A Systematic Mapping Review of the Factors Affecting Women's Persistence in Engineering Faculty Positions

Ms. Taskia Nadriba Mimma, Rowan University

Taskia Nadriba Mimma is a Ph.D. student in the Engineering Education (ExEED) Department at Rowan University, USA. Her research focuses on the representation and persistence of women in engineering academia, with particular attention to the systemic, institutional, and cultural factors influencing women's career trajectories in STEM fields. She is passionate about promoting gender equity, inclusive learning environments, and evidence-based educational practices that empower women to thrive in engineering education and leadership.

Dr. Juan M Cruz, Rowan University

Juan M. Cruz is an assistant professor in the Experiential Engineering Education Department at Rowan University. He has a B.S. in Electronic Engineering and a Masters in Education from Universidad Javeriana in Colombia and a PhD in Engineering Education from Virginia Tech. His research uses a systems perspective to understand the dynamics of the academic system and how it influences faculty motivation to change, undergraduate students' motivation to learn, and retention and persistence of doctoral students (with special attention to underrepresented minority (URM) students).

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Abstract

Underrepresentation of women in engineering is influenced by low women faculty persistence, because it conveys to students that the field is not a worthwhile career. Current research lacks a systemic overview of the barriers affecting women faculty persistence. The purpose of this article is to review existing literature to identify and analyze the factors that influence women's faculty persistence in engineering academia. This study employs a mapping literature review; a method used to systematically categorize and visualize research to provide a comprehensive overview and identify gaps in research. Relevant and credible studies were systematically identified and selected from major academic databases. They were grouped into key thematic areas, including institutional barriers, cultural influences, and individual experiences. The findings were charted, analyzed, and synthesized to illustrate research trends, highlight patterns and gaps, and provide insights into areas requiring further investigation. This study maps the barriers and challenges within the personal and professional contexts of women that affect faculty persistence in engineering. It also emphasizes the importance of developing targeted policies and support mechanisms to mitigate barriers affecting women faculty persistence, which in turn would enhance retention, equity, and career progression in engineering for women.

1. Introduction

Over recent decades, women have demonstrated significant achievements across diverse professional domains. However, relative to other science and technology fields, women remain underrepresented in engineering programs and pursue engineering careers at disproportionately lower rates. Factors such as unnoticed and direct biases, prevailing cultural norms, and persistent societal perceptions continue to discourage many young women from entering Science, Technology, Engineering, and Mathematics (STEM) careers [1]. To address the issue of women's underrepresentation in STEM fields, researchers have explored the mechanisms through which faculty members may serve as role models or mentors for students pursuing STEM degrees [2-4]. A growing body of research highlights the positive outcomes that female STEM students experience when taught by female faculty members [3-9], suggesting that the presence of women faculty may play a critical role in shaping students' perceptions of engineering as an accessible and sustainable career path.

The underrepresentation of women in engineering is closely linked to their persistence in faculty positions. Representation in the faculty workforce depends on more than hiring. It also depends on whether women stay in tenure-track and tenured roles and whether they advance to senior ranks. When women leave these positions or move up more slowly, underrepresentation can continue even if more women are recruited. Large-scale studies show clear gender differences in faculty retention across U.S. academia, which highlights persistence as a key driver of representation over time [21]. National-level syntheses also show that institutional and cultural barriers can limit the recruitment, retention, and advancement of women in science and engineering faculty careers [43]. In addition, prior work suggests that faculty gender representation can influence women students through role-model and belonging mechanisms, which further connects faculty persistence to broader participation in engineering [9].

National data indicate that women remain a small minority of engineering faculty. For example, ASEE reports that women comprise about 20.6% of tenure-track and tenured engineering faculty, and that representation declines with rank (e.g., 28.7% among assistant professors vs. 15.6% among full professors) [40]. Broader tenure data for doctoral scientists and engineers also show lower tenure rates for women (38% for women vs. 52% for men in 2019) [41], and longitudinal evidence from U.S. PhD-granting institutions indicates women faculty are more likely to leave and less likely to be promoted than men across career stages [21].

In light of these considerations, this paper presents a Systematic Mapping (SM) review of literature published from 2010 to 2025 concerning the factors that affect women's persistence and advancement in engineering faculty positions. Systematic mapping helps researchers understand what research already exists in a field. It shows the overall scope of the literature, highlights gaps where little research has been done, and summarizes major research trends. This method is especially useful for complex topics, where gaining a broad overview is important before conducting a more detailed analysis [15]. Although Quezada-Espinoza [15] provides a recent systematic mapping of women in engineering research more broadly, the present review has a different and narrower unit of analysis: women's persistence and advancement in engineering faculty positions, including barriers, interventions, and institutional contexts. This focus yields a distinct evidence map for faculty career stages (pre-tenure through post-tenure) and highlights gaps that are not visible in broader "women in engineering" mappings.

Prior reviews have discussed women's experiences in engineering in a broad way [14, 15]. Some have also focused on specific groups and settings—for example, Asian-American women engineering faculty using an intersectional framework [17]. However, there is still a need for a focused synthesis that maps what research shows about women's persistence in engineering faculty roles across the full career span, from pre-tenure to post-tenure, and across different study designs. Unlike earlier reviews, this study conducts a systematic mapping review of peer-reviewed journal and conference publications from 2010–2025. It organizes the literature into five areas: key factors, temporal and methodological trends, research gaps, interventions, and institutional contexts. This mapping highlights practical gaps that can guide future research and support evidence-based institutional change.

1.1 Objectives

The primary objective of this study is to systematically map and synthesize the literature published from 2010 to 2025 on factors affecting women's persistence and advancement in engineering faculty positions. Specifically, this systematic mapping review aims to:

1. Identify and categorize the cultural, personal, and institutional factors that influence women's decisions to persist in engineering faculty positions

2. Examine patterns in research focus, methodological approaches, and geographical contexts across the literature

3. Map the temporal evolution of research themes and priorities over the fifteen-year period under review

4. Identify gaps in current knowledge regarding women's persistence in engineering academia

5. Provide an overview of the scope and trends in available evidence to inform future research directions and evidence-based interventions

By using a systematic mapping approach, this review provides a broad overview of existing research in this area, showing what is already known and what still needs further study.

1.2 Research Questions

To guide the systematic mapping process and ensure comprehensive coverage of the phenomenon, this review addresses the following research questions:

1.2.1 RQ1 (Factors): What cultural, personal, and institutional factors have been identified in literature as affecting women's persistence in engineering faculty positions?

1.2.2 RQ2 (Temporal & Methodological Trends): How has research focus evolved over time (2010–2025), and what methodological approaches (quantitative, qualitative, mixed methods) have been employed to study women's persistence in engineering academia?

1.2.3 RQ3 (Research Gaps): What are the primary research gaps and underexplored areas in the literature on women in engineering faculty?

1.2.4 RQ4 (Interventions): What interventions or strategies have been proposed or evaluated to improve women's retention and advancement in engineering faculty positions?

1.2.5 RQ5 (Contextual Variations): Which types of institutions have been examined, and how do the results differ across these different settings?

Together, these research questions focus on five main areas: the reasons women stay in engineering faculty roles, common research methods and trends over time, gaps in the existing research, strategies used to support women, and the influence of different institutional settings. This helps explain the current state of research and guides future studies aimed at reducing the gender gap and improving fairness in engineering academia. Conceptually, RQ1 and RQ4 focus on the substantive literature about barriers and interventions, whereas RQ2, RQ3, and RQ5 map the research landscape (trends over time/methods, gaps, and contextual coverage).

2. Methodology

This study uses a Systematic Mapping (SM) approach to explore existing research on women’s persistence in engineering faculty roles. Systematic mapping is a structured method that helps researchers review a wide range of studies, group them into key themes, and identify areas where more research is needed [37]. Unlike traditional literature reviews that focus on answering specific questions, systematic mapping looks at the field as a whole to provide a broad overview of the available evidence. This study follows a similar approach used by Campos et al. [37], who applied systematic mapping to study gender issues in STEM higher education, showing that this method is effective for understanding complex topics related to women’s retention and career advancement in academia.

2.1 PRISMA Reporting and Protocol

This systematic mapping review was conducted following the PRISMA 2020 guidelines [36], to ensure transparency in study identification, screening, and reporting. A review protocol was established prior to full-text screening that specified the research questions, search strategy, eligibility criteria, and data extraction framework. The PRISMA 2020 statement, widely adopted across disciplines and applicable to educational research contexts, provides a rigorous framework appropriate for examining factors affecting women's persistence in engineering faculty positions [36].

2.2 Literature Search

2.2.1 Search Approaches

Guided by the five research questions stated in Section 1.2, the following complementary approach was employed to maximize the comprehensiveness of the literature search:

- **Database searching:** Structured keyword searches were conducted across major scholarly databases using Boolean operators to identify relevant publications within established academic repositories.

2.2.2 Search Key

Search strings were constructed by combining four concept groups using Boolean operators:

A. **Population:** women OR female OR gender

B. **Role/Context:** faculty OR academic OR professor OR tenure-track

C. **Field:** engineering OR STEM (filtered to engineering where database functionality permitted)

D. **Outcome:** persistence OR retention OR attrition OR advancement OR promotion

Example string: TITLE-ABS-KEY(women OR female OR gender) AND TITLE-ABS-KEY(engineering) AND TITLE-ABS-KEY(faculty OR "tenure-track" OR professor OR academic) AND TITLE-ABS-KEY(retention OR persistence OR attrition OR advancement) AND TITLE-ABS-KEY(university OR college OR academia OR "higher education"). Database-specific modifications were applied as necessary to accommodate varying search functionalities and controlled vocabulary systems.

2.2.3 Databases

The following databases were selected based on their relevance as major sources for engineering education research and their comprehensive coverage of literature pertaining to women in academic positions:

a) Scopus

b) Google Scholar

c) EBSCO

d) Proquest

These databases were selected because they follow common practice in engineering education systematic reviews. Together, they cover the main journals, conferences, and other major sources where research on gender equity in academic engineering is typically published [42].

2.2.4 Timeline

The temporal boundaries of this systematic mapping encompass published work from 2010 to 2025, to capture a contemporary body of research during the period when gender-equity initiatives in academic STEM, including National Science Foundation (NSF) ADVANCE had matured and diffused into institutional policy and practice. NSF ADVANCE is a National Science Foundation program supporting institutional change to improve gender equity in academic STEM careers [38]. While NSF ADVANCE began in 2001, the post-2010 window allows this review to focus on literature more likely to reflect sustained implementation, evaluation efforts, and downstream implications for women's persistence and advancement in academic engineering. A limited number of foundational pre-2010 publications were retained only when they provided essential theoretical context that is consistently referenced in subsequent literature [22], [26], [34].

2.3 Inclusion and Exclusion Criteria

Eligibility criteria were established a priori to ensure consistent, transparent study selection and minimize selection bias (Table 1).

Table 1 Inclusion/Exclusion Criteria and Justification

Criterion	Include or Exclude	Justification
Publication year	Only included 2010–2025; allowed a small set of foundational pre-2010 works	Aligns with the scope of review and retains seminal context on organizational change and caregiving [12], [16], [24]
Publication type	Include peer-reviewed journals and refereed conferences	Captures established evidence and international engineering education conferences [4], [5], [22]
Topical relevance	Include studies addressing women's persistence, retention, and advancement in academic engineering or closely related STEM faculty positions	Confirms relevance to faculty persistence; broader STEM faculty work included [11], [14]
Population	Include women faculty; prioritize intersectional populations where available	Persistence is influenced by overlapping identities (e.g., gender and race), so intersectional research is important for accurate understanding

Both empirical studies and peer-reviewed review-type publications were eligible only if they directly addressed women's persistence/retention/advancement in academic engineering faculty roles and met all other criteria. Review articles that focused on women in engineering more broadly (without an explicit engineering-faculty persistence focus) were retained as background for framing and comparison but were not treated as included sources in the mapping dataset.

2.3.1 Study Selection Process (PRISMA)

Following PRISMA guidelines, study selection was conducted in two sequential phases. In Phase 1, titles and abstracts were screened against the predefined eligibility criteria. In Phase 2, full-text articles were assessed for eligibility, with reasons for exclusion documented. The study selection process is summarized using a PRISMA flow diagram (Figure 1), reporting records identified, screened, excluded, and included at each stage.

Records retrieved from database searches were deduplicated prior to screening; because original database exports were not retained, duplicate counts were conservatively reconstructed to ensure internal consistency with PRISMA 2020 reporting.

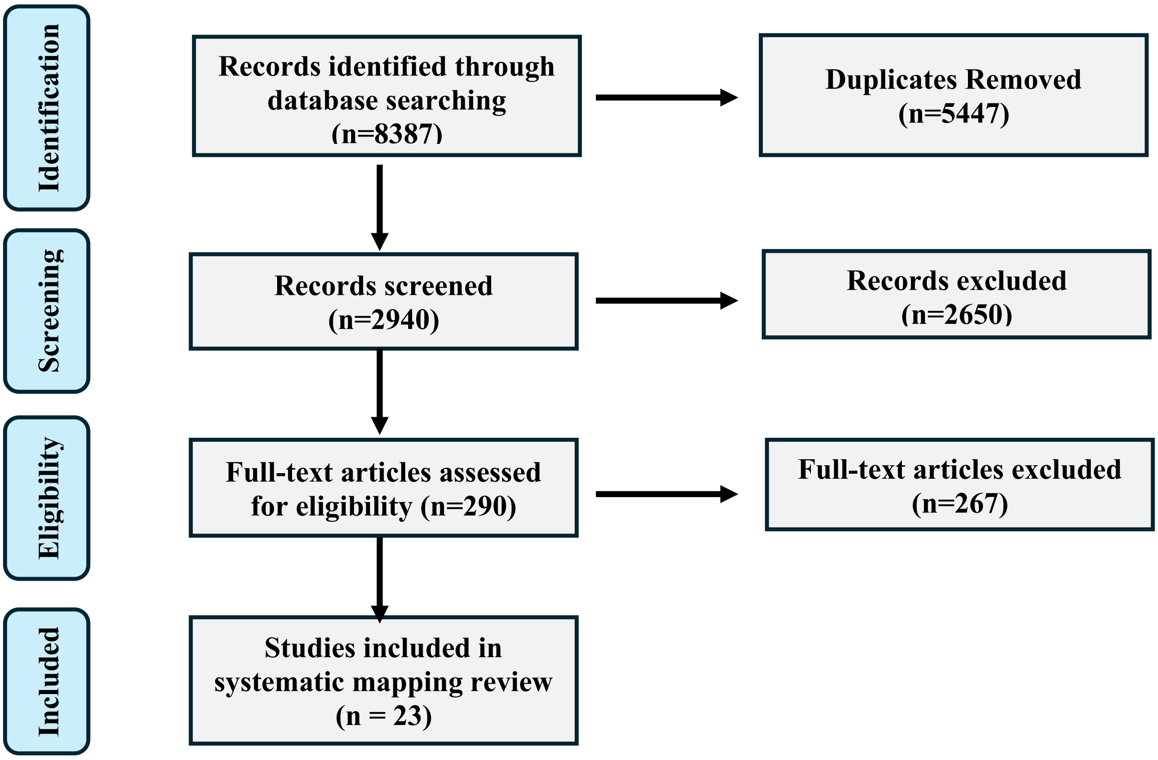

Figure 1. PRISMA flow diagram illustrating the study identification, screening, eligibility, and inclusion process for the systematic mapping review.

2.4 Data Extraction and Coding

A structured protocol extracted bibliographic details, disciplinary focus, geographic context, population characteristics, research design, and key persistence/attrition factors; findings were then categorized using the thematic coding framework presented in Table 2.

Table 2 Coding domains used for mapping

Domain	Description	Example Codes
Institutional/Policy	Formal policies, structures, and evaluation systems	Tenure and promotion criteria [3], [6]; work-life policies [1], [18]; resource allocation and workload [6], [8]
Culture/Climate	Informal norms and departmental climate	Bias and microaggressions [9], [14]; belonging/exclusion and fit [2], [22]; legitimacy/recognition [9], [14]; isolation (esp. WOC) [8], [15], [17]
Individual/Relational	Personal experiences, identity, support, and relationships	Mentoring/sponsorship and support [24]; professional/engineering identity [10]; perceived organizational support [1]; work–family conflict [1], [20]; exit pathways after leaving academia [21]
Intersectional/Structural	Overlapping identities and structural inequities	Racism + sexism (compounded bias) [15], [17]; tokenism/underrepresentation [13], [15]; disproportionate service load [8], [15]; Latina/Asian-American faculty lenses [7], [19]
Interventions/Leadership	Strategies proposed/evaluated to improve retention, advancement, and equity	ADVANCE initiatives [25]; institutional change approaches [12]; problems and solutions synthesis [14]; women's academic leadership strategies [23]; mapping/review trends and gaps [4], [5]

2.5 Extraction and Analysis of Data

Data from the included studies were analyzed through a combination of descriptive mapping and thematic analysis [39], an approach consistent with established practices in systematic mapping methodology. Descriptive mapping involved tabulating key study characteristics, including publication year, publication type (journal article or conference proceeding), research methodology, study population, and geographic context. This phase provided an overview of temporal trends, methodological orientations, and geographic distribution within literature.

Thematic analysis was employed to identify and organize the key factors affecting women’s persistence in engineering faculty positions. Each study was reviewed to extract its main findings, and relevant statements were assigned codes. Similar codes were grouped into broader themes, which were refined through repeated comparison across studies to ensure consistency and thorough coverage of the topic.

3. Results

This systematic mapping review identified and analyzed 23 studies published between 2010 to 2025 that examine factors affecting women's persistence in engineering faculty positions. The following sections present findings organized by the five guiding research questions.

3.1 Overview of Included Studies

The literature search across four databases yielded 8,387 records; 23 studies met inclusion criteria. Although the initial search produced a large number of records, the final sample (N=23) is plausible given the specificity of the scope. Many records addressed women in STEM broadly, student pipeline issues, or gender equity in academic careers without explicitly focusing on engineering faculty persistence/retention/advancement. Additionally, studies that examined engineering faculty often centered on hiring or climate without linking findings to persistence outcomes (e.g., retention, promotion, or tenure progression). These studies employed diverse methodological approaches and examined various populations across different institutional contexts. Figure 2 provides a summary of the study characteristics.

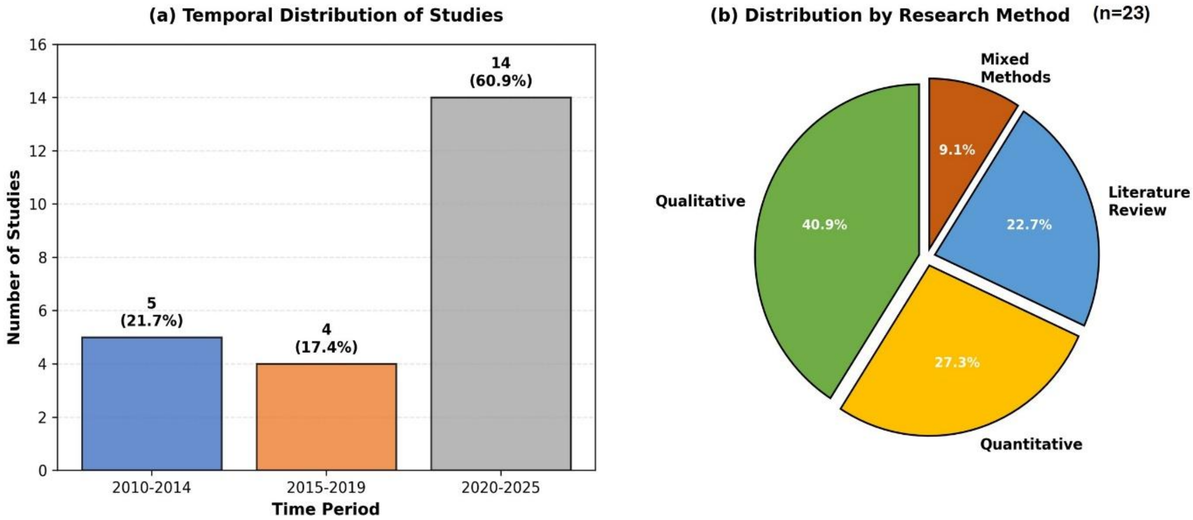

Figure 2: *(a) Temporal Distribution of Studies by time period showing acceleration in recent years, (b) Distribution by research methodology.*

The temporal distribution shows a marked increase in research attention to this topic in recent years, with 60.9% (n=14) of identified studies published between 2020-2025, compared to 21.7% (n=5) during 2010-2014 and 17.4% (n=4) during 2015-2019. This acceleration suggests growing scholarly interest in understanding and addressing women's underrepresentation in engineering faculty positions.

3.2 RQ1: Factors Affecting Women Persistence

The analysis identified five primary thematic domains of factors affecting women persistence in engineering faculty positions. These factors operate at institutional, cultural, and individual levels, often intersecting to create complex barriers to retention and advancement. Table 3 presents a synthesized overview of the key factors affecting women's persistence in engineering faculty positions and the studies in which these factors were identified.

Table 3. Factors affecting women's persistence in engineering faculty positions and representative supporting studies.

Factor Domain	**Specific Factors Identified**	**Representative Studies**
Institutional & Policy Factors	• Unclear tenure and promotion criteria • Inequitable workload distribution (service, teaching, advising), particularly for women of color • Inconsistent evaluation and performance expectations • Gap between formal family-friendly policies and implementation	[12], [13], [18], [21], [22], [26]
Culture & Climate Factors	• Low sense of belonging • Social isolation, particularly for women of color • Exclusionary professional and informal networks • Need to continuously prove legitimacy	[14], [18], [21], [23], [25], [32]
Bias & Discrimination	• Gender bias in evaluation and promotion processes • Disparities in recognition and citation of scholarly work • Microaggressions and subtle discrimination • Compounded racism and sexism affecting women of color	[12], [18], [20], [21], [23], [25], [32]
Work–Life Balance	• Work–family conflict and caregiving demand • Misalignment between tenure timelines and childbearing years • Insufficient institutional support for faculty parents	[22], [26], [30], [31]
Career Development & Support Systems	• Limited access to mentoring and sponsorship • Underrepresentation in leadership roles • Barriers to professional advancement	[13], [18], [21], [23], [25]

3.3 RQ2: Temporal and Methodological Trends

3.3.1 Temporal Evolution

Analysis of publication trends reveals significant acceleration since 2020, coinciding with heightened national attention to diversity, equity, and inclusion in STEM. Thematically, earlier studies (2010-2015) focused primarily on work-life balance and general retention patterns [22, 26], while recent research (2020-2025) demonstrates increased attention to intersectionality [18, 23, 25, 27, 29], systemic barriers [18, 20, 23, 25, 27, 29], and specific experiences of women of color. This shift reflects movement from examining individual-level factors to analyzing structural and institutional barriers.

3.3.2 Methodological Approaches

Qualitative methods were most prevalent (9), followed by quantitative approaches (6), literature reviews (5) for example, [14], [15], [17], [29], [33], and mixed methods (2). Qualitative studies employed interviews and thematic coding to explore lived experiences of women engineering faculty [18, 21, 23, 25, 27]. Quantitative studies utilized national datasets [16, 19] and statistical modeling [22]. The limited use of mixed methods (n=2) represents a methodological gap, as combining approaches could provide more comprehensive understanding.

3.4 RQ3: Research Gaps

Analysis of explicitly stated research gaps across 23 studies reveals several persistent themes requiring future investigation:

3.4.1 Intersectionality and Disaggregated Analysis: Lack of intersectional research examining how gender intersects with race, ethnicity, and other identities [13, 20, 23]. Specific gaps include absence of disaggregated data by race/ethnicity within gender categories [20].

3.4.2 Structural vs. Individual Focus: Several studies focus mainly on individual-level explanations for faculty persistence, with limited attention to structural and institutional barriers; for example, Spoon et al. [21] examine gender differences in faculty retention without directly analyzing the role of institutional policies or organizational structures.

3.4.3 Post-Tenure Career Trajectories: Insufficient research on career development beyond tenure decision, including promotion to full professor and leadership transitions [16].

3.4.4 Intervention Effectiveness: Lack of rigorous evaluation of interventions designed to improve retention [12, 20, 35]. Insufficient quantitative evidence on long-term impacts of major initiatives like NSF ADVANCE.

3.4.5 Methodological Limitations: Limited longitudinal studies tracking faculty over time [12, 16, 22]; difficulty identifying and studying faculty who leave academia [21, 31]; insufficient comparative research across institutional types and disciplines.

3.5 RQ4: Interventions and Strategies

Five studies explicitly discussed interventions operating at multiple levels:

3.5.1 Institutional Change Initiatives: NSF ADVANCE organizational interventions can significantly improve retention when implemented systemically [12, 20, 35]. Effective strategies include transparent tenure criteria, equitable workload systems, and comprehensive support infrastructure.

3.5.2 Policy Interventions: Implementing family-friendly policies including paid parental leave and tenure clock extensions; protecting faculty from excessive service burdens [13, 28, 23]; establishing transparent hiring and promotion processes [20].

3.5.3 Cultural Interventions: Addressing implicit bias through training and structural changes [12, 20, 25]; creating inclusive spaces [18, 32]; establishing mentoring programs with attention to identity matching [13, 23].

3.5.4 Support System Development: Comprehensive mentoring programs [13]; professional development including leadership training; peer support networks particularly for women of color, with 7 articles citing supportive colleagues as crucial [18, 23].

3.6 RQ5: Institutional Contexts and Variations

The 23 studies reporting institutional context examined diverse settings, though distribution was uneven. Research contexts included R1 research universities [19, 23], Historically Black Colleges and Universities [19]. However, the majority focused on research intensive institutions with limited attention to other types.

The studies examined U.S. institutions [19]. One quantitative study found significant correlations between undergraduate student diversity and faculty diversity within racial/ethnic groups [19] suggesting that institutional student demographics may influence faculty recruitment and retention. Institution type (public versus private, research classification, HBCU status) showed associations with faculty diversity patterns [19], though specific mechanisms remain understudied.

4. Discussion

This systematic mapping review synthesized 23 studies examining factors affecting women persistence in engineering faculty positions. The findings reveal a complex, interconnected system of barriers operating at institutional, cultural, and individual levels with bias and discrimination emerging as the most frequently cited factor.

4.1 Key Findings and Implications

First, the research demonstrates a clear shift in focus from individual level factors to structural and systemic barriers. The accelerated publication rate since 2020 (60.9 % of studies) reflects growing recognition that women's departure from engineering faculty positions is strongly shaped by institutional climate, evaluation practices, and structural conditions rather than personal choices alone [18, 21, 24, 25].

Second, the prominence of bias and discrimination underscores that gender inequity in engineering academia is not merely a pipeline problem but reflects persistent evaluation disparities, microaggressions, and differential standards that disadvantage women throughout their careers [22, 24, 32]. The compounding effects for women of color further highlight the need for routine intersectional frameworks and disaggregated analyses to understand how racism and sexism jointly shape persistence [25].

Third, the gap between policy and practice emerged as a consistent theme. Formal policies alone prove insufficient; cultural transformation and accountability mechanisms are essential for meaningful change. Nearly 40 percent of female engineering faculty mothers report inadequate support despite formal maternity policies [22, 26, 30].

Across the intervention-oriented literature, recommended strategies consistently emphasize structural fixes: transparent and bias-aware evaluation and promotion processes, equitable workload and service allocation, strong mentoring/sponsorship networks, and concrete work–family supports (e.g., stop-the-clock policies that are implemented without stigma, childcare support, and flexible workload arrangements) [22, 24, 26, 30]. Several studies also stress that interventions must be paired with accountability mechanisms—such as monitoring climate and workload metrics and linking leadership evaluations to equity outcomes—because policy presence alone does not ensure equitable day-to-day practice [22, 24].

4.2 Contributions to the Field

This review makes several contributions. First, it provides the most comprehensive thematic categorization of factors to date, identifying five distinct but interconnected domains. Second, it documents the temporal evolution of research focus, revealing the field maturation from descriptive studies to more sophisticated analysis of structural barriers and intersectionality. Third, it synthesizes research gaps across 23 studies, providing a roadmap for future investigation.

Building on these contributions, the synthesized gaps point to several high-priority directions for the field: (1) move beyond “add women and stir” approaches by using intersectionality (and reporting disaggregated outcomes by race/ethnicity, rank, and institutional context) [25]; (2) extend attention to post-tenure career trajectories, promotion pathways, and leadership roles, where retention and advancement disparities remain visible [21]; (3) rigorously evaluate intervention effectiveness using longitudinal and mixed-methods designs so that programs can be improved based on evidence rather than assumptions [24]; and (4) broaden the empirical base beyond R1 institutions and STEM-wide samples to include more institutional types and engineering-specific contexts.

4.3 Limitations

This review has limitations. First, source selection bias is an inherent risk in any evidence synthesis: relevant studies may be missed due to database coverage, keyword choices, publication venues, or indexing practices. To mitigate this risk, the review used a structured search string across five complementary databases (including conference proceedings and dissertations), applied priori eligibility criteria, and documented reasons for exclusion during full-text screening using a PRISMA workflow. Also, because this is a systematic mapping review, findings emphasize breadth and research patterns rather than effect-size synthesis.

5. Conclusion

Women underrepresentation in engineering faculty positions persists despite decades of attention and intervention efforts. This systematic mapping review synthesized evidence from 23 studies to answer five research questions about factors, trends, gaps, interventions, and contexts.

The findings reveal that retention challenges stem from systemic barriers including bias and discrimination, unsupportive climates, work-family conflicts, and limited advancement opportunities. These factors intersect and compound, particularly for women of color who face both racism and sexism. While interventions exist at institutional, policy, and cultural levels, rigorous evaluation of their effectiveness remains limited.

The research demonstrates important progress, particularly the recent shift toward examining structural barriers and intersectionality rather than individual-level factors. However, significant gaps persist. Future research should prioritize the routine use of intersectional frameworks with disaggregated analyses by race, ethnicity, and other identities, extend attention to post-tenure career trajectories and leadership pathways, undertake rigorous longitudinal evaluations of intervention effectiveness, broaden the institutional scope beyond R1 universities, and employ mixed methods approaches that integrate qualitative depth with quantitative breadth.

Achieving gender equity in engineering faculty requires sustained commitment to structural and cultural change. Institutions must move beyond symbolic gestures to implement comprehensive interventions addressing bias in evaluation, equitable workload distribution, transparent advancement processes, and inclusive departmental cultures. The evidence synthesized in this review provides a foundation for evidence-based action.

Ultimately, diversifying engineering faculty benefits not only individual women but the field itself. Research shows that faculty diversity is positively associated with student diversity in engineering programs [23]. By addressing the systemic barriers documented in this review, institutions can create academic environments where all scholars can thrive and contribute their full potential to advancing engineering knowledge and education.

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References marked with an asterisk (*) indicate studies included in the systematic mapping review (N = 23)

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