplete, already records 44 articles, suggesting that the growth trend might persist or stabilize at a high level.

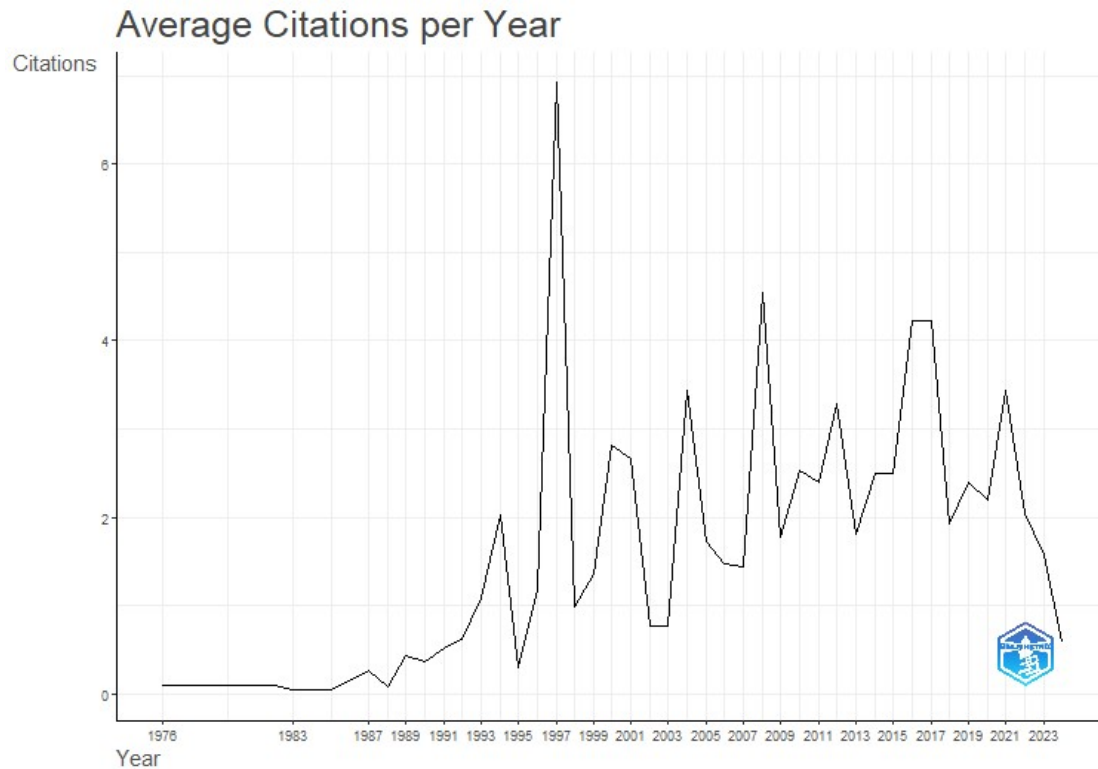


**Figure 2.** Annual production rate in the field of Women and Career Advancement

## Annual Citations Per Year

The data reveals that during the early years (1976-1990), scientific articles had modest citation rates with long-lasting relevance, reflecting slow but steady accumulation of impact over time. A significant increase in citations occurred between 1993 and 1999, particularly in 1997, where certain publications achieved exceptionally high citation counts, indicating major contributions to the field of Women and career advancement. The early 2000s continued this trend, with fluctuating but high citation rates per article, particularly in 2000 and 2004, marking a period of influential research. However, from 2009 onwards, although the citation rates remained steady, there was a noticeable decline in the average impact of articles, with the most recent years (2017-2024) showing a sharp drop in citations per article. This decline suggests that while more articles are being published, their average citation impact is lower, possibly due to a shift in research focus, increased competition, or the short time frame for newer articles to

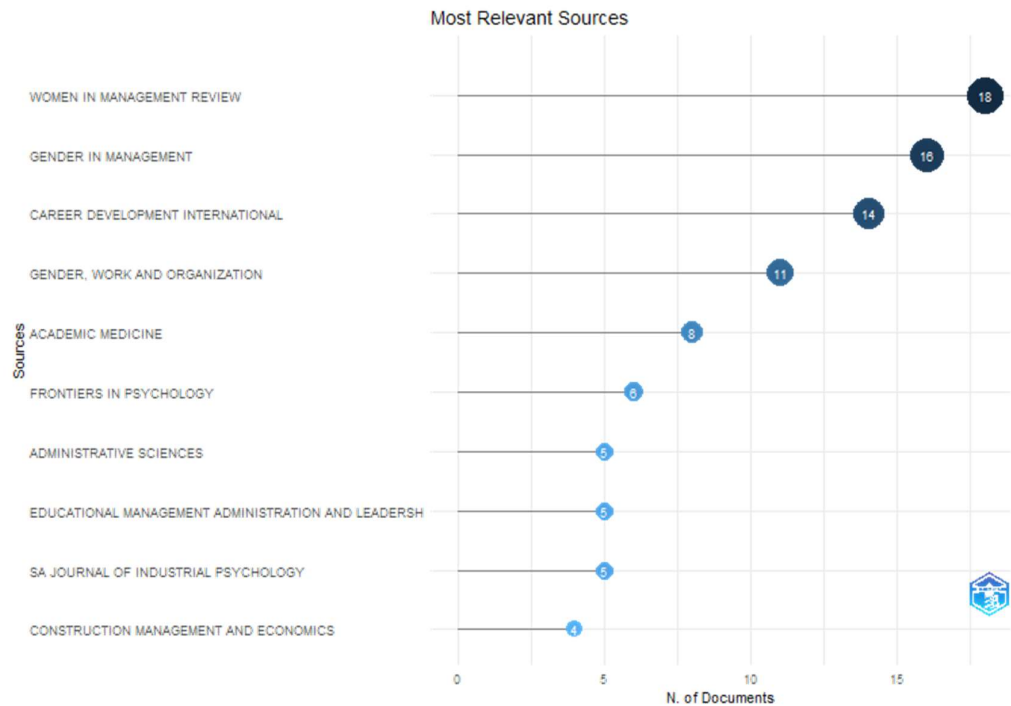
accumulate citations.



**Figure 3.** Annual citation rate in the field of Women and Career Advancement

### Most Relevant Sources

The data highlights key academic journals central to research on gender, management, and career development. The most frequently cited journals, such as "Women in Management Review," "Gender in Management," and "Career Development International," are pivotal in these fields. Journals like "Gender, Work and Organization" and "Gender in Management" emphasize the intersection of gender with organizational behavior, while interdisciplinary contributions from "Academic Medicine" and "Frontiers in Psychology" indicate the broadening scope of gender studies across various domains. Additionally, journals like "Educational Management Administration and Leadership," "SA Journal of Industrial Psychology," and "Journal of Business Ethics" reflect the application of gender and management research across sectors. Emerging trends are captured in specialized journals like "Advancing Women in Leadership Journal," and global perspectives are provided by journals such as "Global Business Review" and "Review of Public Personnel Administration." Collectively, these sources offer a comprehensive foundation for advancing research and informing policies on gender, management, and career development.



**Figure 3.** Most relevant journals in the field of Women and Career Advancement

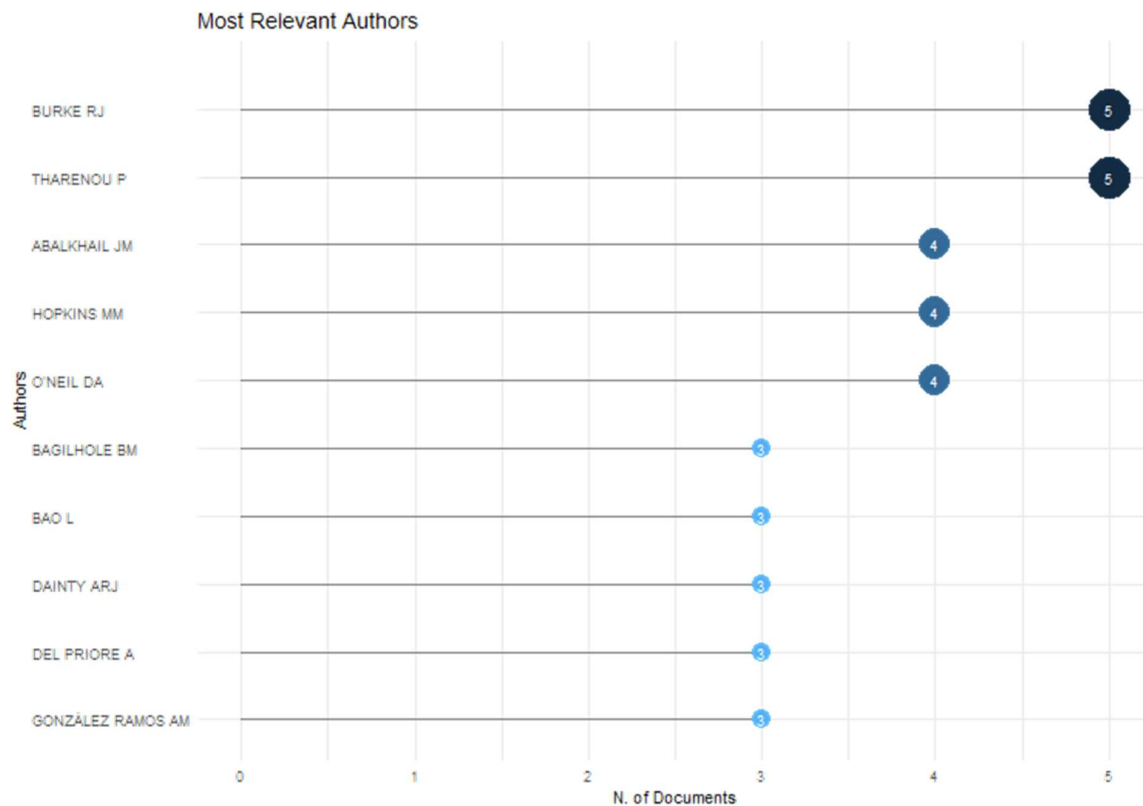
**Table 2.** Top 10 Journals relevant to the field of Women and Career Advancement

| Sources  | Articles |
|--|----------|
| WOMEN IN MANAGEMENT REVIEW                           | 18       |
| GENDER IN MANAGEMENT                                 | 16       |
| CAREER DEVELOPMENT INTERNATIONAL                     | 14       |
| GENDER, WORK AND ORGANIZATION                        | 11       |
| ACADEMIC MEDICINE                                    | 8        |
| FRONTIERS IN PSYCHOLOGY                              | 6        |
| ADMINISTRATIVE SCIENCES                              | 5        |
| EDUCATIONAL MANAGEMENT ADMINISTRATION AND LEADERSHIP | 5        |
| SA JOURNAL OF INDUSTRIAL PSYCHOLOGY                  | 5        |
| CONSTRUCTION MANAGEMENT AND ECONOMICS                | 4        |

Most Relevant Authors

After analyzing the prominent authors in the topic of gender, management, and career development, it is evident that there are several major contributors who stand out based on their article counts and fractionalized contributions. R.J. Burke and P. Tharenou have the maximum number of articles, with each of them having five. Tharenou's fractionalized count is slightly higher, suggesting a more significant individual involvement in their publications. Additional noteworthy authors consist of J.M. Abalkhail, M.M. Hopkins, and D.A. O'Neil, all of whom have authored four pieces. Nevertheless, the extent of their fractionalized contributions differs, with Abalkhail demonstrating a more pronounced individual influence in comparison to Hopkins and O'Neill. Authors such as S. Kumra and H.A. Tlaiss have made notable contributions with three papers each. However, Tlaiss has a larger fractionalized count,

suggesting a strong presence in the subject. A.M. González Ramos and L. Treanor both make considerable contributions, with Treanor having a larger fractionalized count, indicating a substantial individual impact despite having only three papers. Emerging writers such as C. Luke and K. Whitehead have a smaller number of papers, but their contributions are fully or almost entirely fractionalized. This indicates that their work is impactful and focused. These observations emphasize a combination of well-known and up-and-coming researchers who are advancing studies in gender, management, and career development. There is a significant focus on both the number and excellence of their contributions.



**Figure 4.** Most relevant journals in the field of Women and Career Advancement

**Table 3.** Top 10 Journals relevant to the field of Women and Career Advancement

| Authors           | Articles | Articles Fractionalized |
|-------------------|----------|-------------------------|
| BURKE RJ          | 5        | 2.5                     |
| THARENOU P        | 5        | 4.5                     |
| ABALKHAIL JM      | 4        | 3                       |
| HOPKINS MM        | 4        | 1.5                     |
| O'NEIL DA         | 4        | 1.5                     |
| BAGILHOLE BM      | 3        | 1                       |
| BAO L             | 3        | 2.5                     |
| DAINTY ARJ        | 3        | 1                       |
| DEL PRIORE A      | 3        | 3                       |
| GONZÁLEZ RAMOS AM | 3        | 1.333333333             |



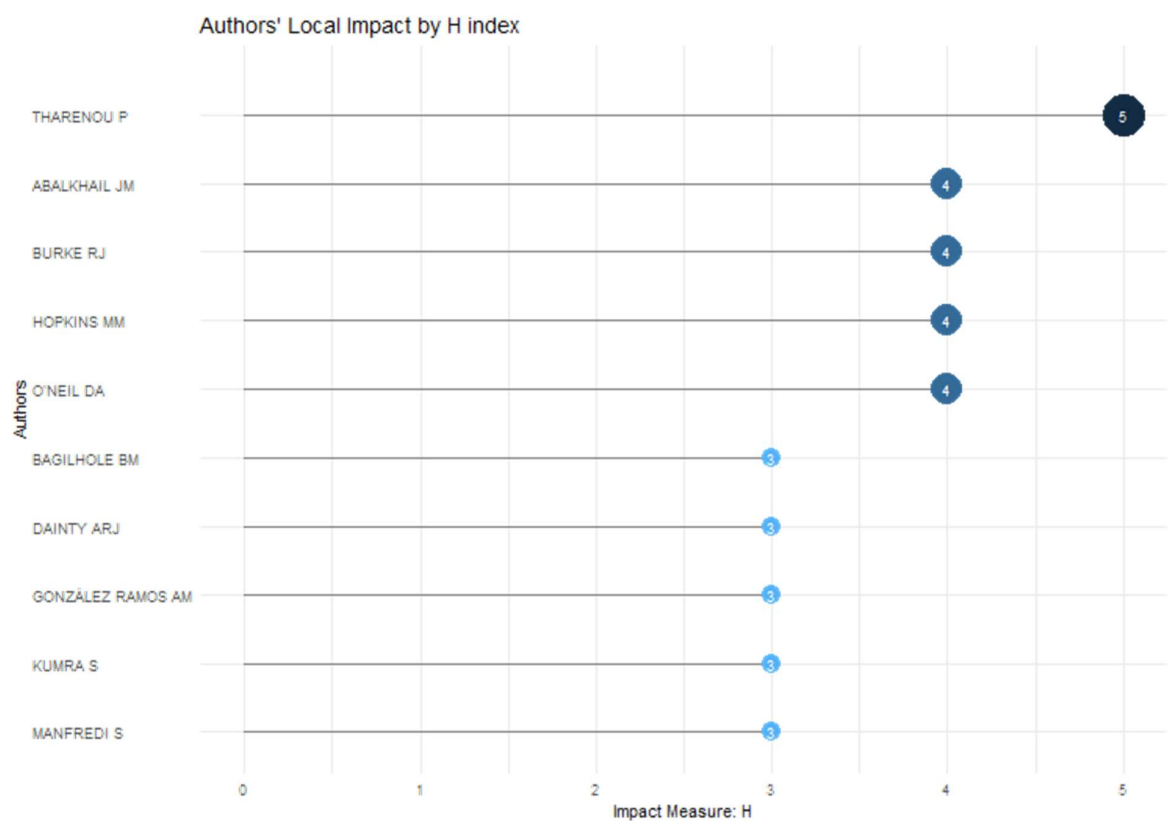
## Authors impact

The analysis of author impact reveals a diverse landscape of researchers with varying levels of influence and productivity in the field. THARENOU P emerges as a standout contributor, boasting the highest h-index of 5 and an impressive total citation count of 483 across 5 publications. This suggests that THARENOU P's work has had a significant and sustained impact on the field since they began publishing in 1990. Interestingly, while THARENOU P leads in overall impact, other researchers show promising trajectories in different metrics. For instance, TREANOR L, despite having started publishing only in 2020, demonstrates the highest m-index of 0.6, indicating a rapid rise in impact relative to career length. This could point to emerging influential voices in the field.

The data also highlights the varied career spans of the researchers, ranging from established scholars like THARENOU P (active since 1990) to more recent entrants like TODAK N (active since 2022). This diversity in career stages suggests a field that is both building on established research and welcoming new perspectives. Another interesting observation is the variation in publication counts. While some researchers like THARENOU P and BURKE RJ have 5 publications each, others have fewer but still maintain notable impact. For example, ABALKHAIL JM has only 4 publications but maintains a respectable h-index of 4, suggesting that their work, though less voluminous, has been well-received and influential. This underscores the point that in this field, impact is not solely a function of quantity, but also of the relevance and quality of the research produced.

**Table 4. Top 15 Authors with high impact in the field of woman and career advancement**

| Author            | h_index | g_index | m_index    | TC  | NP | PY_start |
|-------------------|---------|---------|------------|-----|----|----------|
| THARENOU P        | 5       | 5       | 0.14285714 | 483 | 5  | 1990     |
| ABALKHAIL JM      | 4       | 4       | 0.4        | 162 | 4  | 2015     |
| BURKE RJ          | 4       | 5       | 0.13333333 | 66  | 5  | 1995     |
| HOPKINS MM        | 4       | 4       | 0.23529412 | 348 | 4  | 2008     |
| O'NEIL DA         | 4       | 4       | 0.23529412 | 348 | 4  | 2008     |
| BAGILHOLE BM      | 3       | 3       | 0.11538462 | 280 | 3  | 1999     |
| DAINTY ARJ        | 3       | 3       | 0.11538462 | 280 | 3  | 1999     |
| GONZÁLEZ RAMOS AM | 3       | 3       | 0.25       | 69  | 3  | 2013     |
| KUMRA S           | 3       | 3       | 0.17647059 | 184 | 3  | 2008     |
| MANFREDI S        | 3       | 3       | 0.12       | 154 | 3  | 2000     |
| MCDADE SA         | 3       | 3       | 0.14285714 | 162 | 3  | 2004     |
| MORAHAN PS        | 3       | 3       | 0.14285714 | 162 | 3  | 2004     |
| NEALE RH          | 3       | 3       | 0.11538462 | 280 | 3  | 1999     |
| TLAISS HA         | 3       | 3       | 0.25       | 142 | 3  | 2013     |
| TREANOR L         | 3       | 3       | 0.6        | 40  | 3  | 2020     |



**Figure 5.**Top 10 Authors with high impact in the field of woman and career advancement

**Most relevant Affiliations**

The analysis of the most relevant affiliations provides valuable insights into the institutional landscape of research in this field. The University of California stands out as the leading institution with 18 articles, highlighting its significant contribution to the body of research.

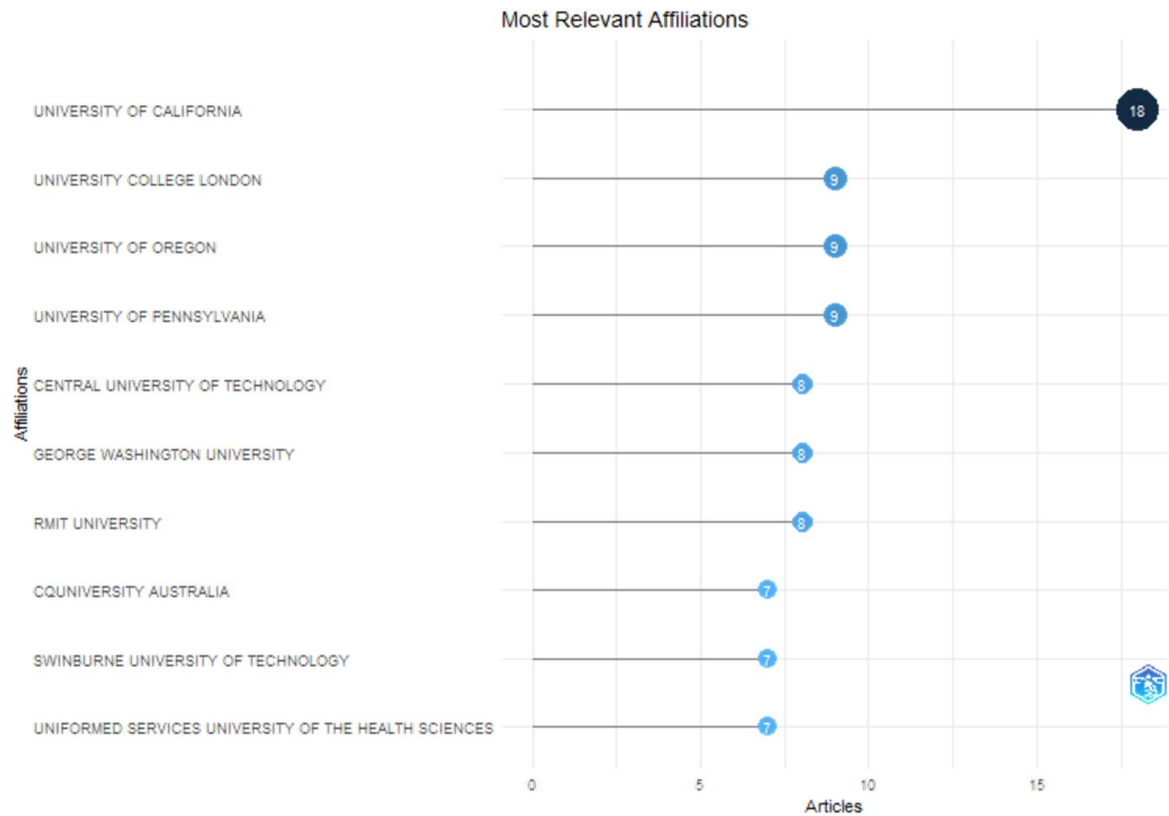
This is followed closely by University College London and the University of Oregon, each with 9 articles, demonstrating a strong presence of both American and British institutions at the forefront of this research area. The data reveals a notable concentration of research output among top-tier universities, with institutions like the University of Pennsylvania, George Washington University, and RMIT University also featuring prominently. This suggests that these institutions may have strong research programs or notable scholars in this field. However, it's also encouraging to see a diverse range of institutions represented, including universities from different countries and regions, as well as specialized institutions like the Central University of Technology and the Uniformed Services University of the Health Sciences. Interestingly, the list includes both traditional research powerhouses and institutions that might be considered less conventional in certain academic circles.

For instance, the presence of institutions like CQUniversity Australia and the University of Salford alongside more widely recognized research universities suggests a democratization of research in this field, with valuable contributions coming from a wide range of academic environments. The data also points to potential research clusters or collaborations. For example, the strong showing of Australian universities (RMIT, CQUniversity Australia, Swinburne University of Technology) might indicate a particularly active research community in the field

of women and career progression in this country. Similarly, the presence of multiple UK-based institutions suggests that this could be a significant area of study in British academia for the research in this particular field.

**Table 5.** Top 10 affiliations relevant to the field of Women and Career Advancement

| Affiliation  | Articles |
|--|----------|
| UNIVERSITY OF CALIFORNIA                             | 18       |
| UNIVERSITY COLLEGE LONDON                            | 9        |
| UNIVERSITY OF OREGON                                 | 9        |
| UNIVERSITY OF PENNSYLVANIA                           | 9        |
| CENTRAL UNIVERSITY OF TECHNOLOGY                     | 8        |
| GEORGE WASHINGTON UNIVERSITY                         | 8        |
| RMIT UNIVERSITY                                      | 8        |
| CQUNIVERSITY AUSTRALIA                               | 7        |
| SWINBURNE UNIVERSITY OF TECHNOLOGY                   | 7        |
| UNIFORMED SERVICES UNIVERSITY OF THE HEALTH SCIENCES | 7        |



**Figure 6.** Top 10 affiliations relevant to the field of Women and Career Advancement

### Most productive countries

The analysis of the most productive countries in terms of research output provides a clear picture of the global distribution of scholarship in this field. The United States emerges as the dominant force, with an impressive 409 publications, far outstripping the next closest competitors. This substantial lead underscores the USA's central role in driving research in this area, possibly due to factors such as funding availability, number of institutions, or a long-standing tradition of scholarship in this field.

The United Kingdom and Australia follow as the second and third most productive countries, with 175 and 137 publications respectively. This strong showing from English-speaking countries might suggest that language plays a role in research dissemination, or it could reflect shared academic traditions or research priorities. The significant contributions from these countries, along with Canada (39 publications), also point to a possible Anglo-American dominance in the field. Interestingly, India emerges as the fourth most productive country with 70 publications, ahead of many European nations. This could indicate a growing research capacity in India in this particular field, or perhaps a specific focus area that aligns with Indian research priorities or societal needs. The presence of South Africa (48 publications) and Malaysia (46 publications) in the top ranks is also noteworthy, suggesting that this research area has relevance and traction beyond the traditional Western academic powerhouses. European countries like Italy (28 publications), Spain (15 publications), and the Netherlands (13 publications) also feature in the list, albeit with lower publication counts.

This could suggest either a different research focus in these countries or perhaps language barriers in publishing in predominantly English-language journals. The appearance of China (16 publications) on the list, while not at the top, could be indicative of growing interest and capacity in this research area in the world's most populous country.

**Table 6.** Top 10 productive countries relevant to the field of Women and Career Advancement

| Region       | Frequency |
|--------------|-----------|
| USA          | 409       |
| UK           | 175       |
| AUSTRALIA    | 137       |
| INDIA        | 70        |
| SOUTH AFRICA | 48        |
| MALAYSIA     | 46        |
| CANADA       | 39        |
| ITALY        | 28        |
| NEW ZEALAND  | 26        |
| CHINA        | 16        |

### Most cited countries

The analysis of the most cited countries provides valuable insights into the global impact and influence of research in this field. The United States not only leads in productivity but also in total citations, amassing 2,249 citations. This reinforces the USA's position as a leader in both the quantity and impact of research in this area. The high average article citation of 25.6 for US publications further underscores the influential nature of research originating from American institutions.

The United Kingdom and Australia follow closely behind the USA in total citations, with 1,264 and 854 citations respectively. Their average article citations (23.4 for the UK and 22.5 for Australia) are comparable to that of the USA, suggesting that research from these countries is similarly impactful on a per-article basis. This data corroborates the earlier observation of Anglo-American dominance in the field, not just in terms of productivity but also in terms of research impact.

Interestingly, some countries show a high impact despite lower productivity. Turkey, for instance, has the highest average article citations at 84.5, significantly higher than any other country. This could indicate that while Turkish research output in this field is not as voluminous, the publications that do emerge are highly influential. Similarly, Finland shows a high average of 49.7 citations per article, suggesting that Finnish research in this area, though not as abundant, is well-regarded and frequently cited. It's worth noting that some countries with high productivity don't necessarily show proportionally high citation counts. India, for example, ranks fifth in productivity but ninth in total citations, with a relatively low average of 9.2 citations per article.

This discrepancy could be due to various factors, such as the recency of publications, the specific subtopics being researched, or the journals in which the research is being published. The presence of countries like Saudi Arabia, China, and the United Arab Emirates in the list of most cited countries suggests that impactful research in this field is truly global, extending beyond the traditional Western academic centers. This global distribution of influential research could be indicative of the universal relevance of the field's topics or the success of international collaboration and knowledge dissemination efforts.

**Table 7.** Top 10 highly cited countries relevant to the field of Women and Career Advancement

| Country        | TC   | Average Article Citations |
|----------------|------|---------------------------|
| USA            | 2249 | 25.6                      |
| UNITED KINGDOM | 1264 | 23.4                      |
| AUSTRALIA      | 854  | 22.5                      |
| CANADA         | 287  | 22.1                      |
| INDIA          | 202  | 9.2                       |
| TURKEY         | 169  | 84.5                      |
| FINLAND        | 149  | 49.7                      |
| GERMANY        | 137  | 27.4                      |
| SOUTH AFRICA   | 134  | 8.4                       |
| NEW ZEALAND    | 130  | 21.7                      |

### Most globally cited documents

The analysis of the most globally cited documents provides crucial insights into the key works that have shaped the field. The most cited paper, authored by BUTTNER EH in 1997 and published in the Journal of Small Business Management, has garnered an impressive 547 citations. This high citation count, coupled with a normalized citation score of 2.82, suggests that this paper has had a sustained and significant impact on the field over time. Recent papers also show strong citation performance, indicating the dynamic nature of the field. For instance, the 2016 paper by HOWE-WALSH L in Studies in Higher Education has already accumulated 227 citations, with a high citation rate of 25.22 per year and a notable normalized citation score of 5.97. This suggests that the paper addresses a timely and relevant topic that has quickly gained traction in the research community. The list spans a wide timeframe, from 1996 to 2017, demonstrating both the enduring relevance of older seminal works and the quick impact of newer contributions.

Papers from the early 2000s, such as METZ I's 2001 paper in Group & Organization Management and AYCAN Z's 2004 paper in Applied Psychology, continue to be highly cited, indicating their foundational nature in the field. Interestingly, the papers come from a diverse range of journals, including those focused on business ethics, higher education, construction management, and sociology. This diversity suggests that the research field intersects with multiple disciplines and has broad relevance across different sectors and academic areas. The variation in citation patterns is also noteworthy. While some papers have high total citations, others stand out for their citations per year or normalized citation scores. For example, LUTTER M's 2015 paper in American Sociological Review has a high normalized citation score of 4.94, indicating a strong and growing impact relative to its publication date.

**Table 8.** Top 10 highly cited documents (globally) relevant to the field of Women and Career Advancement

| Paper                                | Total Citations | TC per Year | Normalized TC |
|--------------------------------------|-----------------|-------------|---------------|
| BUTTNER EH, 1997, J SMALL BUS MANAGE | 547             | 19.5357143  | 2.82444062    |
| O'NEIL DA, 2008, J BUS ETHICS        | 234             | 13.7647059  | 3.02716688    |
| HOWE-WALSH L, 2016, STUD HIGH EDUC   | 227             | 25.2222222  | 5.97368421    |
| DAINTY ARJ, 2000, CONSTR MANAGE ECON | 199             | 7.96        | 2.82938389    |
| SCHROEN AT, 2004, ACAD MED           | 173             | 8.23809524  | 2.40277778    |
| METZ I, 2001, GROUP ORGAN MANAGE     | 157             | 6.54166667  | 2.45953003    |
| AYCAN Z, 2004, APPL PSYCHOL          | 155             | 7.38095238  | 2.15277778    |
| KUMRA S, 2008, BR J MANAGE           | 149             | 8.76470588  | 1.92755498    |
| THARENOU P, 2010, J BUS ETHICS       | 124             | 8.26666667  | 3.26315789    |
| LUTTER M, 2015, AM SOCIOL REV        | 123             | 12.3        | 4.94196429    |

### Most locally cited documents

The analysis of the most locally cited documents provides valuable insights into the papers that have been particularly influential within this specific research area. METZ I's 2001 paper in Group & Organization Management emerges as the most locally cited document with 14 local citations. Interestingly, this paper also has a high global citation count of 157, suggesting its broad impact both within and beyond this specific research area. HOWE-WALSH L's 2016 paper in Studies in Higher Education is the second most locally cited document with 13 local citations.

This paper shows a remarkably high ratio of local to global citations (227 global citations), indicating its particular relevance to this research area. Its high normalized local and global citation scores (5.95 and 5.97 respectively) further underscore its significant and growing impact. The list reveals some interesting patterns in the relationship between local and global citations. For instance, RATH TS's 2019 paper in Women's Studies International Forum has a very high ratio of local to global citations (60%), suggesting that while it may not be widely cited globally, it is particularly relevant and influential within this specific research area. The temporal spread of these highly locally cited papers, ranging from 1994 to 2019, indicates that both foundational works and recent contributions are shaping the current discourse in the field.

This suggests a field that both respects its theoretical foundations and remains open to new ideas and findings. It's also worth noting the diversity of journals represented in this list, including those focused on business ethics, gender management, hospitality management, and women's studies. This diversity reflects the interdisciplinary nature of the research area and suggests that influential work is being published across a range of academic outlets.

**Table 9.** Top 10 highly cited documents (Locally) relevant to the field of Women and Career Advancement

| Document                           | Year | Local Citations | Global Citations | Ratio      | Normalized Local Citations | Normalized Global Citations |
|------------------------------------|------|-----------------|------------------|------------|----------------------------|-----------------------------|
| METZ I, 2001, GROUP ORGAN MANAGE   | 2001 | 14              | 157              | 8.91719745 | 3.65217391                 | 2.45953003                  |
| HOWE-WALSH L, 2016, STUD HIGH EDUC | 2016 | 13              | 227              | 5.72687225 | 5.95833333                 | 5.97368421                  |
| O'NEIL DA, 2008, J BUS ETHICS      | 2008 | 10              | 234              | 4.27350427 | 4.34782609                 | 3.02716688                  |
| TLAISS H, 2010, GENDER MANAGE      | 2010 | 10              | 79               | 12.6582278 | 5.2173913                  | 2.07894737                  |
| MOONEY S, 2009, GENDER MANAGE      | 2009 | 9               | 89               | 10.1123596 | 6.5                        | 3.11859838                  |
| AYCAN Z, 2004, APPL PSYCHOL        | 2004 | 9               | 155              | 5.8064516  | 6.1875                     | 2.15277778                  |

|   |      |   |    |                    |            |            |
|---|------|---|----|--------------------|------------|------------|
|   |      |   |    | 1                  |            |            |
| BROWNELL J, 1994,<br>INT J HOSP MANAGE      | 1994 | 8 | 73 | 10.95<br>8904<br>1 | 1.77777778 | 1.168      |
| FRANCIS V, 2017,<br>CONSTR MANAGE<br>ECON   | 2017 | 6 | 53 | 11.32<br>0754<br>7 | 5.7        | 1.57098284 |
| RATH TS, 2019,<br>WOMEN'S STUD INT<br>FORUM | 2019 | 6 | 10 | 60                 | 7.30434783 | 0.69306931 |
| SMITH P, 2012,<br>GENDER MANAGE             | 2012 | 6 | 29 | 20.68<br>9655<br>2 | 3.27272727 | 0.67836257 |

### Most Locally cited references

The analysis of the most locally cited references provides crucial insights into the foundational works and key influences shaping this research area. Kanter R.M.'s 1977 book "Men and Women of the Corporation" emerges as the most cited reference with 48 citations. The enduring influence of this work, published over four decades ago, underscores its seminal nature in the field of gender and organizational studies. Methodological works also feature prominently in the list of most cited references. Braun V. and Clarke V.'s 2006 paper on thematic analysis in psychology is the second most cited reference with 28 citations.

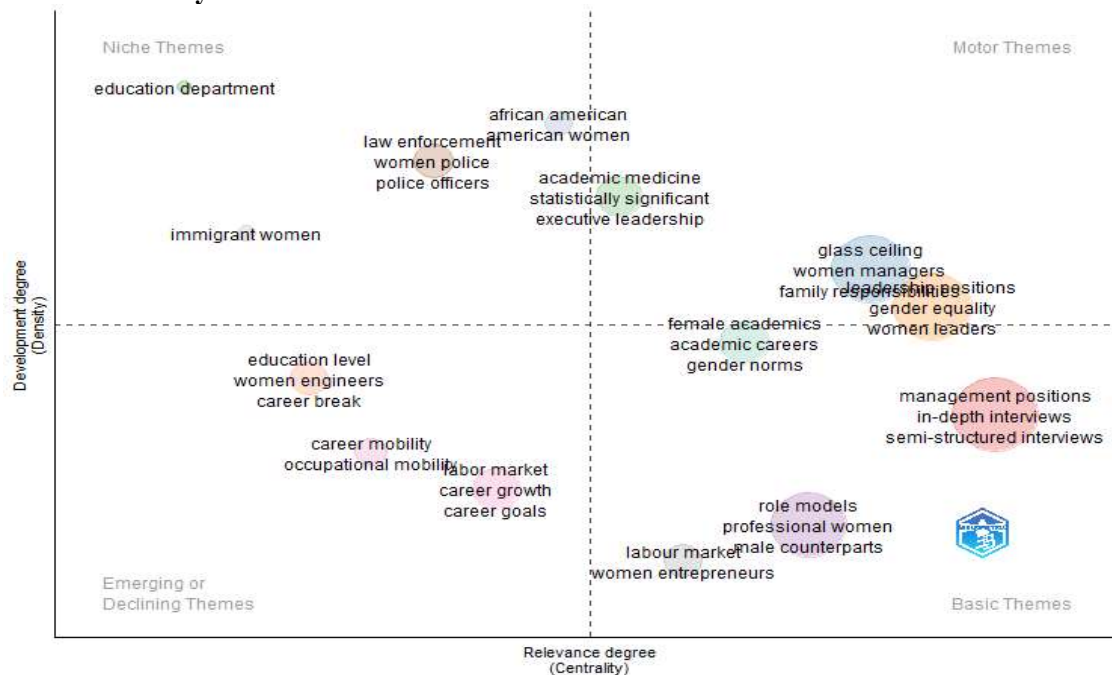
This suggests that qualitative research methods, particularly thematic analysis, play a significant role in the research approaches used in this field. The list includes a mix of books and journal articles, spanning from 1977 to 2016, indicating that the field draws on both classic texts and more recent contributions. Works by influential scholars in gender and leadership studies, such as Eagly A.H. and Carli L.L.'s 2007 book "Through the Labyrinth: The Truth About How Women Become Leaders," feature prominently, highlighting the centrality of gender and leadership themes in this research area. Theoretical works also appear to be highly influential. Acker J.'s 1990 paper proposing a theory of gendered organizations has 15 citations, suggesting that theoretical frameworks for understanding gender in organizational contexts continue to shape research in this field. It's noteworthy that some of the most locally cited references, such as Howe-Walsh L. and Turnbull S.'s 2016 paper on barriers to women leaders in academia, are also among the most globally cited documents in our earlier analysis.

This overlap between locally and globally influential works suggests that some key papers are driving both the broader discourse and the specific research agenda in this field. The presence of Lincoln Y.S. and Guba E.G.'s 1985 book on naturalistic inquiry among the most cited references further reinforces the importance of qualitative research methodologies in this field. This, combined with the prominence of thematic analysis, indicates a strong qualitative research tradition in the area. Overall, this analysis of locally cited references reveals a field that is grounded in classic works on gender and organizations, informed by robust qualitative research methodologies, and continually enriched by more recent contributions that build on and extend these foundational ideas.



## Discussions

### Thematic Analysis



**Figure 7.** Themes derived relevant to the field of Women and Career Advancement

#### *Motor Themes (High Centrality, High Density)*

Keywords fall under these themes are Glass ceiling, Women managers, Family responsibilities, Gender equality, Women leaders. These themes are highly developed and central to the research on women and career advancement. They highlight significant barriers and opportunities women face in advancing their careers, particularly in leadership roles. The glass ceiling and gender equality are prominent issues, indicating ongoing challenges in breaking through entrenched societal and organizational structures that limit women's progression to top management positions. Family responsibilities are also crucial, reflecting the double burden many women face in balancing career and family, which can impede career advancement.

#### *Niche Themes (Low Centrality, High Density)*

Some notable keywords that are categorized under this theme are African American, American women, Academic medicine, Executive leadership. Niche themes are well-developed but have a limited central role in the broader research context. The focus on African American women in executive leadership and academic medicine suggests specialized studies that address the intersectionality of race and gender in career advancement. These themes may not be as universally applicable but are vital for understanding specific subgroups' experiences.

#### *Basic Themes (High Centrality, Low Density)*

Some keywords such as Role models, Professional women, Male counterparts, Labour market, Women entrepreneurs fall under Basic themes. These themes are central but less developed, indicating foundational aspects of the research that require further exploration. The role of male counterparts and the labor market suggests that external influences and market conditions significantly impact women's career progression. The emphasis on role models and professional women points to the importance of mentorship and representation in helping

women navigate their career paths.

#### *Emerging or Declining Themes (Low Centrality, Low Density)*

Career mobility, Occupational mobility, Education level, Career break, Women engineers are such keywords that fall under the category of emerging or declining Themes. These themes are either emerging areas of interest or declining in relevance. Career and occupational mobility, along with education and career breaks, suggest ongoing exploration of how structural factors like education and career interruptions impact women's advancement. The focus on women engineers indicates a growing interest in understanding the unique challenges women face in traditionally male-dominated fields like engineering.

#### **Trending Topics**

##### *Early Focus on Gender Differences and Management (1980s - Early 2000s)*

Gender differences, Management, Careers, Engineering are such topics that are foundations that contributed to women career advancement researches. The earlier stages of research (1987-2005) focused significantly on gender differences and management, indicating foundational studies that explored the broad disparities between men and women in career trajectories. The frequent mention of "engineering" during this period suggests an early recognition of the challenges faced by women in male-dominated fields like STEM. The ongoing exploration of "careers" shows a broad interest in understanding career development from a gendered perspective.

##### *Rise of Organizational Culture and Gender Equality (Late 2000s - Early 2010s)*

Some keywords like Organizational culture, Glass ceiling, Gender equality are slowly entered this field of research. By the late 2000s, there is a noticeable shift towards understanding the role of organizational culture in shaping career advancement for women. The concept of the "glass ceiling" becomes more prominent during this period (Q1 in 2010), indicating growing awareness and documentation of invisible barriers preventing women from ascending to leadership positions. Gender equality also begins to gain traction, signaling a shift from merely recognizing gender differences to actively addressing disparities.

##### *Emergence of Work-Life Balance and Mentoring (2010s - Present)*

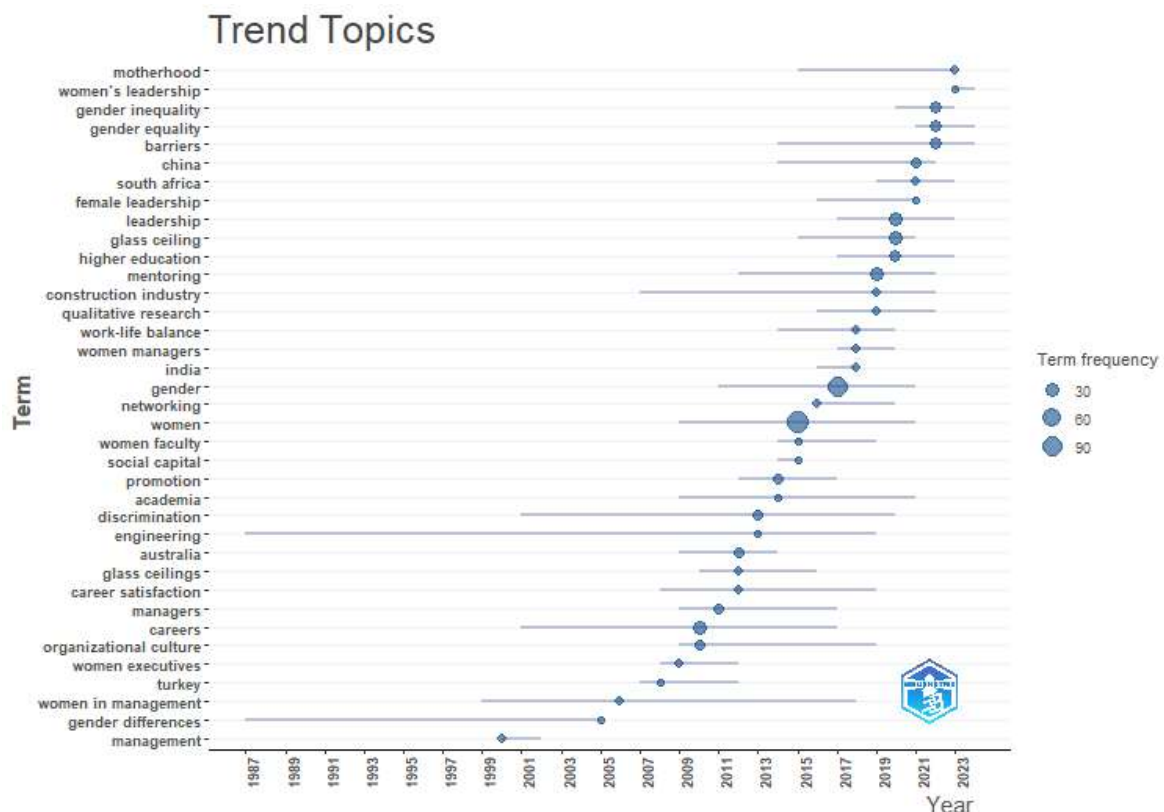
The keywords such as Work-life balance, Mentoring, Leadership, Women managers were slowly coming in to the discussions of women career advancement. From 2010 onwards, there is a clear trend towards addressing work-life balance and mentoring, with these topics emerging as central concerns in the context of women's career advancement. The increasing frequency of "leadership" and "women managers" in recent years reflects a growing focus on how women can be supported in achieving leadership roles, with mentoring identified as a crucial mechanism. The emphasis on work-life balance indicates ongoing challenges related to managing professional and personal responsibilities, a significant factor in career progression.

### *Recent Trends in Gender Inequality and Female Leadership (2020 - Present)*

Finally, latest trends in women career advancement research is contributed by Gender inequality, Female leadership, Women's leadership, Barriers. The analysis reveals a surge in discussions around gender inequality, female leadership, and the barriers women face in recent years, particularly post-2020. These terms' high relevance and recent emergence in Q1 and Q3 suggest that contemporary research is increasingly focused on understanding and dismantling systemic barriers that prevent women from reaching leadership positions. This shift likely reflects broader societal movements advocating for gender equality and the push for more female representation in leadership roles across various sectors.

### *Emerging Topics in Global Contexts (2010s - Present)*

Global context perspective India, China, South Africa, Higher education are such keywords fall in this category. The inclusion of specific geographical contexts like India, China, and South Africa, alongside the focus on higher education, highlights the global dimension of research on women's career advancement. These terms suggest that the discourse is not limited to Western contexts but is expanding to understand the unique challenges faced by women in different cultural and socio-economic settings. The emphasis on higher education also points to the role of educational attainment in facilitating career advancement for women worldwide.



**Figure 8.** Trending topics in the field of Women Career Advancement

## Comparative discussion

### *Core Issues: Glass Ceiling and Gender Equality*

The thematic map identifies the glass ceiling and gender equality as motor themes, indicating their well-developed and central position in the discourse on women and career advancement. These topics have been consistently explored due to their critical role in understanding the systemic barriers women face in the workplace. The trend topic analysis complements this by showing that these issues have remained relevant over time, with significant focus in recent years, particularly post-2020. This consistency in both thematic relevance and topical frequency underscores that, while progress has been made, the glass ceiling and gender equality remain unresolved challenges, demanding continued scholarly and practical attention (Fouad et al., 2023).

### *Mentorship and Leadership: Emerging vs. Developed Themes*

Mentorship and leadership are categorized as basic themes on the thematic map, suggesting that while they are foundational, they are still areas of active development and exploration. The trend topic analysis reveals that these themes have gained prominence in the last decade, reflecting an increasing awareness of the importance of support systems and representation for women's career advancement. This alignment between the thematic map and trend data indicates that mentorship and leadership are crucial but evolving areas of research. The growing emphasis on these topics suggests a response to the need for effective strategies that support women in achieving and succeeding in leadership roles (Ciappei et al., 2023).

### *Work-Life Balance and Family Responsibilities: Continued Importance*

Work-life balance and family responsibilities are highlighted as motor themes in the thematic map, indicating their well-established importance in the discourse on women's career advancement. The trend topic analysis shows that these issues have gained significant attention since the 2010s, coinciding with broader societal changes regarding the integration of personal and professional lives (Franzoi et al., 2024). Both analyses confirm the ongoing relevance of these topics, as they continue to be central considerations in understanding the barriers to women's career progression. The emphasis on these themes reflects the critical need for workplace policies that support work-life integration, particularly for women balancing career and family roles.

### *Intersectionality and Global Perspectives: Specialized but Growing Focus*

The thematic map reveals that intersectional and context-specific issues, such as African American women and executive leadership, are niche but well-developed themes. This suggests that while these areas may not be as central, they offer significant insights into the unique challenges faced by specific groups. The trend topic analysis complements this by highlighting the growing interest in global perspectives, with terms like India, China, and South Africa gaining prominence. This indicates an expanding research agenda that is increasingly inclusive of diverse cultural and socio-economic contexts. The convergence of these analyses suggests that while intersectionality and global perspectives may be specialized, they are becoming more integral to a comprehensive understanding of women's career advancement (Iqbal et al., 2024).

### *Emerging vs. Declining Themes: Early Career and Educational Factors*

The thematic map identifies early career factors, such as career mobility and education level, as emerging or declining themes, indicating that these topics are either gaining attention or becoming less central to the discourse. The trend topic analysis provides context, showing that terms like engineering, promotion, and higher education were more prominent in earlier years but have since evolved. While these factors were once foundational in discussions about women's career advancement, they are now being integrated into more complex themes like leadership and work-life balance. This shift suggests that while early career and educational influences remain important, they are increasingly being considered within broader, more multifaceted discussions of career progression.

### **Implications For Academics and Libraries**

Scholars have many ramifications based on the thorough investigation of women professional development data. While using multidisciplinary techniques, the emphasis should be on keeping investigating important issues such glass ceiling, gender equality, and work-life balance. Global viewpoints are growing in significance hence scholars should give understudied areas or comparative studies top priority. Though mixed-methods approach might offer more complete insights, qualitative techniques remain quite important. More focus should be on developing disciplines like intersectionality and women in STEM professions(Black, 2012). Advancement of the field can benefit from cooperation with eminent institutions and scholars. Scholars should also consider the changing patterns and modify their study focus in line with them(La Torre et al., 2017).

It is imperative that libraries maintain a balance between historical and modern materials and make sure their holdings include important publications. They should help multidisciplinary research and make investments in bibliometric instruments(Zhao, 2010). Libraries have to provide materials from several geographical settings given growing worldwide attention. Improving research in this area may be achieved by the development of specialized information literacy programs and the promotion of open access publication(Lo, 2021). Libraries could also think about creating specific archives with an eye toward women's career growth material. Libraries should also devote more resources—in terms of purchases as well as database subscriptions—to this expanding field(Baudoin et al., 2004). By providing data management tools and direction on utilizing pertinent databases and performing bibliometric analysis, they may be quite helpful to scholars. Libraries can greatly help to progress women's careers by putting these policies into effect.

## References

1. Baudoin, L., Haeffner-Cavaillon, N., Pinhas, N., Mouchet, S., & Kordon, C. (2004). Indicateurs bibliométriques. *Médecine/Sciences*, 20(10), 909–915. <https://doi.org/10.1051/medsci/20042010909>
2. Black, C. (2012). Metrics: Measuring importance. *The Biochemist*, 34(1), 38–41. <https://doi.org/10.1042/bio03401038>
3. Büyükkidik, S. (2022). A Bibliometric Analysis: A Tutorial for the Bibliometrix Package in R Using IRT Literature. *Eğitimde Ve Psikolojide Ölçme Ve Değerlendirme Dergisi*, 13(3), 164–193. <https://doi.org/10.21031/epod.1069307>
4. Caputo, A., & Kargina, M. (2021). A user-friendly method to merge Scopus and Web of Science data during bibliometric analysis. *Journal of Marketing Analytics*, 10(1), 82–88. <https://doi.org/10.1057/s41270-021-00142-7>
5. Chapman, K. (2021). Characteristics of systematic reviews in the social sciences. *The Journal of Academic Librarianship*, 47(5), 102396. <https://doi.org/10.1016/j.acalib.2021.102396>
6. Ciappei, C., Liberatore, G., & Manetti, G. (2023). A systematic literature review of studies on women at the top of firm hierarchies: critique, gap analysis and future research directions. *Sustainability Accounting Management and Policy Journal*, 14(7), 202–231. <https://doi.org/10.1108/sampj-10-2022-0557>
7. Deshpande, A., Kaul, N., Mittal, A., Bhandari, H., & Raut, R. (2023). Breaking Barriers: A Review of Career Transition Trends for Women. *The Open Psychology Journal*, 16(1). <https://doi.org/10.2174/0118743501280610231122112320>
8. Fouad, N. A., Kozlowski, M. B., Schams, S. S., Weber, K. N., Tapia, W. D., & Burrows, S. G. (2023). Why Aren't We There Yet? The Status of Research in Women's Career Development. *The Counseling Psychologist*, 51(6), 786–848. <https://doi.org/10.1177/00110000231178539>
9. Franzoi, I. G., Sauta, M. D., De Luca, A., & Granieri, A. (2024). Returning to work after maternity leave: a systematic literature review. *Archives of Women's Mental Health*. <https://doi.org/10.1007/s00737-024-01464-y>
10. González-Hernández, I. J., Granillo-Macias, R., Rondero-Guerrero, C., & Simón-Marmolejo, I. (2021). Marshall-Olkin distributions: a bibliometric study. *Scientometrics*, 126(11), 9005–9029. <https://doi.org/10.1007/s11192-021-04156-x>
11. Iqbal, S., Farrukh, M., & Bhaumik, A. (2024). A Retrospective of Women Entrepreneurship Research and Future Research Directions. *Vision the Journal of Business Perspective*. <https://doi.org/10.1177/09722629231219617>
12. La Torre, G., Sciarra, I., Chiappetta, M., & Monteduro, A. (2017). [New bibliometric indicators for the scientific literature: an evolving panorama]. *PubMed*, 168(2), e65–e71. <https://doi.org/10.7417/ct.2017.1985>
13. Lo, S. C. (2021). A Snapshot of Library and Information Sciences Studies in Taiwan: From the View of Journal of Library and Information Studies. *DOAJ (DOAJ: Directory of Open Access Journals)*. [https://doi.org/10.6182/jlis.202112\\_19\(2\).001](https://doi.org/10.6182/jlis.202112_19(2).001)
14. MacFarlane, A., Russell-Rose, T., & Shokraneh, F. (2022). Search strategy formulation for systematic reviews: Issues, challenges and opportunities. *Intelligent Systems With Applications*, 15, 200091. <https://doi.org/10.1016/j.iswa.2022.200091>

15. Manterola, C., Dueñas, J. R., & Castillo, C. S. (2024). Estudios bibliométricos. Una opción para desarrollar investigación en cirugía y disciplinas afines. *Revista De Cirugía*, 76(2). <https://doi.org/10.35687/s2452-454920240021890>
16. Metz, I. (2003). Individual, interpersonal, and organisational links to women's advancement in management in banks. *Women in Management Review*, 18(5), 236–251. <https://doi.org/10.1108/09649420310485087>
17. Rath, T. S., Mohanty, M., & Pradhan, B. B. (2019). An alternative career progression model for Indian women bank managers: A labyrinth approach. *Women S Studies International Forum*, 73, 24–34. <https://doi.org/10.1016/j.wsif.2019.01.005>
18. Tharenou, P. (2005). Does Mentor Support Increase Women's Career Advancement More than Men's? The Differential Effects of Career and Psychosocial Support. *Australian Journal of Management*, 30(1), 77–109. <https://doi.org/10.1177/031289620503000105>
19. Zhao, D. (2010). Characteristics and impact of grant-funded research: a case study of the library and information science field. *Scientometrics*, 84(2), 293–306. <https://doi.org/10.1007/s11192-010-0191-y>
20. Zupic, I., & Čater, T. (2014). Bibliometric Methods in Management and Organization. *Organizational Research Methods*, 18(3), 429–472. <https://doi.org/10.1177/1094428114562629>
21. Haustein, S., & Larivière, V. (2014). The Use of Bibliometrics for Assessing Research: Possibilities, Limitations and Adverse Effects. In *Springer eBooks* (pp. 121–139). [https://doi.org/10.1007/978-3-319-09785-5\\_8](https://doi.org/10.1007/978-3-319-09785-5_8)