

SCHOLARLY FRAGMENTATION IN WOMEN'S SPORT LEADERSHIP RESEARCH: A BIBLIOMETRIC ANALYSIS (1989-2025)

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Abstract. Women remain significantly underrepresented in sport leadership positions globally. Previous narrative reviews identified the dominance of Western perspectives, but no study has empirically mapped the intellectual structure and geographic distribution of this research domain. This study employed bibliometric methods to quantify publication trends and geographic concentration, map intellectual structure through bibliographic coupling and keyword co-occurrence analyses, and diagnose patterns of scholarly fragmentation. Following Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines, 180 Scopus-indexed articles published between 1989 and 2025 were analysed using VOSviewer. The analysis revealed significant geographic concentration: four countries (United States, Australia, Canada, United Kingdom) produced 75.5% of publications. Keyword co-occurrence identified four thematic clusters with limited integration. Bibliographic coupling confirmed Burton multilevel review as the intellectual anchor. Notable gaps include minimal Southeast Asian representation, methodological concentration in qualitative approaches, and limited empirical testing of psychological mechanisms. This analysis provides the first bibliometric diagnosis of scholarly fragmentation in women's sport leadership research. A research agenda prioritising cross-regional collaboration, methodological diversification, and integration of governance and psychological perspectives is proposed.

Keywords: *gender equity, sport governance, science mapping, geographic concentration, thematic fragmentation*

Introduction

Women's underrepresentation in sport leadership positions persists as a systematic barrier in sport governance worldwide. Although female participation in athletics reached historic equality at the Paris 2024 Olympic Games, with women comprising 50% of athletes (IOC, 2024), their representation in governance, coaching, and executive positions remains disproportionately low. The International Olympic Committee's Gender Equality Review Project (IOC, 2018) recommendation that National Olympic Committees and International Federations achieve a minimum of 30% women's representation on executive boards has produced uneven progress across regions and organizational tiers. The persistence of gender inequity in sport leadership constitutes both a governance challenge and a policy failure. Despite three decades of international commitments, voluntary targets, and increasingly mandatory quota systems, progress toward gender-balanced leadership remains inconsistent and context-dependent. The International Olympic Committee's Gender Equality Review Project, initiated in 2017 and resulting in 25 recommendations across five thematic areas, represented the most comprehensive policy intervention by a transnational sport

governing body to date (IOC, 2018). Yet implementation has varied dramatically across national contexts, organizational tiers, and sport types, raising fundamental questions about the efficacy of current policy approaches and the conditions under which gender equity policies produce intended outcomes. The policy landscape for women's sport leadership encompasses multiple governance levels operating with varying degrees of coordination. At the transnational level, the IOC, continental Olympic associations, and international sport federations establish targets and monitoring mechanisms. The IOC's requirement that National Olympic Committees and International Federations achieve minimum 30% female representation on executive boards by 2020 created a benchmark that shaped national policy discourse, though compliance remains uneven (Adriaanse, 2016). At the national level, governments have adopted varied approaches, ranging from legislative mandates requiring gender balance on sport governing body boards in Norway, to voluntary governance codes incorporating gender provisions in the United Kingdom, and to minimal regulatory intervention across many Asian and African contexts. This policy variation creates natural variation for comparative analysis, yet scholarly examination of how these different policy instruments affect women's representation and career advancement remains underdeveloped.

The relationship between policy adoption and implementation outcomes in sport governance reflects broader challenges in public policy scholarship. Policy transfer across national contexts encounters barriers including institutional path dependencies, cultural variation in attitudes toward women's leadership, and differential capacity for enforcement and monitoring (Dolowitz and Marsh, 2000). Sport governance presents particular complications, as the autonomy of sport organisations from government intervention, the federated structure of international sport, and the volunteer professional hybrid nature of many national governing bodies create implementation contexts that differ substantially from corporate governance or public sector settings where gender quota research is more developed. Understanding how scholarly knowledge production shapes and is shaped by policy development is essential for advancing both research and practice. If the evidence base informing policy decisions derives predominantly from specific national contexts, the transferability of policy recommendations to other settings remains questionable. Similarly, if researchers and policymakers operate within separate communities with limited interaction, the translation of scholarly findings into actionable policy may be impeded. Bibliometric analysis offers a systematic approach to diagnosing such patterns by mapping where knowledge is produced, how intellectual communities are structured, and whether thematic integration exists between research streams addressing related policy questions. Scholarly engagement with this issue has evolved substantially over three decades. Burton (2015) multilevel review, the most cited work in this domain, established a framework distinguishing macro-level institutional practices, meso-level organizational dynamics, and micro-level individual factors that subsequent research has extended. However, two recent reviews have noted limitations in this literature, Evans and Pfister (2021) identified overrepresentation of Global North perspectives, while Adriaanse (2016) documented that Asian sport organizations have the lowest female representation globally. Park and Won (2024) bibliometric analysis of sport governance literature identified gender dynamics as an emerging research theme but did not specifically examine women's leadership as a distinct subfield. These observations suggest the field may suffer from scholarly fragmentation, geographic insularity, and

thematic fragmentation that impede cumulative knowledge development. However, this proposition has not been empirically tested.

Bibliometric methods offer a systematic, quantitative approach to diagnose such patterns. Unlike narrative reviews that synthesize content, bibliometric analysis maps the structure of a research domain, revealing publication flows, intellectual clusters, and collaboration networks (Donthu et al., 2021). This structural perspective can identify whether research communities are building on shared foundations or developing in parallel with limited integration (Zupic and Čater, 2015). Science mapping techniques, including keyword co-occurrence and bibliographic coupling, provide objective evidence of thematic relationships and intellectual lineages that qualitative reviews cannot capture. This study addresses three research objectives. The first objective (RO1) examines the temporal and geographic patterns of publication in women's sport leadership research and quantifies the degree of concentration characterizing the field. The second objective (RO2) maps the intellectual structure of this research domain to determine whether distinct thematic clusters operate with or without integration. The third objective (RO3) identifies gaps in geographic coverage, methodological approach, and theoretical development, and proposes a research agenda emerging from this diagnosis. The findings contribute to scholarship by providing empirical evidence for fragmentation patterns previously noted only qualitatively, offering a structured framework for prioritizing future research, and identifying specific opportunities for scholars in underrepresented regions to advance the field.

Literature review

Policy frameworks for gender equity in sport governance

Gender equity in sport leadership has evolved from an advocacy concern to a policy priority over three decades, driven by shifting normative frameworks and institutional entrepreneurship at multiple governance levels. The trajectory reflects broader developments in gender mainstreaming across international organisations, yet sport governance presents distinctive features that shape policy adoption and implementation. The IOC's engagement with gender equity in governance accelerated following the 1996 establishment of the Women and Sport Working Group, later elevated to Commission status. Early interventions focused on athlete participation, with governance representation emerging as a policy priority only in the 2000s (Adriaanse and Schofield, 2014). The 2012 adoption of a minimum 20% target for women on National Olympic Committee and International Federation executive boards, subsequently increased to 30% by 2020, marked a shift toward quantitative benchmarking. The IOC Gender Equality Review Project, launched in 2017 and culminating in 25 recommendations endorsed by the IOC Executive Board in February 2018, represented the most comprehensive policy intervention by a transnational sport governing body, addressing sport, funding, governance, and human resources dimensions (IOC, 2018).

Policy instruments for advancing women's sport leadership span a continuum from aspirational targets through prescriptive quotas. Norway pioneered gender quota regulation in organised sport through the Norwegian Olympic and Paralympic Committee and Confederation of Sport (NIF), which requires both genders to be represented on elected boards and committees at all organisational levels, with bodies of four or more members requiring at least two representatives of each sex (Sisjord et al.,

2017). This internal regulatory approach complements Norway's broader legislative framework requiring 40% gender representation on public limited company boards. In contrast, the United Kingdom's Code for Sports Governance establishes gender targets as conditions for public funding eligibility without legislative mandate, requiring organisations to adopt a minimum of 30% of each gender on boards (Sport England, 2016). This softer regulatory approach preserves organisational autonomy while creating compliance incentives through funding conditionality. Australia has recently strengthened its approach, transitioning from voluntary principles to mandatory requirements. The National Gender Equity in Sports Governance Policy, launched in September 2024, requires 50% representation of women and gender diverse individuals on boards, chair positions, and key sub-committees by July 2027, with government funding to be withheld from non-compliant national organisations (ASC, 2024). The effectiveness of these divergent policy approaches remains contested. Adriaanse and Schofield (2014) found that Australian sport organisations' adoption of voluntary targets produced modest representation increases, while Hovden (2010) documented how quota implementation in Norwegian sport governance encountered resistance and adaptation that limited transformative potential. These findings suggest policy design interacts with organisational and cultural contexts in complex ways that require systematic mapping to understand fully.

Theoretical frameworks in women's sport leadership research

Scholarly explanation for women's underrepresentation in sport leadership draws on theoretical traditions from organisational studies, social psychology, and feminist scholarship, though integration across these traditions remains limited. Burton (2015) multilevel framework provides the dominant organising schema, distinguishing macro-level institutional factors (societal gender ideologies, legal frameworks, media representation), meso-level organisational dynamics (hiring practices, organisational culture, network access), and micro-level individual variables (leadership aspiration, self-efficacy, work-family conflict). This framework has shaped subsequent research by providing analytical categories for examining barriers at different levels. However, the framework's descriptive utility exceeds its predictive specification: the relative strength of barriers at different levels, mediating mechanisms connecting barriers to outcomes, and moderating conditions affecting barrier salience remain largely unexamined empirically.

Role congruity theory (Eagly and Karau, 2002) offers psychological explanation for prejudice against women leaders, proposing that perceived incongruity between feminine gender roles and leader role expectations produces two forms of prejudice: perceiving women less favourably than men as potential occupants of leadership roles, and evaluating behaviour that fulfils leader role prescriptions less favourably when enacted by women. Sport contexts may amplify such incongruity given historical masculine coding of sport participation and leadership. However, empirical testing of role congruity predictions within sport leadership contexts remains sparse, and cultural variation in gender role expectations suggests findings may not transfer across national contexts. Homologous reproduction theory (Stangl and Kane, 1991; Kanter, 1977) emphasises how those in power tend to select and promote individuals similar to themselves, perpetuating demographic homogeneity in leadership. Within sport governance, where male-dominated boards control selection processes, this mechanism may operate to exclude women regardless of formal qualification. Claringbould and

Knoppers (2007) demonstrated how selection processes for sport board membership constructed particular notions of the 'normal' candidate that disadvantaged women. Subsequent work by Claringbould and Knoppers (2008) examined how board members engaged in both doing and undoing gender through their sense-making practices. The theory implies that achieving critical mass of women in governance positions may disrupt reproductive dynamics, a proposition underlying policy emphasis on numerical targets, though the threshold at which such disruption occurs remains debated. Shaw and Frisby (2006) challenged traditional conceptualisations of gender equity in sport management, arguing that dominant approaches inadequately addressed power relations and structural inequalities. Their work highlighted how organisational practices that appear gender-neutral may nevertheless reproduce gendered outcomes. This critical perspective has informed subsequent research examining how governance structures and processes maintain masculine dominance despite formal commitments to equity.

The policy research Nexus in sport governance

The relationship between scholarly research and policy development in sport governance reflects broader tensions in evidence-based policymaking. Policymakers operate under time constraints, political pressures, and accountability requirements that shape receptivity to academic research. Researchers prioritise methodological rigour, theoretical contribution, and peer recognition that may diverge from policy utility. These institutional logics can produce disconnection between knowledge production and knowledge utilisation. Within sport policy specifically, the evidence-policy relationship is complicated by sport's distinctive governance characteristics. The autonomy principle, whereby sport organisations claim independence from government intervention, limits state capacity to mandate evidence informed approaches. The volunteer leadership model prevalent in many national governing bodies constrains organisational capacity for evidence gathering and analysis. The federated structure of international sport creates complex multi-level governance where policy coherence is difficult to achieve.

Systematic reviews and bibliometric analyses can serve bridging functions by synthesising dispersed research, identifying knowledge gaps relevant to policy priorities, and assessing whether the evidence base supports prevailing policy approaches. Evans and Pfister (2021) systematic narrative review of women's sport leadership literature advanced this agenda by synthesising findings across studies and explicitly recognising the overrepresentation of Global North perspectives as a limitation constraining the field's knowledge claims. However, narrative approaches are limited in their capacity to map structural patterns in knowledge production. Bibliometric methods complement narrative synthesis by providing quantitative diagnosis of geographic distribution, intellectual structure, and thematic clustering that shapes what knowledge is available to inform policy in different contexts.

Regional policy developments and research gaps

Policy attention to women's sport leadership varies substantially across regions, creating differential demand for evidence-informed approaches. European contexts, particularly Nordic countries, have the longest history of policy intervention and correspondingly developed research literatures. North American research has been shaped by Title IX's influence on US collegiate athletics, producing a substantial body

of work on coaching and athletic administration that may not generalise to volunteer-led sport governance structures prevalent elsewhere. Asian sport governance presents a particularly significant gap. Adriaanse (2016) global index documented that Asian continental and national sport organisations have the lowest average female representation among all regions, yet scholarly attention to this context remains minimal. Southeast Asian countries are implementing various gender equity initiatives within their sport governance structures. These policy developments proceed largely without region-specific research evidence, relying instead on frameworks developed in Western contexts with uncertain applicability. This pattern of inverse relationship between problem severity and research attention has practical consequences for evidence-based policy. Policymakers in underrepresented regions must either adapt Western findings of uncertain transferability or proceed without empirical foundation. Neither approach is satisfactory. Park and Won (2024) bibliometric analysis of sport governance literature identified gender dynamics as an emerging research theme but did not specifically examine women's leadership as a distinct subfield, leaving the structural characteristics of this research domain unmapped. The present study's systematic mapping of geographic distribution and intellectual structure provides empirical diagnosis of this knowledge production asymmetry, informing strategies for addressing regional research gaps.

Materials and Methods

Research design

This study employed bibliometric analysis, a quantitative method for examining characteristics and patterns of scholarly publications within a specific research domain (Donthu et al., 2021; Zupic and Čater, 2015). Bibliometric techniques enable the identification of publication trends, influential works, prolific contributors, and thematic clusters through statistical analysis of bibliographic data. Unlike traditional literature reviews focusing on content synthesis, bibliometric analysis provides objective metrics to map the intellectual structure and identify fragmentation patterns within a research domain (Aria and Cuccurullo, 2017).

Data source and search strategy

Data extraction was conducted on December 26, 2025, using the Scopus database. Scopus was selected as the primary source due to its comprehensive coverage of peer-reviewed literature in the social sciences and sport management, its superior metadata export compatibility with VOSviewer, and its established use in sport management bibliometric studies (Park and Won, 2024; Mongeon and Paul-Hus, 2016). While multi-database approaches can increase retrieval comprehensiveness, Scopus provides the most extensive coverage of sport management journals relevant to this study's focus. The search query targeted scholarly articles addressing women's representation in sport leadership and governance: TITLE-ABS-KEY((women OR female OR gender) AND (leadership OR leader OR governance OR management OR board OR executive OR director) AND (sport OR sports OR athletic OR athletics)). The initial search yielded 265 documents and as stated in *Table 1*, inclusion criteria required: (a) document type limited to articles and reviews; (b) publication in journals; (c) English language; and (d) defined country affiliation. Conference papers, book chapters, editorials, and notes were

excluded to ensure focus on peer-reviewed scholarly contributions. After systematic screening in accordance with Preferred Reporting Items for Systematic Reviews and Meta-Analyses guidelines (Page et al., 2021), 180 documents published between 1989 and 2025 were retained for analysis (*Figure 1*). The reliance on a single database constitutes a methodological boundary condition. Findings should be interpreted as representing the Scopus-indexed, English language scholarly landscape rather than the complete universe of research on this topic. Regional databases and non-English publications may contain additional relevant work not captured in this analysis.

Table 1. Inclusion and exclusion criteria.

Criteria	Inclusion	Exclusion
Document type	Articles and Reviews	Conference papers, book chapters, editorials, notes
Source type	Journals	Books, conference proceedings
Language	English	Non-English publications
Affiliation	Defined country affiliation	Undefined affiliation

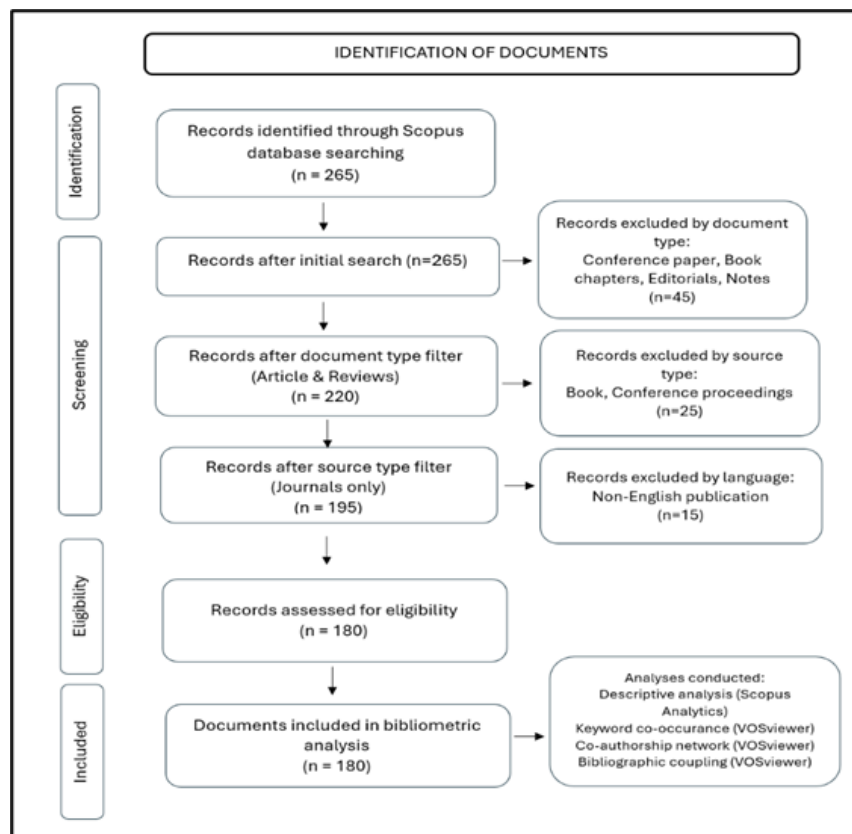


Figure 1. PRISMA flow diagram illustrating the systematic study selection process.

Bibliometric analysis tools

Two complementary analytical approaches were employed. Performance analysis utilized Scopus Analytics and Microsoft Excel to extract and analyse publication trends, geographic distribution, journal productivity, author contributions, institutional affiliations, and citation patterns. Bibliometric indicators, including total publications (TP), total citations (TC), and h-index, were calculated for ranking purposes. Science mapping employed VOSviewer (version 1.6.20, Centre for Science and Technology Studies, Leiden University) to construct and visualize bibliometric networks (Van Eck and Waltman, 2010). Network maps display items as nodes, with connections

representing relationships and link strength indicated by positive numerical values, where higher values denote stronger connections.

Co-authorship analysis

Co-authorship analysis examined international research collaboration patterns using countries as the unit of analysis. The minimum threshold was set at 3 documents per country, balancing inclusivity with analytical clarity by excluding countries with minimal contributions while retaining sufficient nodes for meaningful network visualization (Donthu et al., 2021). Of all countries represented, 17 met this threshold.

Keyword co-occurrence analysis

Keyword co-occurrence analysis identified the field's conceptual structure using author keywords. A total of 911 author keywords were recorded. The minimum occurrence threshold was set at 5, ensuring keywords appeared frequently enough to indicate substantive research focus rather than isolated usage (Van Eck and Waltman, 2010). Of 911 keywords, 30 met this threshold. After removing generic indexing terms, 23 substantive keywords were retained for mapping.

Bibliographic coupling analysis

Bibliographic coupling analysis identifies the intellectual structure by examining documents that share common references. The minimum citation threshold was set at five citations per document, ensuring only works with demonstrated scholarly impact were included. From 180 documents, 108 met this criterion and were included in the network.

Threshold sensitivity and justification

The selection of minimum occurrence thresholds affects network visualization and cluster identification. Following Donthu et al. (2021) recommendations for sample sizes between 100–300 documents, thresholds were established at five occurrences for keywords (capturing terms appearing in $\geq 2.8\%$ of articles) and five citations for bibliographic coupling. Sensitivity analyses using thresholds of 3 and 7 produced substantively similar cluster structures, with the 5-occurrence threshold providing an optimal balance between noise reduction and information preservation.

Use of generative AI in manuscript preparation

The authors used Claude (Anthropic, version Opus 4.5, 2025) to assist with language improvement and structural organisation of the manuscript. The tool was used to refine academic writing clarity and ensure coherent presentation of the literature review and discussion sections. All content was reviewed, verified, and edited by the authors, who take full responsibility for the accuracy of all information, citations, data analysis, and interpretations presented in this work.

Results and Discussion

Publication output and research growth

This section addresses RO1 regarding temporal patterns of publication in women’s sport leadership research (Figure 2). Over 36 years, 180 research articles were published on women in sport leadership. The earliest publication dates to 1989, marking the beginning of scholarly attention to gender issues in sport governance. The publication trend reveals three distinct developmental phases. Phase 1 (1989–1999), the foundational period, was characterized by sporadic publications averaging fewer than two articles annually, establishing initial scholarly interest without sustained momentum. Phase 2 (2000–2019), representing gradual institutionalization, saw publication output increase steadily, coinciding with significant policy developments including the IOC’s establishment of gender targets and growing institutional attention to governance diversity. Phase 3 (2020–2025), the acceleration phase, brought a marked surge in research activity, with 2025 recording the highest annual output (n = 24 as of November 2025). This acceleration suggests women in sport leadership has emerged as a priority research area within sport management. Citation patterns reveal 2015 as the peak year for total citations (n = 462), largely attributable to Burton’s influential review, while declining citations for recent publications (2022–2025) reflect typical citation accumulation periods for newer works. The concentration of citations in a single year, driven by one publication, indicates the field’s intellectual development has been anchored by a singular foundational synthesis rather than distributed across multiple theoretical contributions. This creates both coherence and potential dependency on a single framework. Notably, the Phase 3 acceleration coincides with two contextual factors: intensified IOC gender equality initiatives following the 2018 Gender Equality Review Project, and broader social movements addressing gender inequity in professional settings. Whether this represents sustained scholarly commitment or a reactive response to external events requires longitudinal monitoring.

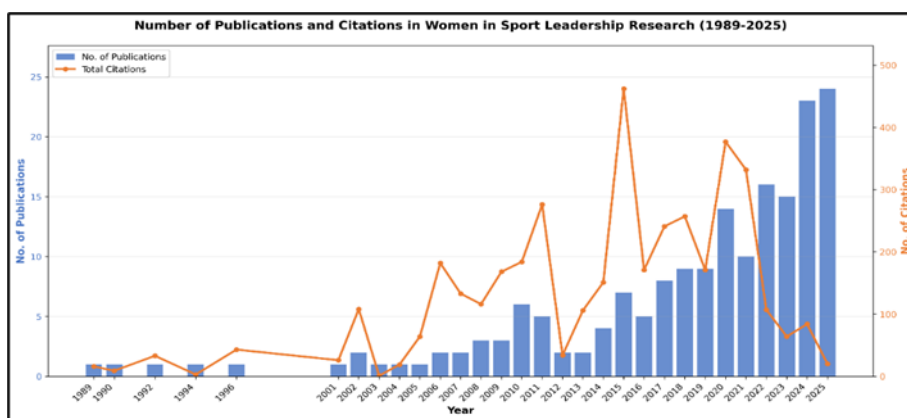


Figure 2. Annual distribution of publications and citations in women’s sport leadership research (1989–2025).

RO1 Summary on Temporal Patterns: Publication output follows three developmental phases, with significant acceleration post-2020. The field has grown from sporadic contributions to sustained scholarly attention, with 2025 recording the highest annual output (n = 24).

Preferred journals

The Journal of Sport Management emerged as the most productive outlet (11 articles), followed by Sport Management Education Journal (9 articles) and Sport

Management Review (8 articles) (Table 2). The concentration of publications in sport management journals indicates this topic is firmly established within the discipline. Five of the ten leading journals hold Q1 rankings, indicating high-quality publication venues. The presence of gender focused journals (Sex Roles, Gender in Management) alongside sport management outlets suggests the topic bridges disciplinary boundaries. This dual presence indicates that researchers approach this topic from different disciplinary traditions, which may contribute to the thematic clustering patterns identified in the keyword analysis.

Table 2. Top 10 most productive journals.

Rank	Journal	TP	SJR quartile
1	Journal of Sport Management	11	Q1
2	Sport Management Education Journal	9	Q2
3	Sport Management Review	8	Q1
4	Managing Sport and Leisure	7	Q2
5	International Review for the Sociology of Sport	7	Q1
6	Frontiers in Sports and Active Living	7	Q2
7	Sex Roles	6	Q1
8	Gender in Management	6	Q2
9	European Sport Management Quarterly	5	Q1
10	Women in Sport and Physical Activity Journal	5	Q3

Note: TP=Total Publications; SJR=SCImago Journal Rank Quartile.

Geographic distribution and international collaboration

This section continues addressing RO1 regarding geographic patterns and the degree of concentration in women’s sport leadership research. The geographic distribution reveals pronounced concentration in Western, English-speaking countries. Four countries (the United States, Australia, Canada, and the United Kingdom) produced 136 articles (75.5% of the total output), with the United States alone contributing 41.1% (Table 3). Asian countries were notably underrepresented, with South Korea leading at only 5 publications (2.8%), followed by China and Iran with 3 each. Southeast Asian countries showed minimal presence, with Malaysia and Indonesia contributing just one and two papers respectively. This concentration exceeds typical patterns in social science research and indicates that the field’s knowledge base predominantly reflects Anglo-American institutional contexts, regulatory frameworks (particularly Title IX in the United States), and cultural norms regarding women’s organizational participation. Such geographic concentration creates a translational challenge: findings produced in Title IX-influenced American contexts or within Australian sport governance frameworks may not transfer to regions with different legal structures, cultural attitudes toward women’s leadership, and sport development trajectories. For researchers in underrepresented regions, this represents both a limitation of current knowledge and a clear opportunity for context-specific contributions.

Table 3. Country distribution of publications.

Rank	Country	Articles	Percentage
1	United States	74	41.1%
2	Australia	24	13.3%
3	Canada	20	11.1%
4	United Kingdom	18	10.0%

5	Spain	11	6.1%
6	Germany	9	5.0%
7	South Korea	5	2.8%
8	Netherlands	4	2.2%
9	New Zealand	4	2.2%
10	Norway	3	1.7%

Node size represents publication volume where the link thickness represents collaboration strength. The co-authorship network reveals a Western-centric collaboration structure (Figure 3). The United States occupies the central position with the strongest collaborative ties, connecting primarily with Canada, Germany, and Australia. South Korea represents the only Asian country in the connected network, linked solely to the United States. Greece appears on the periphery with limited connections. The absence of other Asian and African nations from the network suggests international collaboration remains concentrated within established Western research networks.

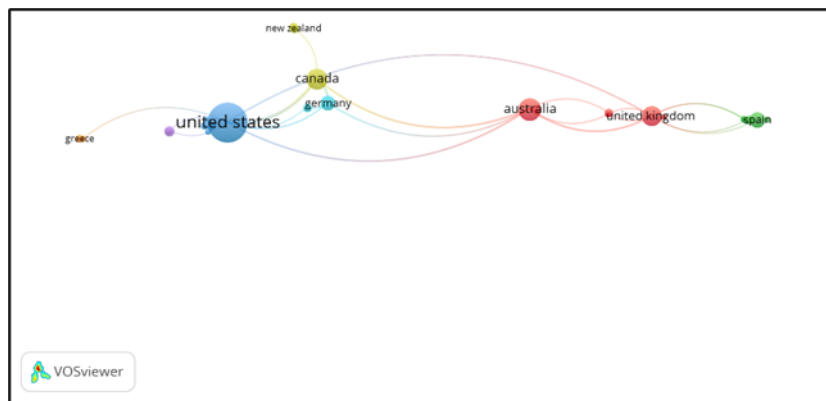


Figure 3. Country co-authorship network visualization showing international collaboration patterns.

RO1 Summary on Geographic Patterns: The field exhibits significant geographic concentration, with 75.5% of publications originating from four countries (the United States, Australia, Canada, and the United Kingdom). The United States alone contributes 41.1%. Southeast Asia is minimally represented, with only three publications from the region (Indonesia: 2, Malaysia: 1).

Leading author

Burton accumulated the highest citation count (508) despite ranking third in publication output, confirming exceptional scholarly influence. Six of the ten leading authors are affiliated with institutions in English speaking countries, while European scholars from Germany, Denmark, the Netherlands, and Switzerland feature prominently (Table 4). No Asian-affiliated researchers appear among the top contributors. The disparity between Adriaanse's publication count (6) and Burton's citation count (508) illustrates different forms of scholarly contribution, as the prolific empirical investigation versus foundational theoretical synthesis, both representing valuable but distinct modes of field building. The author distribution mirrors geographic patterns, reinforcing the Western-centric nature of knowledge production in this field. The absence of Asian affiliated scholars among leading contributors suggests structural

barriers to participation in the global scholarly conversation, including language barriers, limited access to journals, and institutional research priorities.

Table 4. Top 10 most productive authors.

Rank	Author	Affiliation	Country	TP	TC
1	Adriaanse, J.A.	Univ. of Technology Sydney	Australia	6	330
2	Moore, M.E.	East Carolina Univ.	United States	6	64
3	Burton, L.J.	Univ. of Connecticut	United States	5	508
4	Wicker, P.	Universität Bielefeld	Germany	5	73
5	Kerwin, S.	Brock University	Canada	5	36
6	Taylor, E.A.	Temple University	United States	4	83
7	Konrad, A.M.	Ivey Business School	Canada	4	58
8	Pfister, G.U.	Univ. of Copenhagen	Denmark	3	216
9	Claringbould, I.	Utrecht University	Netherlands	3	206
10	Pape, M.	Univ. of Lausanne	Switzerland	3	131

Note: TP=Total Publications; TC=Total Citations.

Most cited documents

Burton (2015) multilevel review was the most cited work, providing a comprehensive framework for examining macro-level institutional practices, meso-level organizational dynamics, and micro-level individual factors. Shaw and Frisby (2006) ranked second, challenging traditional conceptualizations of gender equity in sport management. The top ten most cited documents span from 2006 to 2021, with Burton (2015) receiving more than twice as many citations as the second-ranked work. This dominance confirms Burton's role as the field's intellectual anchor, and the 2.5:1 citation ratio between first and second positions indicates exceptional influence rather than gradual distribution across multiple foundational works. Consequently, the field's theoretical development has been substantially shaped by a single framework. While this provides coherence, it may also constrain theoretical diversity and alternative conceptualizations of women's underrepresentation in sport leadership (Table 5).

Table 5. Top 10 most cited documents.

Rank	Author(s)	Year	Journal	Citations
1	Burton	2015	Sport Management Review	392
2	Shaw and Frisby	2006	Journal of Sport Management	155
3	Sartore and Cunningham	2007	Quest	130
4	Evans and Pfister	2021	Int. Review Sociology of Sport	118
5	Hayhurst	2011	Third World Quarterly	116
6	Adriaanse	2016	Journal of Business Ethics	105
7	Claringbould and Knoppers	2008	Sex Roles	104
8	Adriaanse and Schofield	2014	Journal of Sport Management	91
9	Hovden	2010	Int. J. Sport Policy and Politics	88
10	Whisenant et al.	2002	Sex Roles	85

Keyword co-occurrence analysis

This section addresses RO2, which examines the field's conceptual structure and whether distinct thematic clusters operate with or without integration (Figure 4). Keyword co-occurrence analysis revealed four distinct thematic clusters that capture the field's conceptual structure. Cluster 1 (Yellow) focuses on governance and leadership, with core keywords including gender, leadership, governance, and sport management, representing the structural and organizational focus of the literature. Cluster 2 (Green) addresses gender differences in sport participation through keywords such as female, male, sex difference, athlete, and physical activity, examining participation patterns and physiological and psychological dimensions. Cluster 3 (Red) centres on women's leadership and equity policy, encompassing keywords including women, sport

governance, female leadership, critical mass, gender equality, and intersectionality, with emphasis on lived experience, representation targets, and equity frameworks. Cluster 4 (Blue) examines policy and legal frameworks through keywords including sport, sports, gender equity, Title IX, and athletes, focusing on regulatory mechanisms and policy instruments. Four distinct clusters emerged with limited bridging terms connecting them. Cluster 1 (governance/leadership) and Cluster 3 (women's leadership/equity) address overlapping phenomena, yet appear as separate clusters in the network visualization. This separation suggests governance scholars and gender/equity scholars may be developing parallel literatures with limited cross-citation, where governance research tends toward structural and institutional analysis, while equity research emphasizes lived experience and policy advocacy. Such thematic separation carries practical consequences: without integration, the field risks producing recommendations that are structurally sophisticated but disconnected from implementation realities, or experientially rich but lacking institutional pathways for change. The keyword network thus reveals the field's conceptual architecture but also its fragmentation.

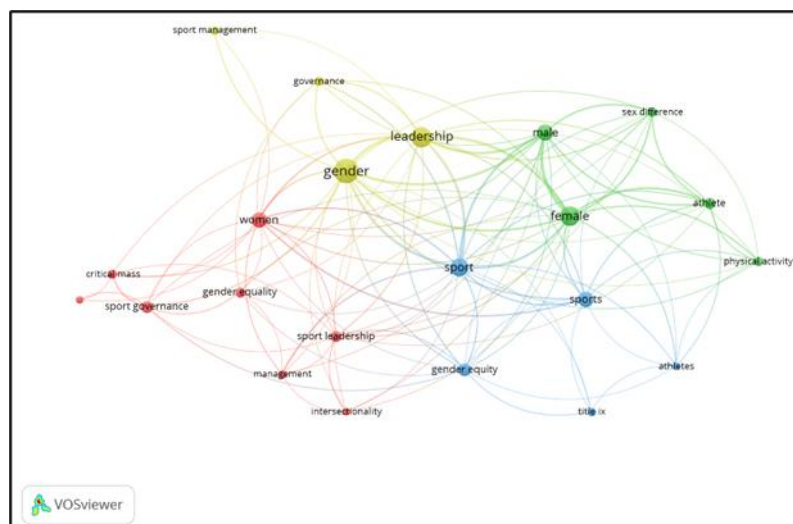


Figure 4. Keyword co-occurrence network with thematic clusters.

RO2 Summary on Thematic Clusters: Four distinct thematic clusters were identified: governance/leadership, gender differences, women's leadership/equity, and policy/legal frameworks. The clusters operate with limited integration, as evidenced by a few bridging terms. Governance scholars and equity scholars appear to be developing parallel literatures addressing overlapping phenomena.

Bibliographic coupling analysis

This section continues addressing RO2 by examining the intellectual structure through bibliographic coupling. Bibliographic coupling analysis examined documents sharing common references to identify intellectual lineages. Burton (2015) occupied the largest and most central node, while nine distinct clusters emerged representing different research streams. The network revealed dense interconnections among Western scholars with limited connections to non-Western contexts. Burton's central position confirms foundational status not merely through citation count but through shared reference patterns indicating intellectual ancestry, as subsequent research builds on the same theoretical foundations Burton synthesized. The intellectual structure

reinforces the finding of geographic concentration: not only are publications geographically clustered, but the ideas and references circulating within the field are similarly bounded, potentially limiting exposure to alternative theoretical traditions (Figure 5).

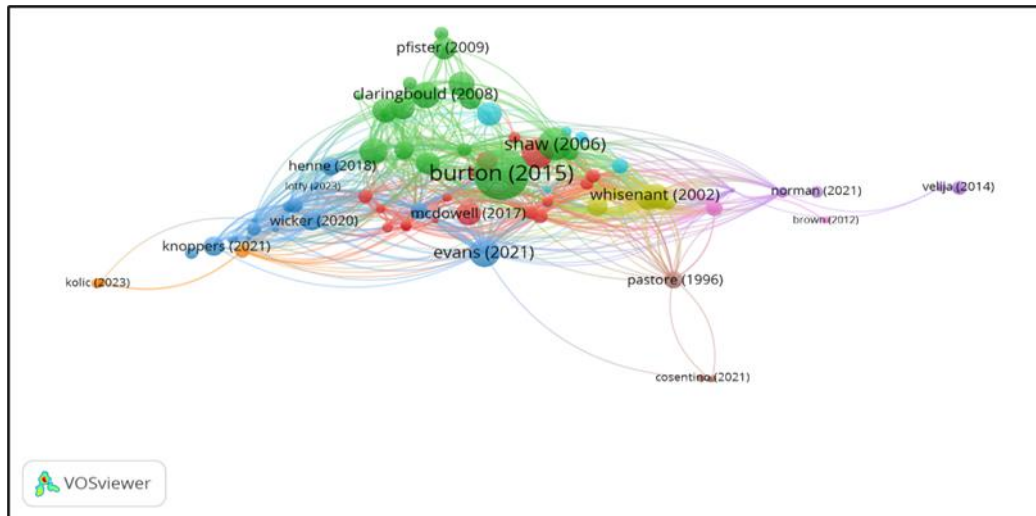


Figure 5. *Bibliographic coupling network of documents.*

RO2 Summary on Intellectual Structure: Burton (2015) serves as the intellectual anchor of the field, as evidenced by both citation counts and bibliographic coupling centrality. Nine distinct clusters emerged, with dense Western interconnections but limited connections to non-Western contexts. The intellectual structure mirrors the geographic concentration identified in RO1.

Temporal evolution of research themes

To examine how intellectual focus shifted across developmental phases, keyword frequencies were compared across periods. During Phase 1 (1989–1999), publications focused predominantly on descriptive documentation of underrepresentation, with keywords clustering around “women,” “sport,” and “participation,” while theoretical frameworks were largely absent. Phase 2 (2000–2019) witnessed the emergence of “governance,” “leadership,” and “management” as prominent keywords, indicating professionalization of the field. Burton (2015) multilevel framework catalyzed theoretical sophistication during this period, introducing terms such as “organizational culture” and “stereotype.” Phase 3 (2020–2025) shows increased prevalence of “intersectionality,” “diversity,” and “inclusion,” reflecting broader social science trends toward recognizing multiple dimensions of disadvantage. The emergence of “quota” and “critical mass” indicates growing attention to policy mechanisms. Thematic focus has evolved from description to theory to policy across the three phases, indicating the field has matured intellectually, moving beyond documentation toward explanation and intervention. However, this thematic maturation has occurred primarily within Western contexts. Sophisticated analysis exists in some contexts, while basic documentation remains unavailable in others, creating knowledge asymmetry.

Gap 1: Geographic insularity

The concentration of 75.5% of publications in four English-speaking countries represents a structural limitation rather than merely a descriptive finding. Knowledge produced in Title IX-influenced American contexts or Australian sport governance frameworks may not transfer to regions with different legal, cultural, and organizational characteristics. Evans and Pfister (2021) explicitly identified over-representation of Global North perspectives as problematic for the field's knowledge claims. This analysis quantifies the pattern: Southeast Asian research remains negligible (three publications total) despite Adriaanse (2016) finding that Asian sport organizations have the lowest female representation globally. Research attention is inversely related to the severity of the phenomenon. RO3 Finding on Geographic Gap: Minimal Southeast Asian research (three publications) despite the region having the lowest female representation in sport governance globally. Research attention is inversely related to problem severity. The field's knowledge base is geographically bounded, limiting generalizability.

Gap 2: Thematic Fragmentation

The emergence of four distinct keyword clusters with limited bridging terms indicates parallel development of governance-oriented and equity-oriented research streams. Bibliographic coupling confirms that documents within clusters share references more frequently than documents across clusters, suggesting that intellectual communities read and build upon different foundational works. This siloing has practical consequences. Governance scholars may produce structural recommendations without accounting for experiential barriers to implementation. Equity scholars may document barriers without engaging institutional mechanisms for change. Integration requires deliberate bridging efforts currently absent from the literature. RO3 Finding on Thematic Gap: Thematic silos exist between governance and equity research streams. The field lacks integration between structural analysis and experiential research, limiting the practical utility of recommendations.

Gap 3: Methodological concentration

The keyword co-occurrence analysis revealed the absence of methodological keywords commonly used in quantitative research (e.g., survey, mediation, moderation, regression). This indicates predominance of qualitative approaches. While qualitative research has generated rich theoretical insight, the field lacks large-sample studies capable of testing proposed mechanisms across contexts and identifying effect sizes for intervention planning. Burton (2015) multilevel framework identifies micro-level psychological factors (self-efficacy, leadership aspiration, turnover intention) as components of underrepresentation, yet these constructs did not emerge prominently in the keyword network. The relationship between perceived barriers and leadership outcomes through psychological mechanisms remains largely untested in sport contexts. RO3 Finding on Methodological Gap: Qualitative approaches dominate the field. Quantitative methods enabling mechanism testing at scale are absent from prominent keywords. Psychological constructs identified in Burton (2015) framework (self-efficacy, leadership aspiration) remain empirically underdeveloped.

Gap 4: Underdeveloped psychological constructs

Key psychological constructs, including self-efficacy, leadership aspiration, career intention, and perceived barriers, did not emerge prominently in the keyword network despite their theoretical importance in Burton (2015) multilevel framework. This represents a disconnect between theoretical acknowledgment and empirical investigation. RO3 Finding on Theoretical Gap: Psychological constructs central to Burton (2015) micro-level analysis remain empirically underdeveloped. The field has not systematically tested relationships between barriers, psychological mechanisms, and leadership outcomes.

Positioning within existing literature

This study extends prior reviews in three ways. First, it provides empirical quantification of geographic concentration that Evans and Pfister (2021) identified qualitatively. Second, it offers a finer-grained analysis of women's sport leadership than Park and Won (2024) broader bibliometric study of sport governance. Third, it diagnoses fragmentation patterns on thematic silos, methodological homogeneity, and geographic insularity, which prior work noted but did not systematically map. The finding that Burton (2015) serves as the intellectual anchor aligns with citation patterns but extends understanding by showing, through bibliographic coupling, that subsequent research shares reference patterns rather than merely citing the work ceremonially. This confirms genuine intellectual lineage rather than perfunctory acknowledgment.

Pathways for integration

This section completes the response to RO3 by proposing a structured research agenda emerging from the gap diagnosis. Based on the four gaps identified, a structured research agenda is proposed addressing three priorities. Priority 1: Geographic Expansion with Theoretical Anchoring. Researchers in underrepresented regions should develop context-specific adaptations of established frameworks rather than merely replicating Western studies. Burton (2015) multilevel model provides useful scaffolding: researchers could examine how macro-level factors (national sport policy, cultural attitudes), meso-level factors (organizational governance structures, selection processes), and micro-level factors (leadership aspiration, self-efficacy) operate within specific national contexts. Southeast Asia offers particularly significant research opportunities given the complete absence of this region from the current literature despite growing regional attention to gender equity in sport governance. Countries such as Malaysia, where policy momentum toward women's representation in sport leadership is emerging, provide natural contexts for baseline studies documenting current representation levels, organizational barriers, and women's career intentions. Such studies would establish foundations for longitudinal tracking of policy effectiveness and women's career progression within sport organizations. The policy landscape across Southeast Asia demonstrates growing governmental attention to gender equity in sport governance that currently proceeds without region-specific evidence. Malaysia's National Sports Policy incorporates provisions addressing women's participation and leadership development, while regional bodies including the ASEAN Secretariat have articulated commitments to gender mainstreaming in sport development initiatives. These policy developments create natural quasi-experimental conditions for researchers to examine implementation processes, stakeholder responses, and outcomes within institutional contexts that differ markedly from the Anglo-

American settings dominating current literature. Research documenting how macro-level policy frameworks interact with meso-level organisational cultures and micro-level individual career decisions within Southeast Asian sport organisations would contribute both contextual knowledge and theoretical refinement to the broader field. The complete absence of this region from bibliographic coupling networks indicates not merely geographic underrepresentation but intellectual isolation that limits the field's capacity to generate transferable insights.

Priority 2: Methodological Diversification. The field requires quantitative studies capable of testing theoretical propositions at scale. Cross-sectional survey research using large samples could measure relationships between proposed barriers (work-family conflict, perceived discrimination, lack of mentorship) and outcomes (leadership aspiration, career advancement, turnover intention), establishing effect sizes and identifying which barriers most strongly predict outcomes. Longitudinal designs tracking women's career trajectories following policy interventions such as quota implementation would provide currently lacking evidence for intervention effectiveness. Experimental and quasi-experimental designs testing intervention effectiveness (mentorship programs, leadership development initiatives, bias training) with appropriate comparison conditions would move the field beyond descriptive documentation toward causal inference. Priority 3: Thematic Integration. Future research should explicitly bridge the governance and equity streams identified in keyword analysis. This integration requires governance scholars to incorporate gender perspectives into board composition and organizational structure research, while equity scholars should engage with institutional theory and governance frameworks to identify implementation pathways. Collaborative research teams combining expertise across domains would facilitate such bridging, as would studies explicitly examining how structural changes affect experiential outcomes and vice versa. RO3 Summary: Three priorities emerge from the gap diagnosis: (1) Geographic expansion using Burton's multilevel framework as theoretical scaffolding, with Southeast Asia (including Malaysia) as a key opportunity; (2) Methodological diversification toward quantitative testing of mechanisms, including survey, longitudinal, and experimental designs; (3) Thematic integration bridging governance and equity research streams through collaborative approaches.

Implications for sport policy scholarship and practice

The bibliometric patterns identified in this analysis carry specific implications for the relationship between scholarship and policy development in sport governance. The geographic concentration of research in jurisdictions with established gender equity frameworks, particularly the United States with Title IX and Australia with its Sport Governance Principles, means that the evidentiary base informing global policy discourse reflects a narrow range of institutional arrangements. Transnational policy actors, including the International Olympic Committee and International Sport Federations, drawing upon this literature when formulating gender equity recommendations may inadvertently privilege approaches developed within contexts characterised by strong state regulatory capacity, established women's sport participation infrastructures, and cultural norms supporting women's organisational leadership. The thematic separation between governance-oriented and equity-oriented research streams presents challenges for translating scholarship into actionable policy guidance. Governance research emphasising structural interventions, including quota

mechanisms, board composition requirements, and selection process reforms, may generate recommendations that prove difficult to implement within organisations lacking supportive cultures. Conversely, equity research documenting experiential barriers and lived realities of women leaders may produce insights that lack clear institutional pathways for operationalisation. Policy development requires integration of both streams: understanding structural levers for change alongside the cultural and interpersonal dynamics that determine whether structural changes produce substantive outcomes.

The methodological concentration in qualitative approaches, while generating rich theoretical insight, limits the evidence available for policy cost-benefit analyses and intervention prioritisation. Policymakers allocating resources across competing priorities require effect size estimates, comparative effectiveness data, and implementation cost projections that qualitative research cannot readily provide. The field's capacity to influence policy would be enhanced by complementing existing qualitative depth with quantitative breadth enabling systematic comparison of intervention approaches. Furthermore, the absence of policy implementation and evaluation research creates a feedback deficit in the scholarship-policy relationship. Policies implemented without embedded evaluation mechanisms generate neither confirming nor disconfirming evidence, leaving subsequent policy development to proceed without learning from prior interventions. The IOC's Gender Equality Review Project (IOC, 2018) established 25 recommendations, yet systematic assessment of recommendation uptake and effectiveness remains limited. Sport governance operates across multiple institutional levels, from grassroots clubs through national federations to international bodies, and policy transfer between levels requires contextual adaptation that evaluation research could inform. The current literature provides stronger foundations for policy advocacy than for policy refinement.

Conclusion

This study systematically mapped 180 publications spanning 1989 to 2025, providing the first bibliometric diagnosis of scholarly fragmentation in women's sport leadership research. The analysis addressed three research objectives with the following findings. Regarding RO1 (Temporal and Geographic Patterns): Publication output follows three developmental phases, foundational (1989–1999), institutionalisation (2000–2019), and acceleration (2020–2025), with 2025 recording the highest annual output. Geographic concentration is pronounced: 75.5% of publications originated from four countries (the United States, Australia, Canada, and the United Kingdom), while Southeast Asia is minimally represented with only three publications. Regarding RO2 (Intellectual Structure and Thematic Integration): Burton (2015) serves as the intellectual anchor, confirmed through both citation dominance (392 citations) and bibliographic coupling centrality. Four thematic clusters were identified operating with limited integration: governance/leadership, gender differences, women's leadership/equity, and policy/legal frameworks. The separation between governance and equity clusters indicates parallel literatures addressing overlapping phenomena.

Regarding RO3 (Gaps and Research Agenda): Four gaps were diagnosed: (1) geographic insularity with minimal Southeast Asian research, (2) thematic silos between governance and equity streams, (3) methodological concentration in qualitative approaches, and (4) underdeveloped psychological constructs despite theoretical

acknowledgment. The proposed research agenda prioritises geographic expansion with theoretical anchoring, methodological diversification, and thematic integration. The implications of these findings extend to multiple stakeholders. For researchers, the geographic gap creates a clear opportunity structure, where scholars in Southeast Asia, Africa, and other underrepresented regions are positioned to make significant contributions by documenting phenomena that Western-dominated literature cannot capture. The methodological gap presents opportunities for researchers with quantitative training to operationalise constructs identified in qualitative work for large-sample testing. For policymakers, the finding that research attention is inversely related to problem severity carries implications for evidence-based policy development. Policymakers in underrepresented regions should prioritise baseline research documenting current representation levels, embed evaluation mechanisms within policy design, and pursue cross-national comparative research. Transnational organisations including the International Olympic Committee should consider commissioning systematic evaluation research and catalysing research in underrepresented regions through targeted funding and institutional partnerships. For sport organisations, the thematic fragmentation suggests attending simultaneously to structural factors (governance design, selection processes) and experiential factors (organizational culture, mentorship availability) when implementing gender equity initiatives.

The policy implications merit particular attention. Sport governance operates within an increasingly institutionalised environment where transnational organisations establish frameworks subsequently adopted by national bodies. The IOC's Gender Equality Review Project (IOC, 2018), the United Kingdom's Code for Sports Governance (Sport England, 2016), and Australia's National Gender Equity in Sports Governance Policy (ASC, 2024) represent substantial policy investments. Yet the scholarly evidence base informing these interventions is geographically bounded, thematically fragmented, and largely silent on implementation effectiveness. Several limitations warrant acknowledgment. First, this study used Scopus as the sole data source; publications indexed exclusively in Web of Science, regional databases, or non-English repositories may have been excluded. Second, the analysis was restricted to English-language publications, potentially overlooking scholarship in other languages. Third, bibliometric analysis maps structural patterns but cannot assess content quality or theoretical coherence within clusters. Fourth, the 2025 data includes publications through November, representing partial-year coverage. As countries in Southeast Asia, including Malaysia, increasingly address gender equity in sport governance through policy initiatives, evidence-based approaches grounded in rigorous, context-specific research will be essential for achieving sustainable progress. The current inverse relationship between problem severity and research attention represents both an intellectual gap and a practical barrier to effective intervention. Addressing this gap requires deliberate investment in research capacity within underrepresented regions, mechanisms for incorporating diverse scholarly perspectives into international discourse, and recognition that effective global policy frameworks must be informed by evidence spanning the institutional diversity of global sport governance.

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Conflict of interest

The authors confirm that there is no conflict of interest involve with any parties in this research study.

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