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Representation and Reality: A Scoping Literature Review of Asian Students in Engineering Scholarship

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Abstract

The purpose of this full research paper explores the existing literature addressing the challenges and barriers faced by Asian students in engineering disciplines at both undergraduate and graduate levels, with a focus on the intersection of their multicultural identities and academic experiences. This research investigates the experiences of Asian students in engineering and how their identities contribute to the development of intercultural competencies, enabling them to engage more effectively in socially just and ethically informed engineering practices.

A scoping review methodology is employed, systematically analyzing academic publications from multiple databases to identify key themes, gaps, and insights. This scoping literature review examines research on Asian students in engineering within the U.S. context, identifying three key themes: (1) The Model Minority Myth (MMM), (2) Identity and Belonging, and (3) Structural and Career Barriers. Findings highlight the pervasive influences of stereotypes, which contribute to unrealistic expectations, mental health challenges, and barriers to seeking support. Additionally, the aggregation of Asian subgroups in statistical analyses obscures disparities. The review underscores the need for future research to capture the complexity of Asian student experiences in engineering education.

Keywords—Undergraduate students, Graduate students, Asian students, Scoping literature review

Introduction

The purpose of this full research paper explores the existing literature addressing the challenges and barriers faced by Asian students in engineering disciplines at both undergraduate and graduate levels, with a focus on the intersection of their multicultural identities and academic experiences. Over the past few decades, the increasing diversity in U.S. higher education has prompted educators and policymakers to examine how students from different backgrounds experience and navigate academic environments [1]. Among these populations, Asian students have consistently represented a significant portion of enrollments in traditional engineering disciplines such as Mechanical, Electrical and Computer, Civil Engineering, and Computer Science (inside of Engineering and outside of Engineering) [2]. However, this high level of numerical representation has created a "paradox of visibility," where high enrollment numbers obscure the unique marginalization these students face [3], [4], [5]. This scoping literature review seeks to consolidate current knowledge about Asian student experiences in U.S. engineering education, identify research gaps, and propose avenues for future inquiry. This invisibility is frequently reinforced by the "Model Minority" myth (MMM)—a persistent stereotype that positions Asian students as innately capable in technical fields and thus not in need of institutional support [4]. This stereotype often functions as a "neoliberal racial project," effectively whitening Asian students in policy discussions and excluding them from resources typically allocated to minoritized groups [11].

This paradox is particularly critical in the current academic landscape. First, by mapping out the landscape of existing research, we aim to understand how Asian students' academic, social, and professional experiences are shaped by the interplay of cultural, institutional, and pedagogical factors [6]. Second, the review intends to highlight potential disparities or challenges that may not be immediately visible in aggregated performance data, such as issues related to stereotype threat, identity negotiation, and acculturation [3], [4]. Finally, with growing calls for inclusive excellence and diversity within STEM fields [7], the insights drawn from this review will contribute to the ongoing dialogue about equitable practices in engineering education.

This study focused on traditional engineering disciplines at both undergraduate and graduate levels. Given the evolving demographic trends and the global competitiveness of the U.S. engineering workforce [2], it is critical to interrogate not only the quantitative outcomes (e.g., enrollment, retention, and graduation rates) but also the qualitative dimensions of the student experience. By exploring these aspects, this review aims to serve as a resource for educators, administrators, and policymakers striving to create more inclusive learning environments that acknowledge and leverage cultural diversity as a strength. What is the state of research on the experiences of Asian students in engineering majors at U.S. institutions?

Background

In the contemporary United States, there is a distinct overrepresentation of specific Asian subgroups in technical industries, such as Chinese individuals in engineering and Filipino individuals in nursing [8]. However, this numerical density has led to complex racial positioning. Pao [9] explained that the overrepresentation of the Asian community members in engineering and related fields has resulted in them frequently being positioned as "white-adjacent," effectively stripping them of their status as people of color in institutional discourse. This process of "whitening" the Asian community reinforces the MMM in engineering collegiate settings, placing

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immense pressure on students to meet external societal expectations [9]. The MMM suggests that Asian students succeed academically and economically solely due to cultural values, ignoring individual struggles and structural obstacles [10]. This reductionist narrative creates a complex "grey area" that Asian community members in engineering must navigate, balancing the perception of privilege with the reality of marginalization.

These complex racial positionings significantly influence the educational trajectory of Asian students, beginning with the decision to pursue an engineering major. Lowinger and Song [11] explain that this choice is influenced by multiple factors, including parental involvement and cultural perceptions of careers. While the traditional "parental influence theory", which suggests Asian students choose engineering solely based on parental expectations for social mobility—has been partially debunked, it remains a factor [12]. Kang et al. [12] suggest that rather than simple parental pressure, major choice is influenced by complex cultural and structural perceptions of occupational barriers and the perceived "easiness" of certain paths for specific subgroups. These findings underscore the critical need to disaggregate data, as different Asian ethnic subgroups hold vastly different perceptions of engineering pathways. Furthermore, Asian students entering higher education in engineering are often homogenized. Although viewed as academically excellent, they are frequently stereotyped as unsociable. Chai and Weseley [13] note that participation in "stereotypical" activities (e.g., violin, math competitions) versus "non-stereotypical" activities (e.g., drums, sports) can negatively impact college admissions, as students are penalized for adhering too closely to the stereotype.

These challenges persist beyond admission; once admitted to collegiate engineering programs, Asian students face the barrier of classification. The National Science Foundation (NSF) often groups Asian students as "overrepresented" in comparison to other minority communities. Iporac [14] notes that while Asian individuals make up 19% of the STEM workforce compared to only 5.9% of the total U.S. population, this aggregate data masks the reality of underrepresented subgroups within engineering specifically. Metcalf [15] highlights that homogenizing Asian ethnic groups into one aggregate dataset ignores Critical Race Theory findings that distinct ethnic groups have significantly different socioeconomic educational experiences. This lack of support has long-term consequences. Jelks and Crain [16] found that Asian community members are significantly more likely to switch industries after entering the professional domain or by the age of 30. This "mismatch" is particularly high for in-demand fields such as engineering and computer science. Iporac [14] argues that because Asian students are often left out of DEI initiatives under the assumption that they are not underrepresented, they do not receive the same support as other minorities, which directly contributes to their departure from the field post-graduation.

Methodology

A. Methods

This paper employs a scoping literature review methodology to explore the current body of research related to Asian students and their experiences studying engineering in the United States [17]. The review aims to map the existing literature to understand the current landscape of Asian student participation in both undergraduate and graduate engineering programs. The definition of Asian the study used was from the IPEDS definition of Asian which is the following:

A person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian Subcontinent, including, for example, Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam [18].

Specifically, it investigates the academic, social, and professional challenges these students encounter, as well as the strategies they adopt to navigate and overcome these obstacles. By synthesizing findings from a diverse range of studies, this review provided a comprehensive overview of prevailing themes and identified research gaps. This approach not only highlights areas of consensus and divergence within the literature but also lays the groundwork for future research and policy interventions designed to support Asian students in engineering education.

B. Scoping Literature Review Protocol

A Scoping Literature Review (ScLR) is a form of knowledge synthesis designed to map the key concepts, types of evidence, and gaps within a broad research area [17]. Unlike systematic reviews that focus on answering narrowly defined questions through critical appraisal of study quality, scoping reviews aim to provide an overview of the available research regardless of methodological diversity [17], [19]. This approach is particularly useful when the topic is emerging, complex, or has not yet been comprehensively examined [17]. As described by Arksey and O'Malley [17] and later refined by Levac et al. [20], a scoping review typically unfolds over five iterative stages: defining the research question, identifying relevant studies, selecting studies based on predetermined criteria, charting the data, and summarizing and reporting the findings.

1) *Stage 1: Identify Research Questions*:

In our research, we aim to explore the current landscape of studies addressing Asian students' experiences in traditional engineering majors in the United States at both the undergraduate and graduate levels. We began by formulating a broad research question that would allow us to capture the full spectrum of issues. The research question that guided the search was the following: What is the state of research on the experiences of Asian students in engineering majors at U.S. institutions? This question guided the development of our search strategy and helped ensure that our inquiry was sufficiently inclusive of diverse research methodologies and perspectives.

2) *Stage 2: Identify Relevant Studies:*

Database searches were conducted using combinations of keywords including "Asian," "Asian American," "engineering," "STEM," "undergraduate," "graduate," and "United States." The following search string was used and adapted per database syntax:

1. ("Asian" OR "Asian American") AND ("engineering" OR "engineering education" OR "STEM") AND ("undergraduate" OR "graduate") AND ("United States" OR "U.S.")
2. ("Asian" OR "Asian American") AND ("engineering" OR "engineering education" OR "STEM") AND ("undergraduate" OR "graduate")
3. ("Asian")

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Searches were conducted in title, abstract, and keyword fields where available. Database-specific filters (e.g., peer-reviewed, English language) were applied where supported. Databases included EBSCOhost (Academic Search Complete and ERIC), the ASEE PEER Document Repository, and the Journal of Engineering Education (JEE) via Wiley Online Library. These sources were selected due to their relevance to engineering and higher education scholarship. Initial searches were conducted from March to April 2025, with a follow-up search in September 2025 to ensure comprehensive coverage. No publication date limits were imposed.

3) *Stage 3: Study Selection:*

During the study selection phase, we screened titles, abstracts, and full texts to ensure consistency and transparency in our approach as seen in Table 1. Two researchers independently screened titles for relevance based on inclusion criteria. Abstracts were then independently reviewed by author 1 and 2. Articles were retained if both reviewers agreed they met inclusion criteria. Full texts were reviews collaboratively to confirm eligibility. When disagreements occurred during title or abstract screening, discrepancies were resolved through discussion until consensus was reached. If consensus could not be achieved, the article was retained for full-text review to minimize premature exclusion. This study employed an ScLR where calibration discussions were conducted throughout the screening process between author 1 and 2 to ensure consistent application of criteria. Inclusion and exclusion criteria were developed a priori to ensure alignment with the research question as seen in Tables 2 and 3.

TABLE 1. Screening Levels

Screening Level	**Definition**
Database Search	Using the chosen databases (EBSCOhost – ERIC, EBSCOhost – Academic Search Complete, ASEE Peer, JEE) to conduct the search.
Initial Screening	Reviewing the abstract and keyword of the publications to eliminate
Secondary Screening	Reviewing the overall publication to eliminate

Studies were included if they: 1) examined undergraduate or graduate Asian or Asian American students, 2) focused on engineering or engineering-related disciplines, 3) were conducted within U.S. higher education institutions, and 4) explicitly analyzed findings related to Asian students rather than merely listing them as demographic categories. The requirement for explicit analysis ensured that included studies meaningfully engaged with Asian student experiences rather than contributing to aggregate statistical reporting.

TABLE 2. Inclusion Criteria

Screening Level	**Definition**	**Implementation**
Publication Type	Published in an academic journal or as a conference paper	Database Search
Publication Language	Published in English	Database Search
Institutional Level	Higher education institutes of undergraduate and graduate levels	Initial and Secondary Screening
Institutional Location	United States of America	All Levels

Studies were excluded if they: 1) focused solely on K–12 populations, 2) examined faculty or staff rather than students, 3) were literature reviews (to avoid duplication of synthesized findings),

4) were conducted outside the U.S. without explicit focus on Asian American populations, and 5) included Asian participants only as demographic descriptors without disaggregated findings. Excluding literature reviews ensured synthesis of primary empirical studies. Excluding studies that only listed Asian students without analytic focus prevented overestimation of the depth of scholarship in this area. Furthermore, we limited our selection to peer-reviewed journal articles and conference papers to ensure the credibility and quality of the literature reviewed.

TABLE 3. Exclusion Criteria

Screening Level	**Definition**	**Implementation**
Duplication	Appearing more than once between all databases	Database Search
Literature Reviews	Explicitly labeled as a literature review	All Levels
Study Participants	Participants include K-12 Teachers, University Faculty/Staff, or minors	All Levels
Asians Appearing Only as Participants	Articles that only included Asian students as a demographic section or as participants without explicitly drawing conclusion or having findings related to trends for the entire demographic.	Secondary Screening

The initial search across four databases yielded 3,305 records. After removing 34 duplicates**,** 3,271 articles remained for screening. Title, abstract, and keyword screening reduced the pool to 372 articles**,** of which 60 advanced to full-text review**.** Following application of the inclusion and exclusion criteria, 36 articles were retained for thematic analysis**.** Figure 1 illustrates the study selection process across identification, screening, eligibility, and inclusion stages.

Full-text exclusions (n = 24) were due to: non-U.S. study context (n = 6), literature review articles (n = 2), studies where Asian participants were only included as demographic descriptors without disaggregated analysis (n = 14), and studies where the Asian ethnic group was used as a comparison against other ethnic groups (n = 2).

4) *Stage 4: Charting the Data:*

Once eligible studies were identified, data were charted and organized by emergent themes to support synthesis of findings and identification of research gaps. The iterative nature of the scoping review allowed refinement of inclusion criteria and thematic categorization as patterns emerged during analysis. Of the 36 articles included in the final review**,** 21 were identified through the *Journal of Engineering Education (JEE)*, 9 through the *ASEE PEER repository*, and 6 through *EBSCOhost databases*. These studies formed the basis of the thematic analysis. There were three main themes that came from the compilation of all of the articles after all of the screening levels were complete with the inclusion and exclusion criteria. The themes were (1) The Model Minority Myth (MMM), which examines how stereotypes and statistical overrepresentation mask struggles; (2) Identity and Belonging, exploring intersectionality and the "perpetual foreigner" syndrome; and (3) Structural and Career Barriers. The total articles per theme are found within table 4 below with the removed articles shown in figure 1 below. The out-of-scope articles were added to demonstrate how many articles were eliminated using the inclusion and exclusion criteria. In addition to thematic categorization, study characteristics were systematically charted to provide an overview of methodological and contextual patterns across the dataset. Each study was coded based on study type (qualitative, quantitative, mixed methods, or conceptual), population (undergraduate, graduate, or mixed), and primary data source (e.g., interviews, surveys, or

secondary datasets). Aggregating these characteristics allowed for identification of methodological trends across themes. These results are summarized in Table 5 and provide complementary context to the thematic analysis.

TABLE 4. Theme Mapping to Articles

Theme	Total Results	Articles
The Model Minority Myth (MMM)	3	[3], [20], [21]
Identity & Belonging	12	[23], [24], [25], [26], [27], [28], [29], [30], [31], [32], [33], [34]
Structural and Career Barriers	21	[4], [5], [11], [16], [38], [39], [40], [41], [42], [44], [45], [46], [47], [48], [50], [52], [53], [54], [55], [56], [57]

TABLE 5. Characteristics of Included Studies (N = 36)

Category	Articles
Publication Type	21 journal (JEE), 9 conference (ASEE), 6 peer-reviewed journal articles identified through EBSCOhost
Theme Distribution	MMM (n=3), Identity & Belonging (n=12), Structural/Career (n=21)
Study Type	12 qualitative / 18 quantitative / 6 mixed or conceptual
Population	24 undergraduate / 5 graduate / 7 mixed (undergrad + grad or workforce)
Data Source	11 interviews/qualitative artifacts / 15 surveys / 10 secondary datasets/program data

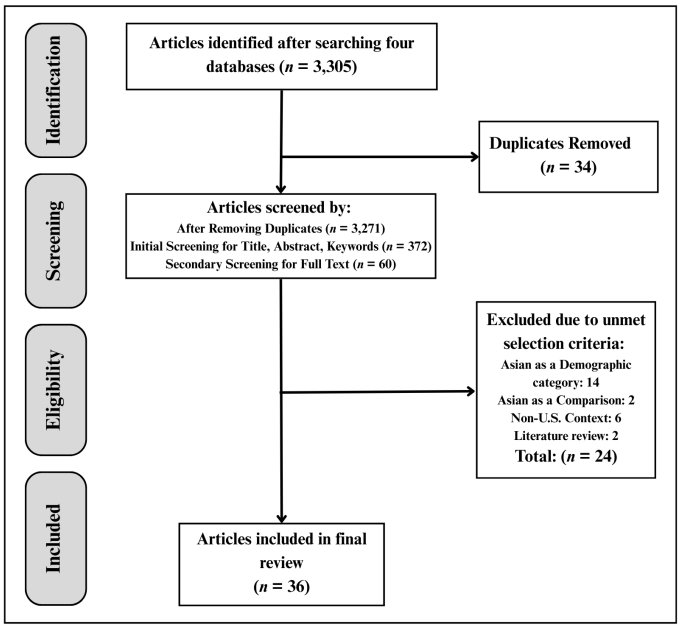

Fig. 1 Removal Process by Screening Level

5) Stage 5: Summarize and Report Results:

The last stage is to summarize and report our findings, which is further discussed in the Results Section.

Results

This scoping literature review examined research on Asian students in engineering within the U.S. context. The analysis identified three major themes that encapsulate the key challenges, experiences, and institutional factors influencing this population.

A. Theme 1: The Model Minority Myth (MMM)

The literature consistently highlights a tension between statistical representation and individual reality, most notably through the pervasive impact of the MMM stereotype. This stereotype, which positions Asian students as naturally gifted in STEM, functions as a double-edged sword [57], [58]. While it might imply positive academic capability, it creates a "high-achieving trap" where students face unrealistic expectations [4]. Research indicates that when Asian students do not conform to this stereotype of technical excellence, they are more likely to experience discrimination and microaggressions [4], [6]. Furthermore, the pressure to maintain this image of uncomplicated success discourages help-seeking behaviors. The stigmatization of seeking academic or mental health support exacerbates struggles, as institutional resources often overlook their unique needs under the false assumption that they are "fine" and require no intervention [7], [59].

This stereotype is frequently reinforced by statistical enrollment data, a phenomenon where the lack of under-representation leads to the false assumption that racial discrimination and inequality no longer exist in the field [5]. High enrollment numbers are frequently used to justify the exclusion of Asian students from equity initiatives [37]. However, disaggregated analyses—breaking down "Asian" into specific ethnicities—reveal significant disparities. Subgroups, such as Southeast Asian scholars, often face attrition risks similar to other underrepresented groups, yet these risks are masked by the aggregate success of the racial category as a whole.

By deconstructing these banal mechanisms of statistical aggregation, this work advances the pillar of spotlighting normalized violencel that reproduces systematic harm by treating “Asian” as a monolith. As Gilmore [60] and Haverkamp et al. [61] demonstrate, racism operates through the “fatal coupling of power and difference,” where tehnical success is weaponized to maintain institutional silence regarding interlocking systems of oppression. Ultilizaing Critical Race Theory to make whiteness visible within the meritocratic structures of engineering reveals how tthe MMM is often leveraged to justify existing power differentials. By adopting an anti-deficit approach [62] we challenge the problematic and misued equity frameworks that equate the high representation with an absence of marginalization. Moving towards an anticolonial praxis [63] necessitates a shift in disaggregation practices to identify specific attritions risks that are currently obscured. Furthermore, advising and DEI policies must be restructured to ensure the “high-achieving trap” does not continue to exclude students from essential mental health and academic support.

B. Theme 2: Identity and Belonging

Beyond academic metrics, the literature emphasizes the psychological and social toll of navigating engineering spaces as an Asian student. Engineering environments, often shaped by dominant cultural norms, frequently alienate Asian students, leading to reported feelings of exclusion and a fractured sense of belonging despite strong academic performance [3], [64]. A critical distinction exists between domestic Asian students and international Asian students. While international students face language and cultural barriers [45], domestic students often struggle with the "perpetual foreigner" stereotype—the experience of being treated as outsiders in their own country—and the frustration of not being recognized as underrepresented minorities in diversity initiatives [29], [31], [65].

These challenges are compounded by intersectionality, particularly for Asian women in engineering. The review highlights that Asian women must navigate a unique intersection of racial and gendered stereotypes, often facing additional hurdles to be taken seriously as technical leaders [66]. To succeed, they are often required to perform significant "identity work," balancing the need to align with the hyper-masculine culture of engineering while battling stereotypes of submissiveness [40], [53].

This work engages the pillar of Theorists and theories by leveraging Critical Race Theory to challenge problematic and misused assumptions that “belonging” is a personal responsibility of the student. By applying Gilmore’s [60] concept of “fatal coupling of power and difference,” we reveal how the engineering environment depicts domestic Asian students hyper-visible as foreigners but invisible in DEI policies. Viewing the classroom as a terrain of struggle and site of possibility allows us to identify the “identity work” required of Asian women as a form of spirit-murdering [67] where there is systemic erosion of self within technical spaces. Addressing these issues requires concrete changes in advising and DEI policy to transition toward anti-deficit and liberative approaches [62] that validate intersectional identities. Moreover, the research agenda should shift wards collaborative inquiry [63] to dismantle the “perpetual foreigner” trope. These findings suggests that disaggregation practices must be expanded to include the social and psychological dimensions of identity to truly support engineering communities in becoming more grounded in social justice.

C. Theme 3: Structural and Career Barriers

While Asian students are successful in entering engineering pipelines, the literature identifies significant structural barriers in their progression and professional outcomes. Longitudinal studies suggest that despite a strong presence in engineering programs, Asian students are underrepresented in leadership positions, faculty roles, and decision-making spaces—a phenomenon known as the "Bamboo Ceiling" [38]. Engineering education often fails to provide the specific mentorship or soft-skill development required to overcome these biases, leaving students ill-equipped for career advancement [1].

This issue is exacerbated by a lack of culturally responsive institutional support. Mentorship programs are often designed for underrepresented minorities (URM), a designation that frequently excludes Asian as a demographic group. Consequently, Asian students lack access to formal mechanisms that help them navigate the "hidden curriculum" of graduate school and professional

engineering environments [68], [69]. In the absence of formal institutional support, studies highlight that Asian students rely heavily on peer networks and student-led organizations to mitigate the lack of faculty mentorship, creating an isolated support system disconnected from institutional resources [70]. Academic trajectories are also shaped by strong parental influence and cultural expectations, which can sometimes lead to a misalignment between a student's personal interests and their persistence in engineering fields [71], [72].

By deconstructing these barriers, this work advances the pillar of the classroom as a terratin of struggle and site of possibility. The “hidden cirriculum” and the Bamboo Ceiling are not merely career obsticles but are evidence of how engineering education functions as a site where capitalist and settler colonial logics [63] prioritize technical output over the holistic development of marginalized scholars. The exclusion of Asian students from formal mentorship constitutes a form of normalized institutional violence, as it relies on aggregate success to justify the “spirit-murdering” [67] of students who are left to navigate hostile professional structures without institutional protection. Challenging these problematic and misued equity designations reuires moving toward an anti-deficit and liberative approaches [62] that recognize the unique hurdles faces by Asian scholars in the transition from student to leader.

Discussion

While our results provide a framework for understanding the diverse experiences of Asian students in engineering through three key themes, they also underscore a critical methodological concern: the prevalent aggregation of Asian populations in statistical studies [73] [74]. Many large-scale datasets and research initiatives tend to treat Asian students as a single, homogeneous category [75]. This practice not only perpetuates the MMM stereotype by assuming uniform academic and professional success, but also obscures the significant variations among Asian subgroups [76]. As highlighted in the MMM theme, disaggregated data reveal that while some subgroups appear overrepresented in engineering programs, others, such as Southeast Asian students, remain marginalized and underrepresented. This skews the current existing data to favor East Asians students and can cause further divide between Asian communities when resources and programs favor East Asians students [77] [73]. These observations are consistent with the work of Dai et al. [78], which highlights Model Minority Theory as one of the most frequently utilized frameworks in studies of Asian American engineering students.

This aggregation of data has far-reaching implications. In studies where Asian populations are lumped together, important nuances related to cultural, socioeconomic, and institutional factors are often lost [73]. Ausman and Zhu [58] critiqued the practice of aggregating Asian populations into a homogeneous group, a concern that persists in current research. For instance, the challenges tied to identity, belonging, and intersectionality may differ greatly between domestic Asian students and international Asian students, yet these differences are rarely captured when the data are not disaggregated [79] . Consequently, the true impact of structural barriers may be understated or misinterpreted. Without a nuanced analysis that distinguishes between various Asian subgroups, policies and support initiatives risk being overly generalized and may fail to address the specific needs of those who are most at risk of marginalization [76].

Furthermore, the reliance on aggregated statistical categories has implications for both academic research and institutional practices [76]. When studies do not focus explicitly on the diverse experiences of Asian individuals, the resulting literature can reinforce existing stereotypes and undermine efforts to foster inclusive educational environments. The persistence of the MMM, as revealed in our first theme, is partly a product of this oversimplification. By not recognizing the varied challenges that different Asian subgroups face, research inadvertently supports a narrative that masks inequalities and diminishes the urgency for targeted interventions. Future research should prioritize collecting disaggregated data and adopting methodologies that capture the complexity of Asian identities. This approach is essential for developing more effective policies and practices that truly reflect the heterogeneous nature of Asian experiences in engineering education [76].

Limitations

One limitation of this literature review is the time range of the existing research. We did not impose a specific time restriction during our search process, as scholarly work on Asian students in engineering education only began to gain traction in the early 2000s. As a result, the body of literature on this topic remains relatively recent and continues to evolve. While this ensures that our review captures the most current discussions, it also means that historical perspectives and long-term trends are less extensively documented. The limited temporal scope of available studies may affect the ability to track how the experiences of Asian engineering students have changed over time, particularly in response to shifting societal attitudes, policy changes, and global events such as the COVID-19 pandemic [80]. Future research should explore longitudinal trends to provide a more comprehensive understanding of how challenges and support structures for Asian students have developed over multiple generations.

Another limitation of this study is the lack of distinction between undergraduate and graduate student experiences. Due to the limited amount of existing literature on Asian students in engineering, we included studies covering both undergraduate and graduate populations without separating their unique challenges. This approach allowed for a broader synthesis of findings but may overlook key differences between these groups. The absence of separate analysis for these distinct academic standings limits the depth of insights regarding how experiences may differ at various educational levels. Future research should aim to disaggregate findings based on academic levels to better understand specific barriers and support systems needed for Asian students across difference phases of their engineering education.

Conclusion

This scoping literature review highlights the complex and multifaceted experiences of Asian students in engineering education within the U.S. context. While Asian students are often perceived as academically successful, the MMM stereotype continues to impose unrealistic expectations, discourage help-seeking behaviors, and obscure the challenges they face. Issues related to identity, belonging, and intersectionality further complicate their experiences, particularly for women and students from underrepresented Asian student subgroups. Although many Asian students excel academically, institutional barriers such as limited culturally responsive advising hinder their overall well-being and professional development. A critical limitation in existing research is the frequent aggregation of Asian demographic ethnic data, which masks

disparities among subgroups and prevents a nuanced understanding of their diverse experiences. To create a more equitable and inclusive engineering education environment, institutions must prioritize disaggregated data collection, implement targeted support systems, and challenge prevailing stereotypes. Future research should explore how race, gender, and immigration status intersect to shape student experiences while also considering long-term career outcomes. By addressing these gaps, educators and policymakers can foster a more supportive and inclusive learning environment that acknowledges and addresses the unique needs of Asian engineering students.

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