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Women Workers and Working Conditions: A Bibliometric Analysis of Global Research, 2000-2025

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Systematic Review

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Abstract

Background.

Women's working conditions, including pay, contractual security, occupational health, working time, harassment, and the interface between paid work and care, are central to decent work and gender equality agendas; however, scholarship addressing them is spread across development studies, sociology, economics, occupational health, and ergonomics. To the best of our knowledge, no systematic map exists in this field.

Methods.

Methods: We conducted a bibliometric analysis of 614 Scopus-indexed journal articles and book chapters on women workers and working conditions published between 2000 and 2025. Performance analysis (production, citations, h- and g-indices, and collaboration) and science mapping (keyword co-occurrence, thematic mapping, trend topics, and reference-year analysis) were carried out using Biblioshiny and VOSviewer.

Results.

Output grew at approximately 9% per year, and half of all documents (49.5%) appeared between 2020 and 2025. The literature is dispersed: 398 sources carried 614 documents, 77.1% of sources contributed a single document, and 95.3% of the 1,363 authors appeared only once. *Gender, Work and Organisation*, *Social Science and Medicine*, and *International Journal of Industrial Ergonomics* were the most productive sources. The United Kingdom (57 documents with a corresponding author), the USA (51), and India (48) led production, but India's average citation count (6.1) was far below that of the United Kingdom (31.1) and Australia (29.1), partly because more than half of India's affiliation count was added after 2022. International co-authorship was limited (19.8% of documents with identified corresponding authors). Keyword mapping revealed five clusters: labour markets and informal work; work-family balance and inequality in Europe; occupational health and ergonomics; psychosocial well-being and harassment; and socioeconomic context, with "working conditions" as the bridging concept. Trend topics moved from ergonomics and musculoskeletal disorders to gender discrimination, inequality, mental health, decent work, and COVID-19.

Conclusions.

The field is expanding rapidly but remains fragmented, geographically uneven, and weakly connected across its social science and health streams. Priorities include research on informal and platform work

in the Global South, comparative and collaborative designs, and integrated frameworks that link structural, organisational and health perspectives.

1. Introduction

Over the past fifty years, women's participation in paid employment has increased in most regions; nevertheless, the conditions under which women work remain significantly unequal. Informal employment, characterized by the absence of a contract, legal protection, or social security, represents the most prevalent form of employment globally. In 2016, it constituted approximately 61% of total employment, equating to around two billion workers. In 55% of countries, the proportion of women in informal employment surpassed that of men (Benavides et al., 2022). Despite the rise in women's involvement in both formal and informal employment, there has not been a corresponding redistribution of social-reproductive responsibilities (Rai et al., 2019). The concept of decent work, as outlined in Sustainable Development Goal 8, is in conflict with SDG 5 when viewed through a gendered lens, as the gross domestic product's definition of "productive" work excludes unpaid care and domestic labor (Rai et al., 2019).

The term "working conditions" serves as an intentionally broad analytical category encompassing various aspects such as wages, contractual hours, scheduling, physical and psychosocial hazards, employee voice and representation, and the balance between paid work and domestic responsibilities. Research on these facets draws from multiple scholarly traditions. Sociologists have conceptualized organizations and jobs as gendered structures that perpetuate inequality (Acker, 1990, 2006) and have documented the proliferation of precarious employment (Kalleberg, 2009). Development scholars have investigated the "global feminization" of flexible labor (Standing, 1999), the governance of global value chains (Gereffi et al., 2005), and the gendered implications of codes of conduct (Barrientos et al., 2003). Researchers in occupational health and psychology, utilizing job demand-control models (Karasek, 1979), have linked working conditions and social support to the onset of depressive and anxiety disorders among employees (Plaisier et al., 2007), examined the effects of atypical employment on well-being (Bardasi & Francesconi, 2004), and studied musculoskeletal health (Strazdins & Bammer, 2004). Recent studies explore platform- and social-media-based self-enterprise as a new domain of gendered work (Duffy & Pruchniewska, 2017), while economists have analysed the long-term historical convergence of economic outcomes between women and men (Goldin, 2014).

These streams are published in different journals, use different vocabularies, and rarely cite one another. Narrative reviews can summarise individual streams but cannot easily reveal the overall size, shape, and connectedness of a literature. Bibliometric analysis is suited to this task: it applies quantitative methods to bibliographic records to describe the growth, productivity, impact, and intellectual structure of a field (Donthu et al., 2021; Aria & Cuccurullo, 2017). Bibliometric studies already exist for adjacent topics, such as female labor-force participation (Peng & Li, 2025) and women’s entrepreneurship in relation to the Sustainable Development Goals (Raman et al., 2022), and they show how mapping can expose geographic concentration and thematic gaps. However, in our literature search, we did not locate a

bibliometric mapping that treats women workers' *working conditions* as its organising concept across the social science and health literatures.

This study addresses this gap by analysing 614 Scopus-indexed documents published between 2000 and 2025. This study addresses the following six research questions:

RQ1. How have publication output and citations impacted female workers and working conditions over time?

RQ2. Which sources, authors, and institutions are the most productive and influential?

RQ3. Which countries lead production, how strongly do they collaborate, and how does productivity relate to the citation impact?

RQ4. Which documents and references form the intellectual foundations of this field?

RQ5. What are the main thematic clusters, and how is the conceptual structure organised?

RQ6. How have research topics evolved, and what gaps have emerged for future research?

The contribution is threefold. First, it provides a systematic overview of the size and structure of this literature. Second, it identifies where the field is concentrated by journal, author, institution, and country, and where it is not. Third, it derives, from the mapped structure, an evidence-based agenda for future research, with particular attention to the informal economy of the Global South and India, which emerges as a leading producer with comparatively low citation impact.

The remainder of this paper is organised as follows. Section 2 reviews the conceptual and empirical literature on women's working conditions and related bibliometric studies. Section 3 describes the data and methods, Section 4 reports the results, Section 5 discusses them, Section 6 sets out the limitations, and Section 7 concludes.

2. Literature Review

2.1 Conceptualising women's working conditions

Research on women's working conditions has been shaped by theories that treat the workplace and labour market as gendered structures rather than neutral settings (Steiber & Haas, 2012). Acker (1990) proposed that organisations, jobs, and hierarchies are themselves gendered, so that inequality is built into how work is organised, and later extended the argument to "inequality regimes" in which gender, class, and race jointly shape pay, authority, and working conditions (Acker, 2006). A second line of work concerns the changing form of employment. Standing (1999) revisited the thesis of the "global feminisation" of labour through flexible employment, and Kalleberg (2009) described the spread of precarious work and insecure workers as employment relations moved away from standard

arrangements. Against these structural accounts, Goldin (2014) analysed the long historical convergence between women's and men's economic roles and outcomes, showing why progress has been uneven.

The policy framing of these questions has increasingly been to ensure decent work. A gendered reading of Sustainable Development Goal 8 argues that its emphasis on growth and productive employment leaves out social reproduction because the conventional productive boundary excludes unpaid care and domestic work. The authors note that although the rate of working women has risen in both the formal and informal sectors, there has been no matching shift in who does reproductive work, which places SDG 8 in tension with SDG 5 (Rai et al., 2019). The scale matters for this argument. Informal employment work without a contract, legal protection, or social security accounted for approximately 61% of employment worldwide in 2016, with a share of 63% among men and 58% among women. However, in 55% of countries, women's share exceeds that of men. Informal employment is estimated at 88% of employment in Africa and 77% in Asia, excluding China, against roughly 15–18% in the European Union and the USA (Benavides et al., 2022). Therefore, women's working conditions are most precarious where the informal economy is the largest.

2.2 Informal work, value chains and the Global South

A large body of work examines how women's conditions are produced by the organisation of the production. Gereffi et al. (2005) set out a framework for the governance of global value chains, and Barrientos et al. (2003) applied a gendered value chain approach to codes of conduct in African horticulture, showing how the position of women workers can be analysed within chains and the standards that govern them. Case studies from South Asia connect these structural arguments to specific occupations in the region. In India, home-based work is one of the largest forms of employment in the informal economy and is overwhelmingly done by women (Samantroy, 2019). Using a social-reproduction framework, Boeri (2023) shows how women's unpaid domestic and care work is appropriated as labour within subcontracted production, which is irregular, fragmented, and reliant on unpaid family workers, and argues that concepts of the economy developed in the Global North need to be re-examined for postcolonial informal economies. In Nepal, women construction workers face informality, precarity, and gendered responsibility for social reproduction, with experiences shaped by the intersection of gender, class, caste, and ethnicity. Wilson et al. (2023) also find that policy approaches inspired by the "smart economics" view of gender equality render these structures of inequality invisible, while workers negotiate conditions through informal and organised collective strategies.

2.3 Working conditions, health and well-being

A second stream links conditions of work to health and psychological outcomes. The job demand control model (Karasek, 1979) related job demands and decision latitude to mental strain and has been the dominant framework for psychosocial working conditions. Subsequent studies examined how working conditions and social support relate to the onset of depressive and anxiety disorders among male and female employees (Plaisier et al., 2007) and how atypical employment affects individual well-

being in a panel of British workers (Bardasi & Francesconi, 2004). Women's musculoskeletal health has been analysed as a product of the work women do and the conditions under which they do it (Strazdins & Bammer, 2004). Taken together, this stream treats working conditions as exposures with measurable consequences, in contrast with the structural and institutional emphasis of the sociological and development streams.

2.4 Work–family interface and unpaid care

The reconciliation of paid work with domestic responsibilities was the third theme. (Kossek & Lee, 2017)defined sources of conflict between work and family roles, and Gallie and Russell (2009) examined work–family conflict together with working conditions in Western Europe, linking the two themes that this review treats as part of the same problem. The social reproduction critique of decent work policy (Rai et al., 2019) and the evidence on home-based work in India (Boeri, 2023) extend the concern from the household to the economy as a whole: unpaid care is not a private matter outside the labour market but a condition that shapes who can accept which jobs and on what terms are they accepted.

2.5 Emerging forms of work

New forms of self-employment and platform-mediated work are changing the context in which gendered working conditions are being studied. Duffy and Pruchniewska (2017), for example, analyse gender and self-enterprise in the social-media age as a "digital double bind," indicating that the flexibility promised by digital work comes with distinctive gendered constraints. The extent to which such forms of work have entered the mainstream research literature on women's working conditions is an empirical question that bibliometric mapping can answer.

2.6 Bibliometric studies of related fields

Bibliometric methods have been used to map gender and work adjacent areas. Peng and Li (2025) analysed Web of Science records on female labour-force participation published between 2001 and 2021 with VOSviewer and reported continuous growth in publications, concentration of 84% of output in the ten most productive countries, a central position for the United States in international collaboration, and keyword clusters around gender, gender inequality, and fertility. Raman et al. (2022) mapped 3,157 publications on women's entrepreneurship from 1991 to 2021 using the Dimensions database; 843 were aligned with the Sustainable Development Goals, with SDG 8, SDG 10, and SDG 5 the most frequent. Methodological guidance on the design and reporting of such studies is provided by Donthu et al. (2021) and Aria and Cuccurullo (2017), whose recommendations this study follows.

2.7 Synthesis and research gap

This review led to three observations. First, the literature on women's working conditions is divided among gendered organisation theory, global value chain, informal economy research, psychosocial and occupational health research, and work-family studies, which use different concepts and are published in different outlets. Second, evidence on informal work in South Asia is often presented as case studies of particular occupations (Boeri, 2023; Wilson et al., 2023), which are valuable for depth but do not show

the size of the Indian and South Asian literature, how it is connected internationally, or how influential it has been in the field. Third, the bibliometric studies identified here concern female labour force participation and women's entrepreneurship (Peng & Li, 2025; Raman et al., 2022) rather than the conditions under which women work for a living. In our search of the literature, we did not find bibliometric mapping of research on female workers and working conditions across these traditions. This study addresses this gap by describing the size, growth, structure, and influence of the field and identifying its main thematic clusters, which correspond to the six research questions stated in Section 1.

3. Methodology

3.1 Research design

We followed the general workflow for bibliometric studies described by Donthu et al. (2021): defining the aims and scope, choosing the techniques, compiling the data, analysing, and reporting. Two families of techniques were combined in this study. *Performance analysis* describes the contributions of constituents (years, sources, authors, institutions, countries, and documents) using their counts, citations, h- and g-indices, and collaboration indicators. *Science mapping* examines the relationships among constituents using keyword co-occurrence, thematic mapping, trend analysis, and the distribution of cited references (Cobo et al., 2011; Aria & Cuccurullo, 2017).

3.2 Data source and search strategy

Bibliographic records were retrieved from Scopus, which was chosen for its broad coverage of the social sciences, development studies, and health journals in which this literature appears. The search was applied to titles, abstracts, and keywords, and two concept blocks were combined using the Boolean operator, AND. Block A captured the population (women or female workers, working women, women or female labor/labor, and women or female employees), and Block B captured the object of study (working, work, workplace, or employment conditions; working or work environment; job or employment quality; decent work; job or employment security; and occupational conditions). Truncation was used for the variant word endings. The complete search string and record counts at each step are presented in Appendix A.

3.3 Eligibility criteria and final corpus

The search returned 2,438 records, which were limited to publication years 2000–2025 (1,828 records), the subject areas of Social Sciences and Arts & Humanities, document types of journal articles and book chapters, and documents written in English. This left 615 records (528 articles and 87 book chapters) for further review. Duplicates were screened in Excel by title and DOI, and one record was removed, resulting in a final dataset of 614 documents (Fig. 1; Appendix A). Reviews were not selected as a separate document type, and book chapters were retained because a substantial share of the literature on informal and gendered work appears in edited volumes and book series. Document-level metadata were

largely complete: titles, abstracts, sources, and citation counts had no missing values; author, document type, and language had one missing value each; publication year had two; and cited references 17 (2.8%). Author keywords were missing for 121 documents (19.7%), the corresponding author field for 183 (29.8%), and Keywords Plus for 341 (55.5%). Analyses that rely on these fields are, therefore, interpreted as indicative.

3.4 Tools and analytical procedures

Performance analysis and descriptive science-mapping outputs were produced using the R package *Bibliometrix* through its web interface Biblioshiny (Aria & Cuccurullo, 2017). The keyword co-occurrence network and density visualisation were produced using VOSviewer (van Eck & Waltman, 2010). Productivity was measured by document counts (full and fractionalised), impact by total citations, average citations per article, citations per year, and year-normalised citation scores, and source and author influence by the h-index (Hirsch, 2005) and g-index (Egghe, 2006), which were calculated within the dataset. Collaboration was measured by the share of multiple-country publications (MCP) among documents with a corresponding author. Local citations denote citations received from other documents in the dataset, whereas global citations are those recorded in Scopus.

Growth was summarised by a log-linear fit to annual output and by the logistic life-cycle and cumulative growth models implemented in Biblioshiny. Keyword analysis used all keywords (author keywords and Keywords Plus). In the VOSviewer network, generic indexing terms (for example, *human, article*, and *adult*) were excluded, and the default association-strength normalisation and clustering procedure was applied [state minimum keyword-occurrence threshold and number of keywords retained]. Indexing terms were not otherwise harmonised; therefore, some generic terms remained visible in Biblioshiny outputs. Thematic mapping positioned keyword clusters by centrality (relevance degree) and density (development degree), and trend topics displayed the median year and interquartile range of each term's occurrence.

4. Results

4.1 Overview of the dataset

The 614 documents appeared in 398 sources and were written by 1,363 authors, with 10,921 citations in total (mean 17.79 per document) and 27,306 distinct cited references (Table 1). Country affiliations were recorded for 68 countries in total. Two documents lacked a publication year; therefore, the temporal analyses used only the remaining 612 documents.

Table 1
Main information about the bibliometric dataset (Scopus, 2000–2025)

Descriptor	Value
Timespan	2000–2025
Documents (journal articles and book chapters)	614
Sources (journals and book series)	398
Authors	1,363
Authors of single-document output	1,299 (95.3%)
Countries (author-affiliation based)	68
Total citations (global)	10,921
Mean citations per document	17.79
Unique cited references (local)	27,306
Annual growth rate (log-linear fit, 2000–2025)	9.1%
Documents published 2020–2025	303 (49.5%)
Corresponding-author country identified	425 documents (69.2%)
Multiple-country publications (MCP)	84 of 425 (19.8%)
Author keywords missing	121 (19.7%)
Keywords Plus missing	341 (55.5%)

Note. Source: Authors' calculations from Biblioshiny/Bibliometrix exports. The Web of Science category field is empty because the data were extracted from Scopus.

4.2 Growth of scientific production and citation impact (RQ1)

Annual output rose from 7 documents in 2000 to 76 in 2025 (Fig. 2), corresponding to a log-linear growth rate of 9.1% per year. Growth was slow and irregular until 2018 (45 documents in 2000–2004, 67 in 2005–2009, 78 in 2010–2014, and 119 in 2015–2019), and then accelerated: 303 documents (49.5% of the total) appeared in 2020–2025, and 141 (23.0%) in the last two years alone. A logistic life-cycle model fitted in Biblioshiny yielded $R^2 = 0.881$ and a modelled peak in annual output around 2043 at approximately 185 documents per year (model output not shown), with the 2024 and 2025 observations lying at or above the fitted curve. Such extrapolations are heuristic, as the series is short and the recent jump may reflect changes in indexing and publishing volume as well as scholarly interest; however, they indicate that the literature is still in an early growth phase rather than approaching saturation.

(n = 612 documents with a recorded publication year).

Citation impact shows the expected age effect (Fig. 3). Mean citations per article were highest for the earliest cohorts (55–76 for 2000 and 2002–2004, peaking at 75.6 for 2003) and were lower for recent cohorts, to 8.3 for 2022, 4.6 for 2024, and 1.5 for 2025. Normalised for age, the annual rate was 3.82 citations per article per year for the 2021 cohort, the highest in the series, and declined for later cohorts, whose citation windows were short. Citations were highly skewed: the median document had 6.5 citations against a mean of 17.8, 98 documents (16.0%) were uncited, and 19 documents had 100 or more citations. The fifteen most-cited documents accounted for 25.4% of all citations.

4.3 Sources (RQ2)

Publications were widely dispersed: of the 398 sources, 307 (77.1%) contributed a single document, and the ten most productive sources together carried 106 documents (17.3% of the corpus) (Table 2). *Gender, Work and Organisation* was the most productive source (18 documents; h-index 14 within the dataset), followed by *Social Science and Medicine* (16 documents; h = 13; 988 citations, the most of any source), the *International Journal of Industrial Ergonomics* (12), the *Journal of International Women's Studies (11)*, and *Gender and Development* (10). *World Development*, with nine documents, accumulated 840 citations (93.3 per document), which is a higher per-document impact than any other leading source. The leading sources thus span gender and organisation studies, medical sociology and public health, ergonomics, development studies, and social-indicator research, which is consistent with the multidisciplinary identity of the field.

Cumulative production curves show different trajectories (not shown). *Social Science and Medicine* and the *International Journal of Industrial Ergonomics* were active from the start of the period, whereas the *Journal of International Women's Studies* and *Gender and Development* each added roughly half of their documents after 2019. The journals most cited *by* the corpus are the *Journal of Applied Psychology* (165 citations), *World Development* (158), *Economic and Political Weekly* (104), *Employment and Society* (96), *American Sociological Review (95)*, and *Feminist Economics* (93); therefore, psychology and organisational behaviour supply much of the intellectual base, although none of those psychology journals is among the main publishing outlets.

Table 2
Top 10 most productive sources

Rank	Source	NP	h	g	TC	PY start
1	Gender, Work and Organization	18	14	18	518	2002
2	Social Science and Medicine	16	13	16	988	2000
3	International Journal of Industrial Ergonomics	12	11	12	473	2000
4	Journal of International Women's Studies	11	7	11	147	2006
5	Gender and Development	10	8	10	263	2004
6	Safety and Health at Work	9	5	8	77	2014
7	Social Indicators Research	9	6	9	180	2011
8	World Development	9	8	9	840	2003
9	Sustainability (Switzerland)	6	6	6	167	2015
10	Women's Studies International Forum	6	3	4	18	2016

Note. NP = number of documents; h = h-index; g = g-index; TC = total citations; PY start = first publication year in the dataset. The h- and g-indices were computed within this dataset only.

4.4 Authors and institutions (RQ2)

Authorship is highly fragmented: 1,299 of the 1,363 authors (95.3%) appear in only one document, 55 appear twice, seven three times, and two four times (Table 3). No author exceeds four documents. Barrientos S and Kim J each have four documents; Barrientos S has the highest h-index (4) and total citations (492) in the dataset and is also the most locally cited author (11 local citations), followed by Dolan C and Tallontire A (9 each), co-authors of the 2003 gendered value-chain article that is the most-cited document in the corpus. Five authors (Cho J, Hancock P, Li Y, Lyonette C, and Warren T) have three documents each. Among productive authors, Kim J's four documents date entirely from 2024 and 2025, whereas Barrientos S's output began in 2000, which illustrates the combination of long-standing and newly active researchers.

The University of London led with 10 documents, followed by the University of Manchester (8) and the Universities of Warwick, California, Michigan, and Korea (7 each). The export of institutional output contains only the leading affiliations, and institution names were not disambiguated (for example, constituent colleges of the University of London are reported together); therefore, institutional rankings should be read cautiously.

Table 3
Top 10 authors by number of documents

Rank	Author	Documents	Fractionalized documents	h	TC	PY start
1	Barrientos S	4	1.92	4	492	2000
2	Kim J	4	2.08	2	37	2024
3	Cho J	3	1.50	3	58	2015
4	Collins B	3	1.50	0	0	2012
5	Feder J	3	1.50	0	0	2012
6	Hancock P	3	1.00	3	14	2014
7	Li Y	3	0.78	3	50	2022
8	Lyonette C	3	1.25	3	69	2018
9	Warren T	3	1.25	3	69	2018
10	Amin S	2	0.83	2	57	2004

Note. Ties are ordered as exported by Biblioshiny. The h-index is calculated within the dataset only.

4.5 Countries and international collaboration (RQ3)

The USA (147), the United Kingdom (126), and India (125) lead in the number of author-country affiliations, followed by Australia (49), China (46), South Korea (43), and Spain (43). Cumulative production curves (not shown) show that the USA and the United Kingdom have grown steadily from the early 2000s, whereas India's output was small until about 2015 (15 affiliations) and then rose steeply: from 59 in 2023 to 78 in 2024 and 125 in 2025. The 47-affiliation increase in 2025 is large relative to the 76 documents published that year and suggests that India-affiliated authors contributed a majority of the 2025 output; because affiliation counts are not document counts, this pattern should be verified at the record level.

Using the corresponding author's country, which was identified for 425 documents (69.2%), the United Kingdom (57 documents), the USA (51), and India (48) led, accounting for 36.7% of those documents (Table 4; Fig. 4). International collaboration was limited: 84 of 425 documents (19.8%) were multiple-country publications. The share was 15.8% for the United Kingdom, 17.6% for the USA, and only 10.4% for India, whereas it was 53.8% for Canada (13 documents) and 50.0% for Sweden (12); Japan, Turkey, Italy, and Norway showed no multiple-country publications. Rates for countries with fewer than ten documents (for example, Bangladesh, 3 of 4) were unstable.

Production and impact diverged (Fig. 5; Table 4). Documents with a UK corresponding author received 1,772 citations (31.1 per article), followed by the USA (1,199; 23.5 per article) and Australia (670; 29.1 per article). Several small producers had high averages in the Netherlands (76.5 per article from six

documents), Denmark (88.8 from four), Bangladesh (76.8 from four), and Norway (44.0), reflecting the influence of single highly cited papers in small samples. India stood out in the opposite direction: with 48 documents, it was the third-largest producer but received only 293 citations (6.1 per article), below China (12.4), Spain (15.2), and Korea (9.0). Citation age is a major part of the explanation: 53.6% of India's affiliation count (67 of 125) was added after 2022, against 31.0% for the United Kingdom (39 of 126), and 23.8% for the USA (35 of 147). The comparison indicates that India's volume is recent and that its citation impact cannot yet be assessed on equal terms; it does not exclude additional differences in journal selection and in international visibility.

Table 4
Top 15 countries by corresponding-author affiliation: output, collaboration and citation impact

Rank	Country	Docs	Docs (%)	SCP	MCP	MCP (%)	TC	Avg. citations
1	United Kingdom	57	9.3	48	9	15.8	1772	31.1
2	USA	51	8.3	42	9	17.6	1199	23.5
3	India	48	7.8	43	5	10.4	293	6.1
4	Australia	23	3.7	18	5	21.7	670	29.1
5	China	20	3.3	15	5	25.0	248	12.4
6	Korea	20	3.3	16	4	20.0	180	9.0
7	Spain	15	2.4	12	3	20.0	228	15.2
8	Canada	13	2.1	6	7	53.8	118	9.1
9	Germany	13	2.1	11	2	15.4	105	8.1
10	Sweden	12	2.0	6	6	50.0	440	36.7
11	Japan	10	1.6	10	0	0.0	110	11.0
12	Turkey	10	1.6	10	0	0.0	155	15.5
13	Malaysia	9	1.5	8	1	11.1	154	17.1
14	South Africa	9	1.5	8	1	11.1	74	8.2
15	Italy	8	1.3	8	0	0.0	50	6.2

Note. Docs (%) is the share of the 614 documents; SCP = single-country publications; MCP = multiple-country publications; TC = total citations of documents with a corresponding author from the country; Avg. citations = TC/Docs.

4.6 Most-cited documents and intellectual base (RQ4)

The most globally cited document is the gendered value-chain analysis of codes of conduct in African horticulture by Barrientos et al. (2003), with 325 citations (13.5 per year), followed by a 2004 article in the *Journal of International Development* (289; 12.6 per year), and the gendered analysis of SDG 8 by Rai et al. (2019; 281 citations). Rai et al. (2019) have the highest citation rate in the top group (35.1 citations per year; normalised score 11.98). Other leading documents include Bardasi and Francesconi (2004) on atypical employment and well-being (222 citations), Duffy and Pruchniewska (2017) on gender and self-enterprise on social media (185), Plaisier et al. (2007) on working conditions, social support, and depressive and anxiety disorders (182), and Strazdins and Bammer (2004) on musculoskeletal health (164) (Table 5). The 15 leading documents appeared in outlets spanning development studies, medicine and public health, ergonomics, communication, tourism, sociology, and political economy; thus, influence is not concentrated in a single disciplinary stream.

The documents most cited by other documents in the dataset (local citations) are dominated by development-oriented work (Barrientos et al., 2003: nine local citations; the 2004 *Journal of International Development* article: four) and health studies (Bardasi & Francesconi, 2004: three). Local counts are low because the corpus is small; therefore, the local citation ranking mainly signals where a limited amount of within-field cumulation occurs. The most locally cited references (Table 6) show the theoretical anchors of the field: Braun and Clarke's (2006) thematic-analysis method (13 citations), Acker's (1990) theory of gendered organisations (7), Barrientos et al. (2003) value-chain article (7), and a group of works cited six times each, including Standing (1999) on global feminisation, Karasek (1979) on job demands and decision latitude, and a 1985 article on work-family conflict (Greenhaus & Beutell, 1985). Kalleberg (2009) on precarious work follows with five citations, and Goldin (2014) on gender convergence and Gallie and Russell (2009) on work–family conflict and working conditions in Western Europe are each cited four times (not shown in Table 6). The presence of qualitative-method, sociological, development, psychological, and labour-economic references confirms the multi-paradigm base of the field.

The reference-publication-year spectrogram (Fig. 6) shows that cited references rose sharply from the late 1980s and again from the late 1990s, with the largest peak around 2020. The most pronounced deviations from the five-year median occurred in 1979, 1984, 1990, 1995, 1997, 2000, 2003, 2010, 2013, and 2020. The 1979 and 1990 peaks coincide with the locally cited classics Karasek (1979) and Acker (1990), whereas the 2020 peak is consistent with the COVID-19-era surge in recent literature. The decline after 2020 reflects the citation lag of the youngest publications.

Table 5
Fifteen most globally cited documents

Rank	Document (first author, year, source)	DOI	TC	TC per year	Normalized TC
1	BARRIENTOS S, 2003, WORLD DEV	10.1016/S0305-750X(03)00110-4	325	13.5	4.30
2	KABEER N, 2004, J INT DEV	10.1002/jid.1065	289	12.6	5.17
3	RAI SM, 2019, WORLD DEV	10.1016/j.worlddev.2018.09.006	281	35.1	11.98
4	BARDASI E, 2004, SOC SCI MED	10.1016/S0277-9536(03)00400-3	222	9.7	3.97
5	DUFFY BE, 2017, INF COMMUN SOC	10.1080/1369118X.2017.1291703	185	18.5	8.67
6	PLAISIER I, 2007, SOC SCI MED	10.1016/j.socscimed.2006.09.008	182	9.1	6.11
7	JENSEN C, 2002, INT J IND ERGON	10.1016/S0169-8141(02)00130-0	168	6.7	2.96
8	STRAZDINS L, 2004, SOC SCI MED	10.1016/S0277-9536(03)00260-0	164	7.1	2.94
9	PETERS P, 2009, COMMUNITY WORK FAM	10.1080/13668800902968907	162	9.0	4.79
10	BÜLTMANN U, 2006, SOC PSYCHIATRY PSYCHIATR EPIDEMIOL	10.1007/s00127-006-0110-y	158	7.5	5.42
11	KHERA R, 2009, ECON POLIT WKLY	n/a	152	8.4	4.50
12	UDDIN M, 2021, INT SOC SCI J	10.1111/issj.12267	133	22.2	5.80
13	PALPACUER F, 2008, ECON SOC	10.1080/03085140802172698	127	6.7	4.62
14	THRANE C, 2008, TOUR MANAGE	10.1016/j.tourman.2007.05.017	120	6.3	4.37
15	SCHUELLER-WEIDEKAMM C,	10.1016/j.genm.2012.04.002	108	7.2	5.59

Note. As exported by Biblioshiny; documents are identified by first author, year and source abbreviation as recorded in Scopus. TC = total citations; Normalised TC = TC divided by the mean TC of documents published in the same year. n/a = no DOI recorded.

Rank	Document (first author, year, source)	DOI	TC	TC per year	Normalized TC
	2012, GENDER MED				

Note. As exported by Biblioshiny; documents are identified by first author, year and source abbreviation as recorded in Scopus. TC = total citations; Normalised TC = TC divided by the mean TC of documents published in the same year. n/a = no DOI recorded.

Table 6
Ten most locally cited references

Rank	Cited reference	Citations
1	Braun V., Clarke V., Using Thematic Analysis in Psychology, Qualitative Research in Psychology, 3, 2, pp. 77–101, (2006)	13
2	Acker J., Hierarchies, Jobs, Bodies: a Theory of Gendered Organizations, Gender & Society, 4, 2, pp. 139–158, (1990)	7
3	Barrientos S., Dolan C., Tallontire A., A Gendered Value Chain Approach to Codes of Conduct in African Horticulture, World Development, 31, 9, pp. 1511–1526, (2003)	7
4	Anderson B., Doing the Dirty Work? the Global Politics of Domestic Labour, (2000)	6
5	Clark A.E., Job Satisfaction and Gender: Why Are Women So Happy At Work?, Labour Economics, 4, 4, pp. 341–372, (1997)	6
6	Greenhaus J.H., Beutell N.J., Sources of Conflict Between Work and Family Roles, Academy of Management Review, 10, 1, pp. 76–88, (1985)	6
7	Karasek R.A., Job Demands, Job Decision Latitude, and Mental Strain: Implications for Job Redesign, Administrative Science Quarterly, 24, 2, pp. 285–308, (1979)	6
8	Standing G., Global Feminization Through Flexible Labor: a Theme Revisited, World Development, 27, 3, pp. 583–602, (1999)	6
9	Kalleberg A.L., Precarious Work, Insecure Workers: Employment Relations in Transition, American Sociological Review, 74, 1, pp. 1–22, (2009)	5
10	Kanter R.M., Men and Women of the Corporation, (1977)	5

Note. Reference strings are parsed by Bibliometrix from Scopus cited-reference fields. One entry ("Proceedings of the IEEE, 2016") is a parsing artefact of an incomplete reference string and is not a substantive source.

4.7 Conceptual structure (RQ5)

Keywords. The most frequent keywords were *women's employment* (77 occurrences), *employment* (62), *women's status* (52), *female worker (47)*, and *labour market* (45), followed by *major clinical study* (33),

gender role (30), *India* (26), *COVID-19 (20)*, and *gender disparity* (20) (Table 7). The appearance of *major clinical study* and, in the network, terms such as *occupational diseases* and *major clinical study* reflects the medical-indexing vocabulary attached to the health stream of the literature. *India* was the only country among the ten most frequent keywords.

Co-occurrence network. The VOSviewer network (Fig. 9; Table 8) has five clusters. The largest (red) cluster concentrates on labour markets, informal work, and development: *working conditions*, the largest node in the whole network, *women's employment*, *women's status*, *labour market*, *women workers*, *India*, *Bangladesh*, *garment industry*, *domestic work*, *labour migration*, *decent work*, *globalisation*, and trade *unions*. A green cluster combines work-life balance, gender equality and inequality, wage gaps, job satisfaction, family policy, and European and UK settings. A blue cluster covers occupational health, ergonomics, musculoskeletal disease, job stress, and occupational risks. A yellow cluster links female workers with depression, sexual harassment, gender differences, social support, and violence, and a purple cluster groups employment with income, socioeconomic factors, education, aging, and marriage. *Working conditions* occupy the position between the red and health clusters and is the main conceptual bridge between social-structural and health-oriented research.

Thematic map. In the Biblioshiny thematic map (Fig. 8), the motor-theme quadrant is occupied by a cluster of generic indexing terms (*female*, *human*, *article*), which is an artefact of Keywords Plus rather than a substantive theme and is a consequence of the high proportion of missing and non-harmonised keywords. A small niche cluster (*workplace*, *humans*, *health status*) lies on the left of the map, while the substantive core *working conditions, gender*, and *women's employment* sit near the centre line at low density. In the usual reading of the map, this places the central concepts of the field at the boundary between basic and emerging themes: they are highly connected to the rest of the field but conceptually still loosely developed.

Trend topics. The trend-topics plot (Fig. 7) shows a clear temporal sequence. Terms with the earliest median years (around 2006–2012) include *Africa*, *Western Europe*, *ergonomics*, *musculoskeletal disease*, *risk factors*, and *globalisation*. Mid-period terms (2013–2018) include *occupational health*, *sexual harassment*, *gender relations*, *women's employment*, *work environment*, and *working conditions*, whose median year is 2017 and which has the largest term frequency in the plot. The most recent terms (2021–2025) are *decent work*, *violence*, *Bangladesh*, *gender equality*, *job satisfaction*, *gender inequality*, *gender discrimination*, *COVID-19*, *sexism*, *South Korea*, *mental health, wages*, and *inequality*. The literature has thus shifted from risk exposure and musculoskeletal disorders in industrial and European settings toward inequality, discrimination, mental health, and decent work, with new geographies (Bangladesh and South Korea) entering the field.

Table 7
Ten most frequent keywords (author keywords and Keywords Plus)

Rank	Keyword	Occurrences
1	Women's employment	77
2	Employment	62
3	Women's status	52
4	Female worker	47
5	Labor market	45
6	Major clinical study	33
7	Gender role	30
8	India	26
9	COVID-19	20
10	Gender disparity	20

Note. Values read from the Biblioshiny "Most Relevant Words" plot generated from all the keywords.

Table 8
Thematic clusters in the keyword co-occurrence network

Cluster	Interpretive label	Representative keywords (as displayed in Fig. 9)
1 (red)	Labour markets, informal work and development	Working conditions, women's employment, women's status, labor market, women workers, India, Bangladesh, garment industry, domestic work, labour migration, decent work, globalization, trade unions, wage
2 (green)	Work–family balance, inequality and European labour markets	Work-life balance, gender equality, gender inequality, Europe, United Kingdom, job satisfaction, wage gap, family policy, job quality, quality of life, mental health
3 (blue)	Occupational health, ergonomics and musculoskeletal risk	Occupational health, occupational exposure, ergonomics, musculoskeletal disease, major clinical study, job stress, prevalence, occupational risks
4 (yellow)	Psychosocial well-being, harassment and gender differences	Female worker, depression, sexual harassment, gender differences, social support, adolescent, violence, stress, qualitative research
5 (purple)	Employment, socioeconomic status and demographic context	Employment, income, socioeconomic factors, education, aging, marriage, Japan, South Korea, employment status

Note. Clusters were identified using VOSviewer; labels are the authors' interpretation. Keyword assignment is read from the network visualization and is indicative rather than exhaustive

5. Discussion

5.1 Principal findings

The results answer the six research questions as follows. The literature has grown at approximately 9% per year and has roughly doubled in the last six years (RQ1). It is dispersed across hundreds of journals and a large number of one-time authors, with a few outlets in gender and organisation studies, medical sociology, and ergonomics at its core (RQ2). It is produced mainly in the United Kingdom, USA, and India, with limited international co-authorship (RQ3). Its intellectual base is multi-paradigmatic, combining gendered-organisation theory, global value-chain analysis, precarious-work sociology, labour economics, and job-strain psychology (RQ4). Conceptually, the field comprises five clusters bridged by the concept of working conditions, and its focus has shifted from physical risk exposure to inequality, mental health, and decent work (RQ5, RQ6).

5.2 A growing but fragmented field

Fragmentation was the most consistent finding. The proportion of single-appearance authors (95.3%) and single-document sources (77.1%) was high, local citation counts were small, and international collaboration was low. Taken with the five-cluster network, this suggests that studies of women's working conditions are typically conducted by occasional contributors within separate disciplinary traditions rather than by sustained research groups building cumulative programs. The two largest clusters, social-structural research on labour markets and informal work and occupational-health research on exposure and illness, are connected mainly through the single term *working conditions*. Work on informal employment and precariousness increasingly examines their health impact (Benavides et al., 2022), and studies of atypical employment have long examined well-being outcomes (Bardasi & Francesconi, 2004); however, the map indicates that in the literature analysed here, these perspectives are connected mainly through a single term. Integrative designs that combine structural indicators of precarity with measured health and well-being outcomes would therefore address a visible structural gap in the field.

5.3 Geographic imbalance and the position of India

The leading producers are the United Kingdom, the USA, and India, and the highest average citation counts are found for documents with corresponding authors from the United Kingdom, Australia, and several small European countries. India's position is distinctive. It is the third-largest producer, but its documents average 6.1 citations, and its international collaboration rate (10.4%) is the lowest among the three leading countries. Two caveats apply. Much of India's output is recent, which depresses citation counts, and the sharp rise in 2025 should be examined at the record level. Simultaneously, the keyword *India* is the only national label in the top ten keywords and sits in the informal work and development cluster together with *Bangladesh*, *garment industry*, *domestic work*, and *decent work*, showing that Indian scholarship is already engaged with informal work, which accounts for a large majority of employment in Asia outside China (77%, according to figures reviewed by Benavides et al., 2022). The distinct finding is

therefore not a shortage of Indian studies but a shortage of influential and internationally co-authored studies. For researchers working on women in India's informal labour markets, this points to two opportunities: designing comparative South Asian studies with partners in countries such as Bangladesh and anchoring locally generated evidence in the theoretical vocabularies of gendered organisations, value chains, and precarious work that organise the high-impact literature.

5.4 Research agenda

The mapped structure suggests five priorities. *First*, studies of informal and platform-mediated work are under-represented relative to their weight in women's employment; informal and domestic work appear mainly at the margins of the network, and platform and digital work is represented by a single document among the fifteen most cited (Duffy & Pruchniewska, 2017). *Second*, the SDG 8 agenda, including the treatment of unpaid care and social reproduction (Rai et al., 2019), needs empirical measurement in the conditions-of-work literature. *Third*, the rise of terms such as *gender discrimination*, *sexism*, violence, and *mental health* points to the need for longitudinal and mixed-method designs that link workplace harassment and psychosocial conditions to health and wages. *Fourth*, post-pandemic changes in working time, remote work, and care responsibilities are only beginning to appear (*COVID-19* is among the ten most frequent keywords). *Fifth, the* capacity for international collaboration is limited and uneven; comparative designs across regions would reduce the dependence of the field on single-country case studies. Because the present corpus is restricted to English-language Scopus records, regional-language literature and grey literature from labour organisations and international agencies, which carry much of the evidence on informal work, should be incorporated in future work.

5.5 Implications

For researchers, the results provide a map of influential sources, theories, and authors for positioning new work and identifying collaborators and target journals for publication. For funders and policymakers, they indicate where evidence is concentrated (formal employment in high-income settings; exposure and health outcomes in industrial settings) and where it is thin (informal and platform work; Global South contexts; multi-country comparison). For editors and reviewers, they show how rapidly the literature is growing and how dispersed it is across different outlets.

6. Limitations

The analysis has limitations that should shape its interpretation. (i) Only Scopus was used, and only English-language journal articles and book chapters in the Social Sciences and Arts & Humanities subject areas were retained; monographs, conference papers, grey literature, and non-English work, including much of the research on informal labour in the Global South, are not covered, and purely biomedical occupational health journals may be underrepresented. (ii) The search strategy depends on the terms chosen for the two concept blocks, and relevant studies that use other vocabulary (for example, *domestic workers*, *garment workers*, or *gig workers* without the condition terms) may be missed; the corpus was not manually screened for relevance beyond the stated filters. (iii) Metadata quality

varies: corresponding-author information is missing for 29.8% of documents and Keywords Plus for 55.5%, which weakens the country-collaboration and thematic-map results; affiliations were not disambiguated and keywords were not harmonised. (iv) Citation counts depend on document age, and recent cohorts are under-cited; country averages for small producers are driven by single papers. (v) Local-citation and author-productivity analyses have limited power in a corpus of 614 documents in which most authors and sources appear once. (vi) Bibliometric indicators describe publication patterns, not the quality or findings of the studies, and the interpretation of clusters is the authors' own. Combining the present mapping with a systematic content analysis of the most-cited and most-recent documents would address several of these issues.

7. Conclusion

This study mapped 614 Scopus-indexed documents on female workers and working conditions published between 2000 and 2025. The literature is growing quickly, with almost half of all documents published since 2020, but it is dispersed across many sources and authors, concentrated in a few countries, and weakly connected across social science and health streams. India is among the three leading producers, yet has a markedly low average citation count and limited international co-authorship, much of which reflects the recentness of its output. Keyword analysis revealed five thematic clusters bridged by *working conditions* and a shift from ergonomic and musculoskeletal concerns to inequality, discrimination, mental health, and decent work. The field would benefit from integrated structural health frameworks, greater attention to informal and platform work and Global South settings, and more comparative and collaborative research efforts.

Declarations

Clinical trial registration.

Not applicable. This study is a bibliometric analysis of published bibliographic records and does not involve any clinical trial, intervention, or health-related experiment. Therefore, clinical trial registration was not required.

Competing interests.

The authors declare that they have no competing interests.

Ethics approval and consent to participate.

Not applicable. This study is a bibliometric analysis based exclusively on published, publicly available bibliographic records. It did not involve human participants, human data, human tissue, or animals, and therefore did not require ethical approval or informed consent.

Consent for publication.

Not applicable. The manuscript does not contain any individual person's data, images, or details.

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Author Contribution

Pranay Ramteke conducted the study, including conceptualization, methodology, data collection, data analysis, visualization, and manuscript writing. Gopi Nimbarte provided academic guidance and supervision and critically reviewed the manuscript. Both authors read and approved the final manuscript.

Data availability.

The bibliographic data were retrieved from Scopus and analysed using Bibliometrix/Biblioshiny and VOSviewer. The exported summary tables underlying all tables and figures are available from the corresponding author on reasonable request, subject to database licence terms.

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Figures

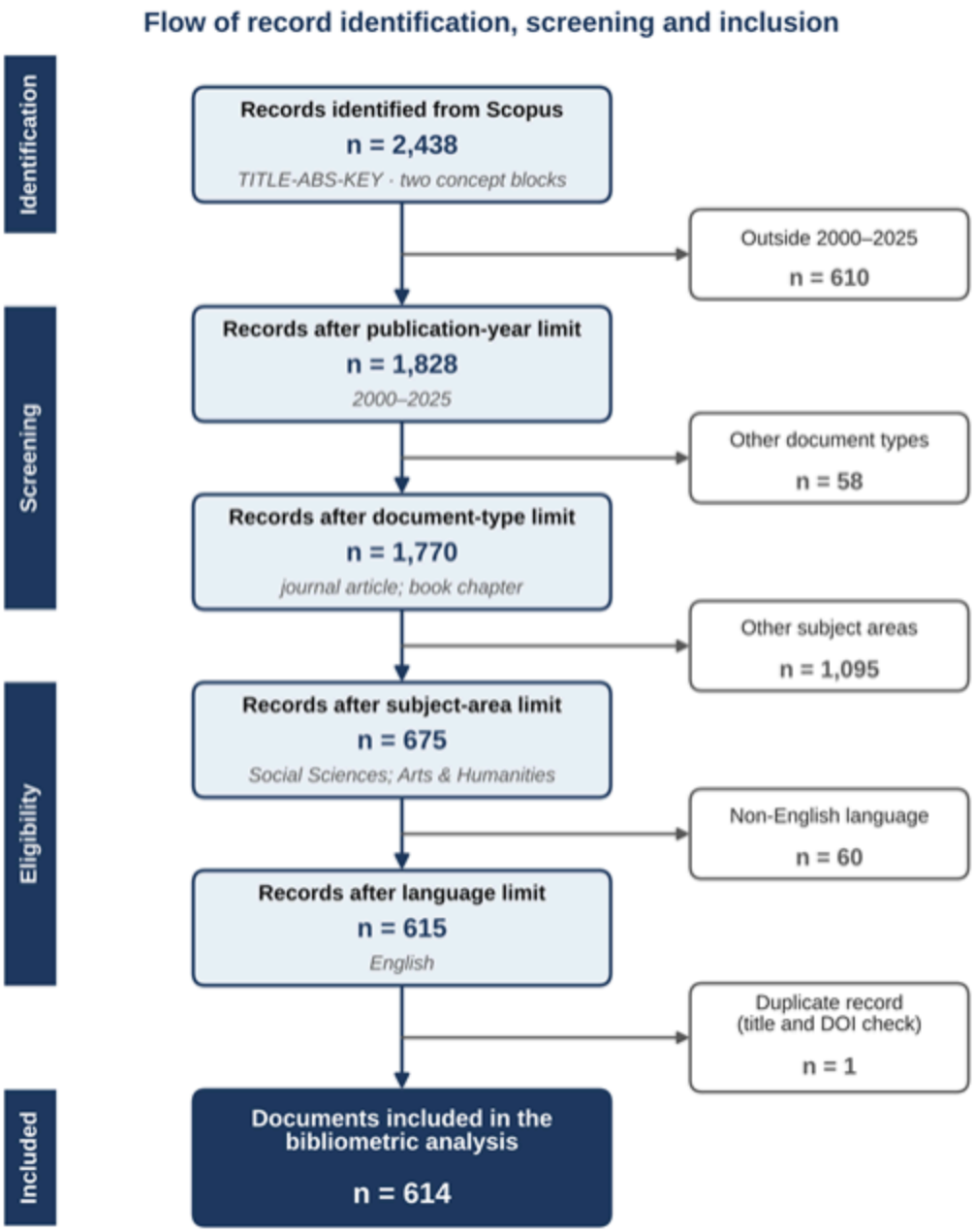


Figure 1

PRISMA-style flow diagram of record identification, screening, and inclusion (Scopus; adapted for bibliometric analysis).

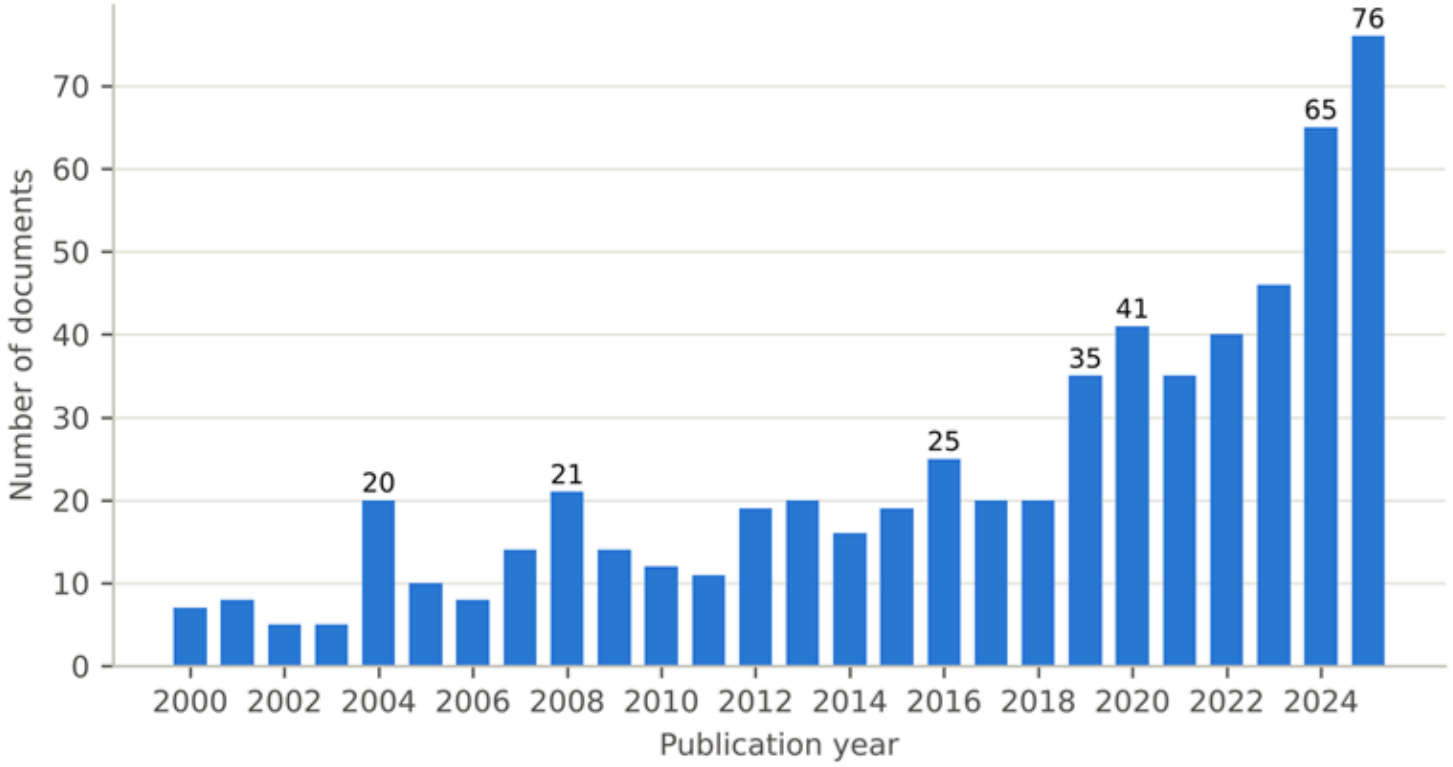


Figure 2

Annual scientific production of female workers and working conditions, 2000–2025 (n = 612 documents with a recorded publication year).

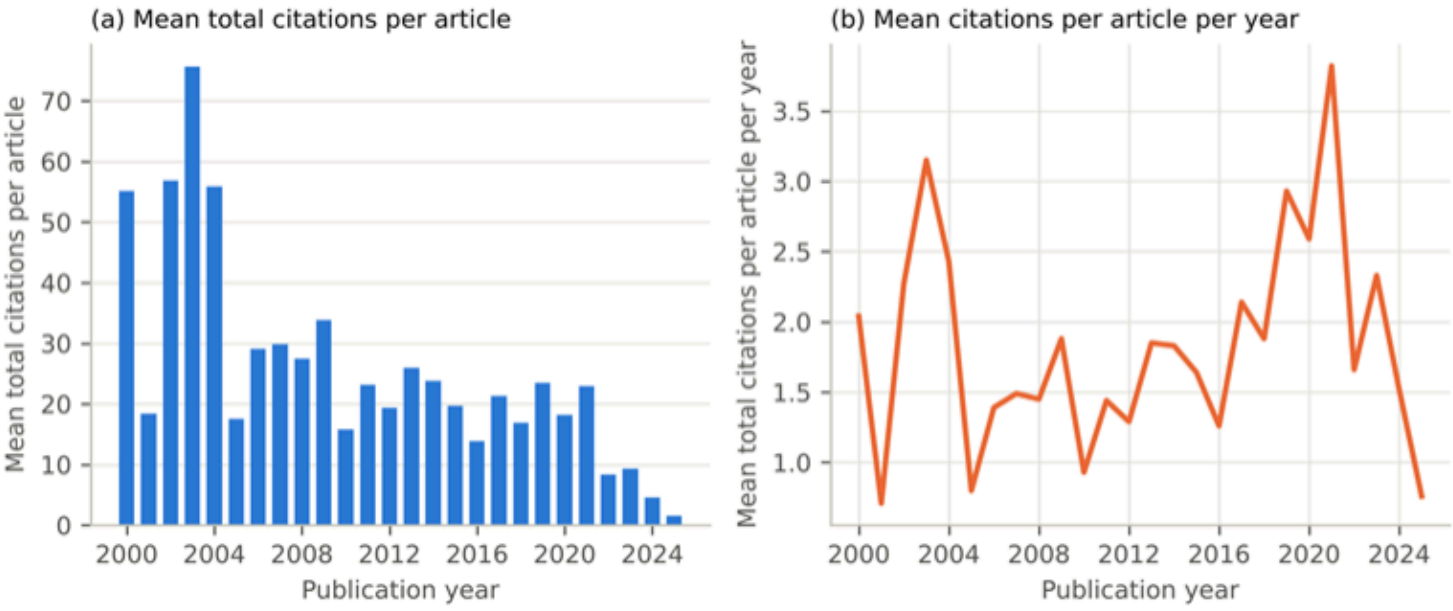


Figure 3

Citation impact by publication year: (a) mean total citations per article; (b) mean citations per article per year.

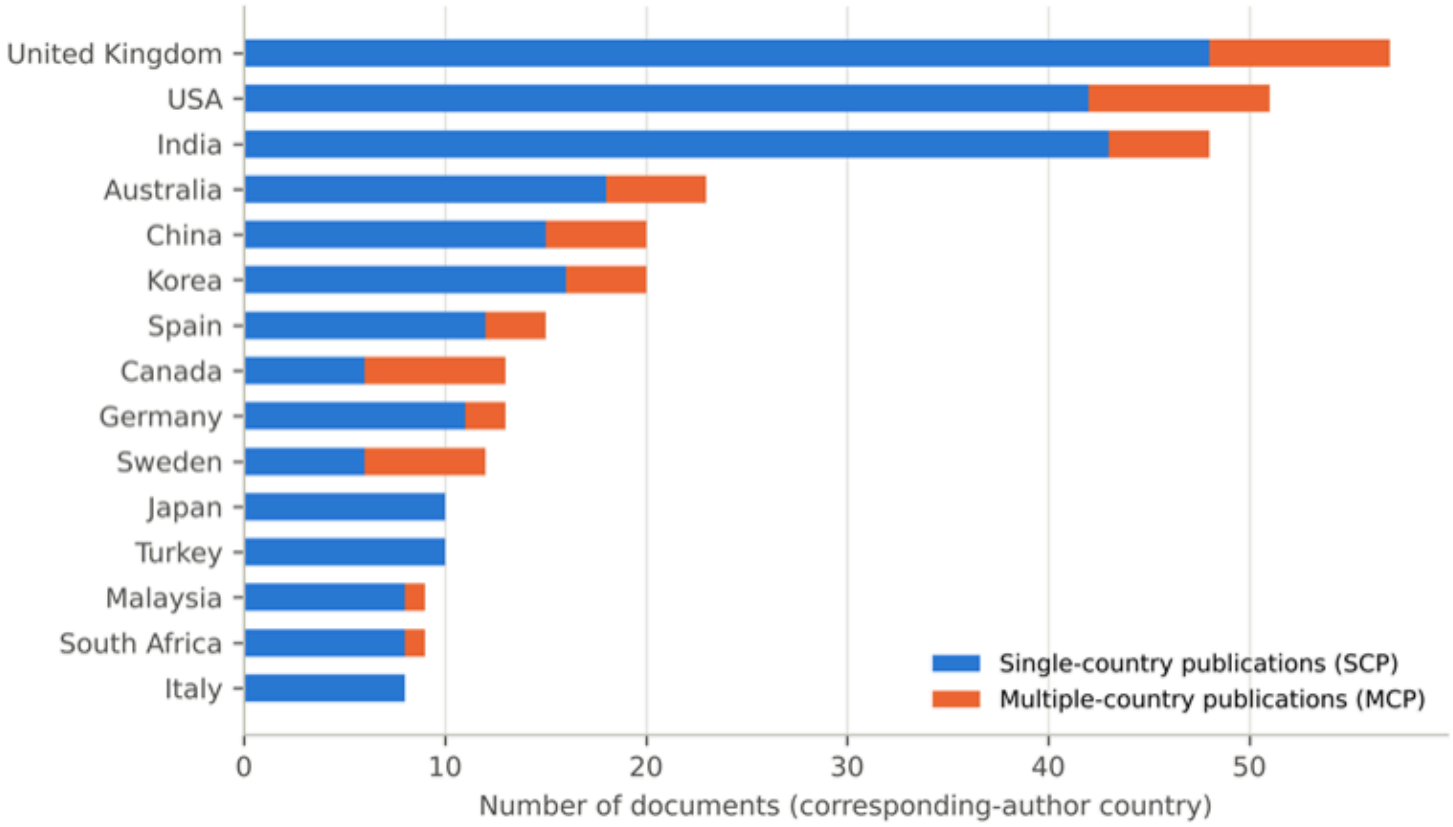


Figure 4

Corresponding-author countries (top 15): single-country (SCP) and multiple-country (MCP) publications.

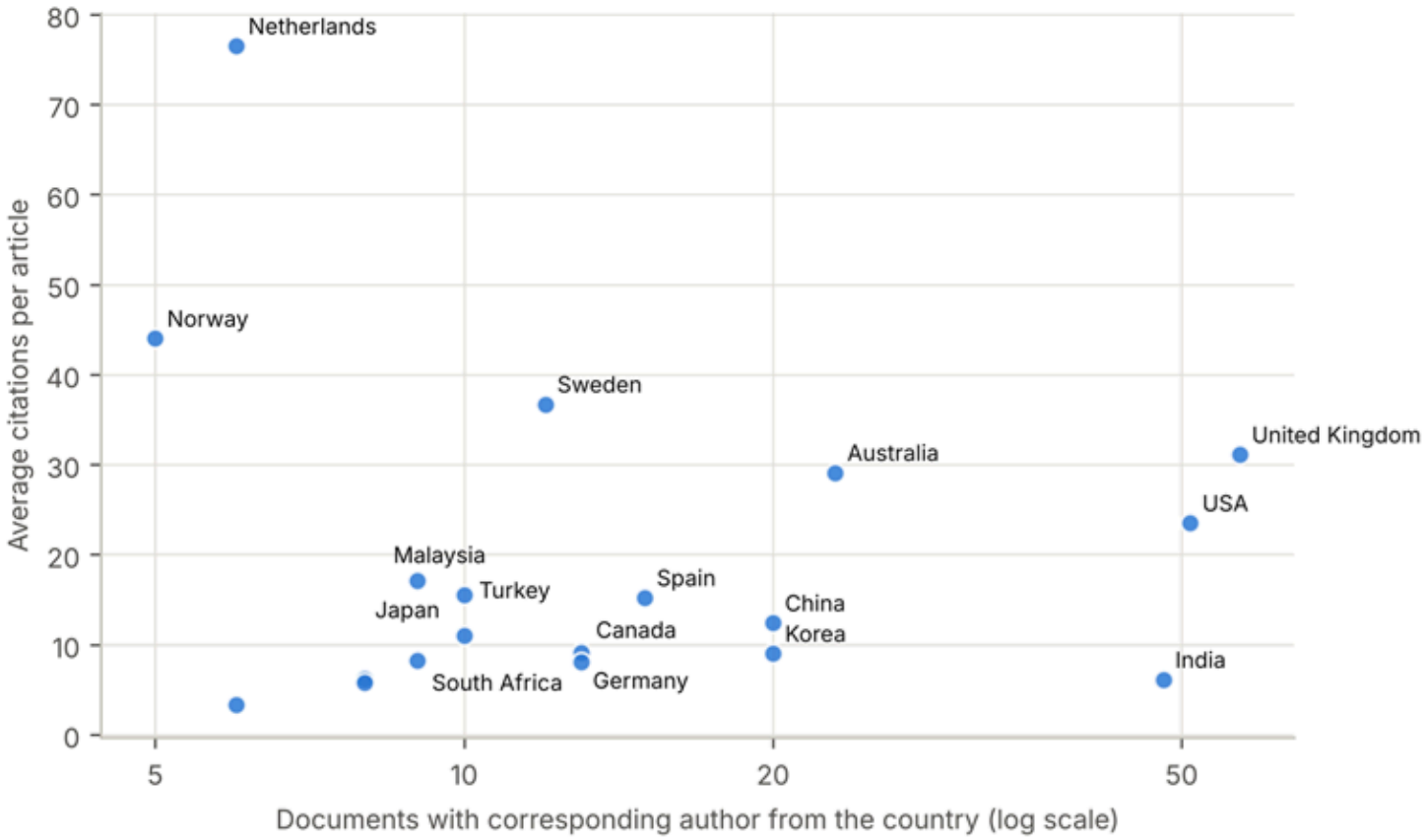


Figure 5

Production and citation impact by corresponding-author country (countries with at least five documents; horizontal axis on a logarithmic scale).

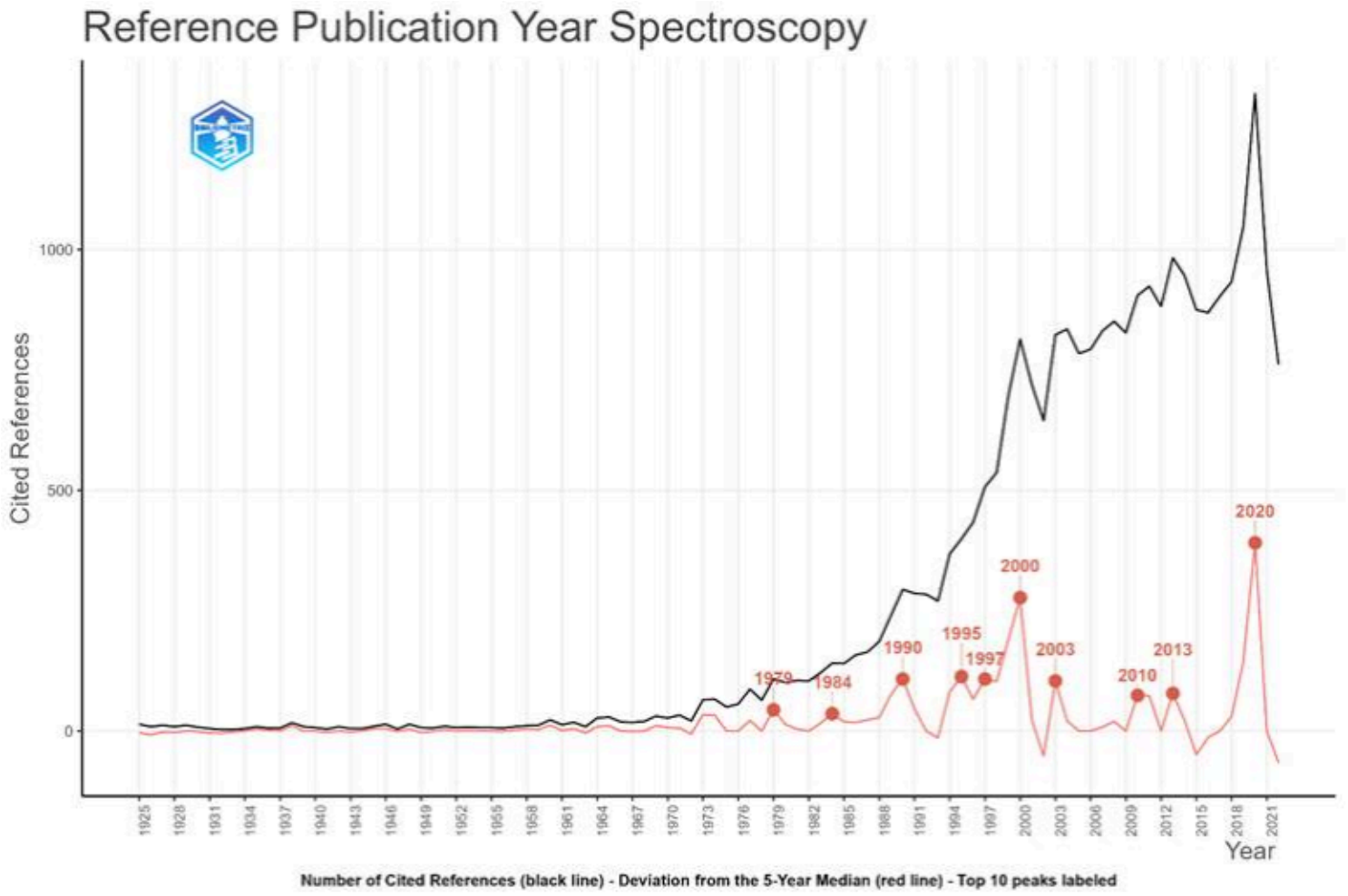


Figure 6

Reference publication year spectroscopy. The black line represents the number of cited references by publication year, and the red line represents the deviation from the five-year median, with the ten largest peaks labelled (Biblioshiny).

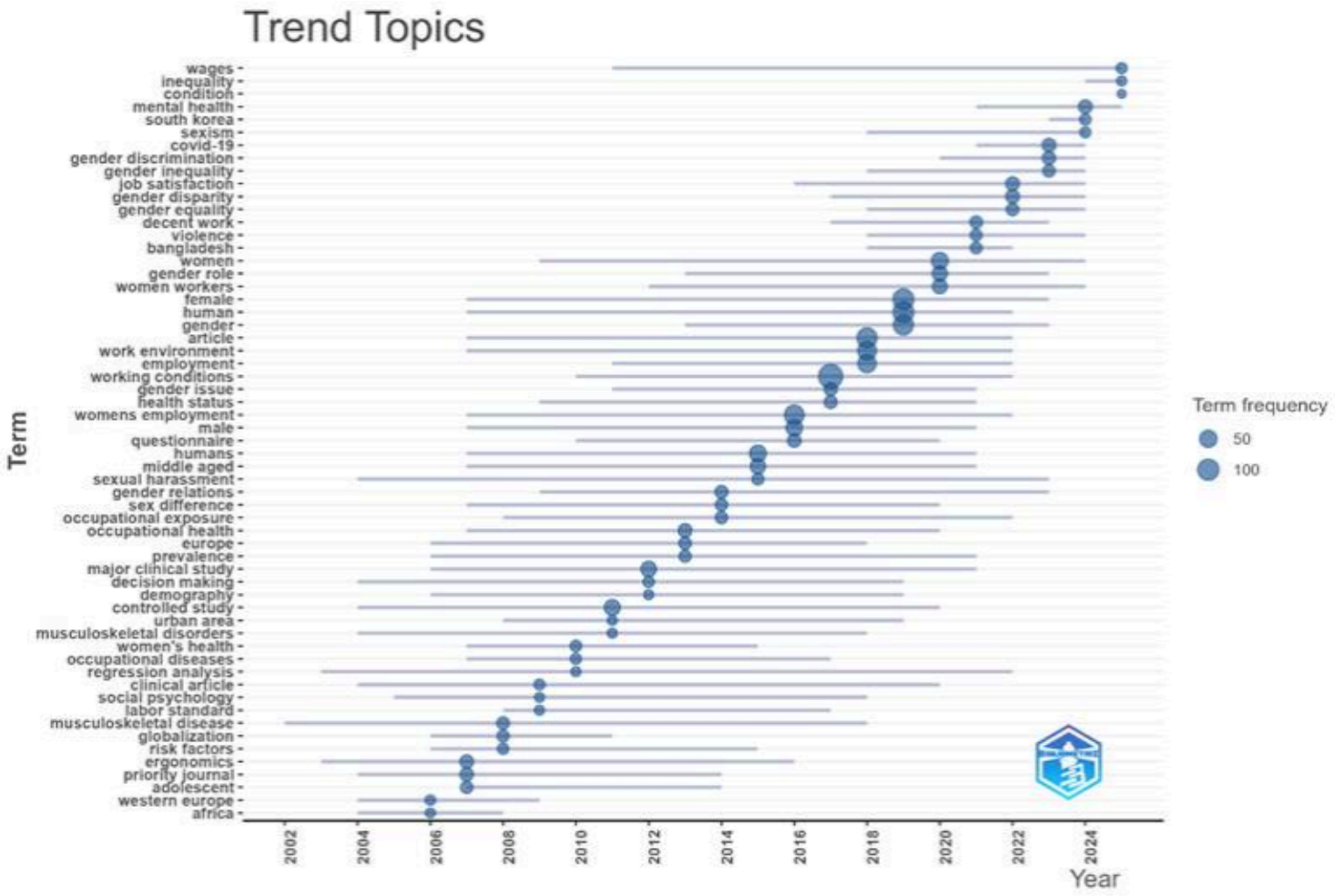


Figure 7

Trend topics. Each point represents the median year of occurrence of a term; the horizontal line is the interquartile range; and the point size represents the term frequency (Biblioshiny).

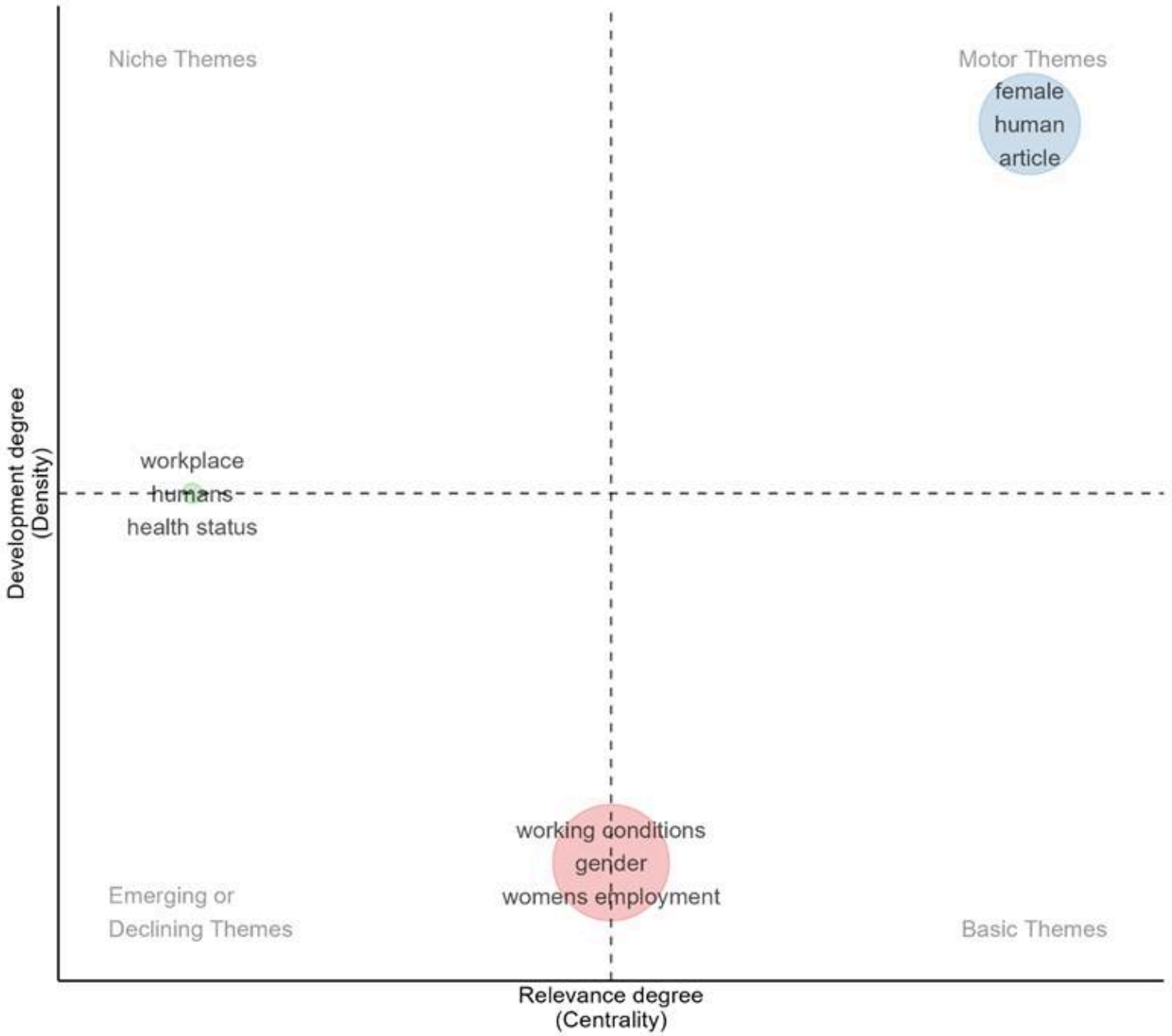


Figure 8

Thematic map of keywords by centrality (relevance degree) and density (development degree) (Biblioshiny).

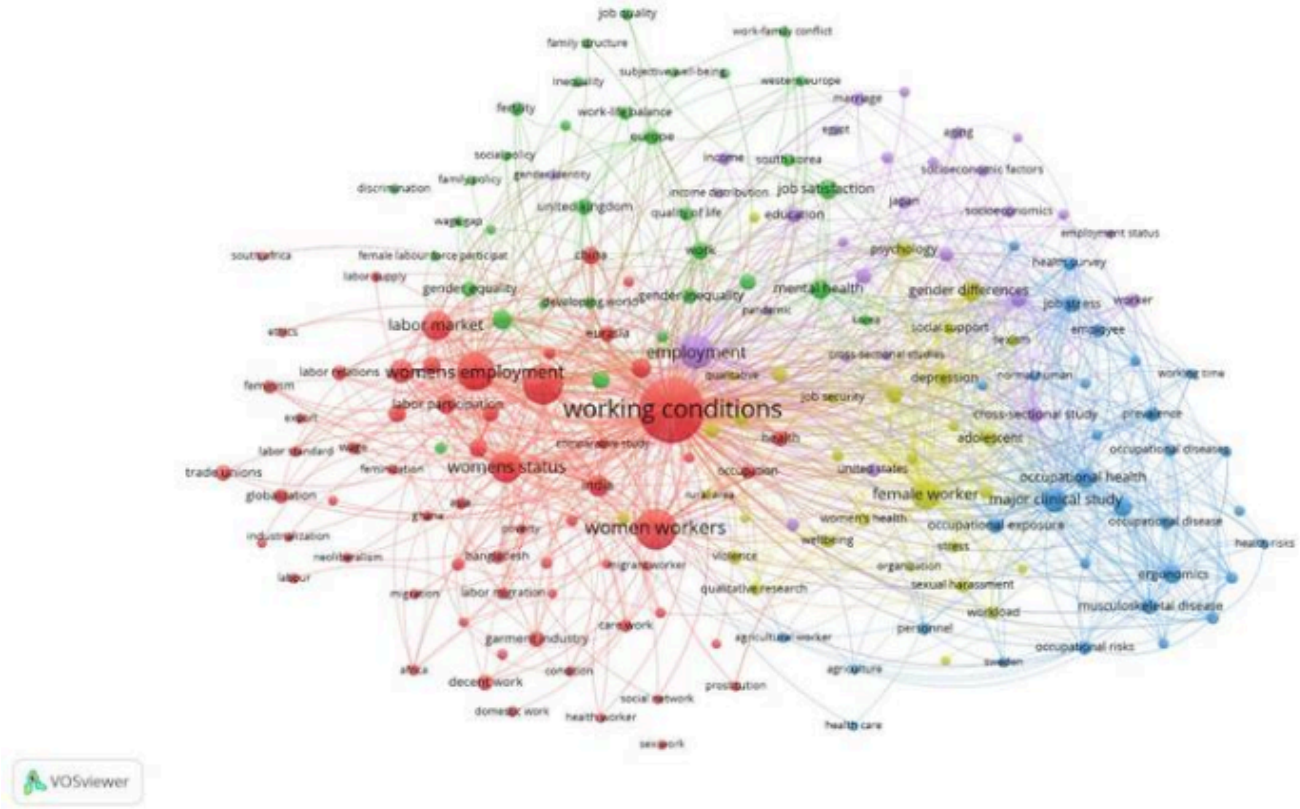


Figure 9

Keyword co-occurrence network (VOSviewer). Node size reflects keyword frequency; colours indicate clusters; generic indexing terms are excluded.

Supplementary Files

This is a list of supplementary files associated with this preprint. Click to download.

- AppendixA.Searchstrategyandrecordselection.docx