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Engineering's Stress Culture and Student Well-Being: A Systematized Review

Mrs. Fatemeh Sadat Mirmahdi, Rowan University
Dr. Justin Charles Major, Rowan University

Dr. Justin C. Major (they/them) is an Assistant Professor of Experiential Engineering Education at Rowan University where they leads ASPIRE Lab (Advancing Student Pathways through Inequality Research in Engineering). Justin's research focuses on low-income students, engineering belonging and marginalization mechanisms, adverse childhood experiences, and feminist approaches to EER, and connects these topics to broader understandings of student success in engineering. Justin completed their Ph.D. in Engineering Education ('22) and M.S. in Aeronautics and Astronautics ('21) at Purdue University, and two B.S. in Mechanical Engineering and Secondary Mathematics Education at the University of Nevada, Reno ('17). Atop their education, Justin is a previous NSF Graduate Research Fellow and has won over a dozen awards for research, service, and activism related to marginalized communities, including the 2020 ASEE ERM Division Best Diversity Paper for their work on test anxiety. As a previous homeless and food-insecure student, Justin is eager to challenge and change engineering engineering education to be a pathway for socioeconomic mobility and broader systemic improvement rather than an additional barrier.

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Abstract
Engineering students experience higher rates of stress, anxiety, and depression compared to their non-engineering peers; they are also less likely to seek professional support, a pattern often attributed to a "culture of hardship" within engineering education, underscoring the importance of understanding how to effectively address mental health concerns in this population. In this systematized review, we synthesized findings from 48 peer-reviewed journals and conference papers to examine how the culture of engineering education programs (e.g., norms, expectations, pedagogical practices, and departmental climate) contributes to student mental health outcomes. Five themes emerged: (1) engineering program culture is associated with increased distress, (2) cultural stigma and silence around mental health decrease help-seeking, (3) faculty behavior normalizes engineering cultural impacts on mental health, (4) added effects of discrimination exacerbate the effects of engineering culture on mental health, and (5) structural and pedagogical interventions decrease the effects of culture on mental health. This study demonstrates that engineering education culture strongly shapes students' well-being in negative ways. Addressing stress culture through structural and cultural change offers a pathway to improve mental health and foster inclusion in engineering education. Implications are discussed further.

Introduction

Mental health among engineering students has become a serious concern in the United States, as rates of anxiety, depression, and even suicidal ideation are rising across the nation's campuses. The Healthy Minds Study found that over 60% of college students are experiencing at least one mental health problem [1]. Prior studies show that undergraduate engineering students face higher rates of mental health issues compared to their peers in other fields [2]. This feature suggests uncovering the reasons why a prevalence of distress exists, including the role played by the broader educational context in which these experiences occur, is necessary.

Rigor and toughness are often positioned as defining features of U.S. undergraduate engineering education culture, shaping the norms, values, and everyday practices within programs. This emphasis can contribute to elevated student stress and, over time, may become internalized as part of students' developing engineering identity [4]. Jenson and Cross describe this phenomenon as "engineering stress culture," where, for being an engineer, constant pressure and endurance are considered "natural" and expected. As a result, students, as a vulnerable population [2], avoid seeking support when facing mental health distress [5], [6]. Literature suggests that engineering students face lower treatment and higher cultural barriers compared to their non-engineering peers. Engineering students regularly report that they skip eating, sacrifice sleep, or adopt a number of other unhealthy mechanisms to cope with known workloads [7], and faculty often exacerbate that by reinforcement of rigor rather than reducing it. Rigid grading structures, competitive norms, and dismissive faculty responses convey that performance is prioritized over well-being [8], [9].

Another part of the engineering education culture that affects mental health is the existence of stigma and silence. Students worry that seeking help will make them appear "weak" and "unfit for engineering" [10], which makes them feel ashamed to admit they are struggling. Failing to discuss mental health openly reinforces this stigma. Even when resources exist, the literature suggests that students avoid them because they do not see their use as compatible with engineering's culture of toughness [11], because many students may choose to address these

problems privately. Importantly, stigma and stress do not impact all students equally. Marginalized groups, including women, students of color, LGBTQ+ students, and international students, are known to face more pressure during their program [12], [13]. Female students frequently feel pressured to hide their struggles in male-dominated environments. Similarly, Black, Latinx, and Indigenous students experience racialized trauma within engineering spaces [14].

Despite growing evidence of its importance, the role of engineering education culture in engineering student mental health remains understudied. The present literature overlooks how engineering education culture actively shapes students' experience of distress, coping, and support-seeking. To address these challenges, this paper suggests looking beyond individual coping strategies and examining how engineering culture contributes to mental health. Recent studies show that the norms and values shaping "engineering culture" are not culturally or socially neutral. Instead, engineering culture shapes students ' well-being in powerful ways, just like curriculum design or workload. Mirabelli et al. introduced the Engineering Stress Culture Scale [14] and demonstrated that normalized beliefs are associated with increased distress and lower use of support services among undergraduate engineering students, who reported significantly greater untreated anxiety and depression than their peers, a gap attributed to cultural barriers rather than individual weakness [15]. Together, these findings suggest that any attempt to improve mental health outcomes must confront culture directly. In this paper, we explore the following research question (RQ): *In what ways has the literature discussed the relationship between students' mental health and engineering education culture?*

Methodology

To investigate how the literature addresses the relationship between mental health and engineering education culture among U.S. engineering students, a systematized review was conducted. Grant and Booth describe a systematized review as a synthesis that keeps the key elements of a systematic review without following the full set of formal procedures [16]. This approach allows for a more feasible implementation without compromising the overall structure and transparency of the review process. In this study, the method incorporates six elements from Grant and Booth's methodology [16], including 1) selecting data sources across relevant disciplines to ensure broad coverage, 2) developing and implementing a structural search using Boolean operators and predefined inclusion and exclusion criteria, 3) conducting independent screening of titles, abstracts, and full text according to predefined eligible criteria, 4) extracting key study aspects and findings to ensure methodological consistency, 5) organizing the findings into a meaningful narrative, and 6) investing the results of the study selection.

A. Data Sources—After defining the RQ, databases were selected to capture a broad range of the literature. Specifically, three databases emphasizing both educational and conference sources were chosen to incorporate diverse perspectives:

1) *Scopus*, the widest multidisciplinary coverage of peer-reviewed engineering and health journals and conferences, including the IEEE Frontiers in Education Conference [17].
2) *Education Source,* an education database that captures journal/conference papers [18].
3) *ASEE PEER is* the official archive of the American Society for Engineering Education conference proceedings, where U.S. scholars publish emerging work on engineering culture and student well-being [19].

B. Search Strategy—To identify relevant studies, this study used the simple Boolean query ("mental health" AND "engineering culture") across the three databases. After collecting relevant records, we removed duplicates. Thereafter, we screened the titles and abstracts for relevance, followed by full-text reviews. We applied the predefined inclusion and exclusion criteria throughout the described process to identify eligible studies.

C. Data Organization and Extraction—For each eligible study, we completed a structured extraction form in Google Sheets. We captured the title and DOI, language, country of study, population details, study design and methodology, paper type, authors, and key findings. Collaborative documentation in a single, version-controlled spreadsheet provided a clear path from raw information to final themes, making it easier for the authors to summarize findings.

D. Charting & Narrative Synthesis—We analyzed studies to examine how engineering education culture was conceptualized and related to mental health. Each study's findings were synthesized into a summary statement that captured how engineering education culture was defined and linked to mental health. These summaries were then integrated into a unified narrative that highlighted shared patterns, key differences, and gaps in the engineering education literature.

E. Result of Study Selection—We found n=176 total records through a search of three databases: n=151 records from ASEE, n=19 records from Scopus, and n=6 records from Education Source. We followed a two-stage selection process consistent with PRISMA (Figure 1) [20].

After removing 12 duplicate records, primarily from Scopus, we retained 164 unique records for screening. After removing duplicates, we applied our inclusion and exclusion criteria. First, we checked titles and abstracts. Then we moved on to the full paper review. We excluded 70 records that did not address either mental health or engineering culture, leaving 94 papers for further review. We reviewed full texts using these criteria:

- The study focused on post-secondary engineering students in the United States.
- The study reported on at least one aspect of the engineering culture construct (e.g., shared beliefs, values, expectations, or norms) and at least one mental health outcome (e.g., anxiety, depression).
- The study was published in a peer-reviewed journal or conference in engineering education.
- The paper was written in English.

We excluded n=46 records at this stage for not meeting the above criteria. We included the remaining n=48 studies in the final synthesis (refer to Appendix A). Table 1 summarizes the key characteristics of the n=48 included studies. The literature was dominated by conference proceedings, with fewer journal articles. Most studies were published in recent years and focused primarily on the engineering undergraduate population.

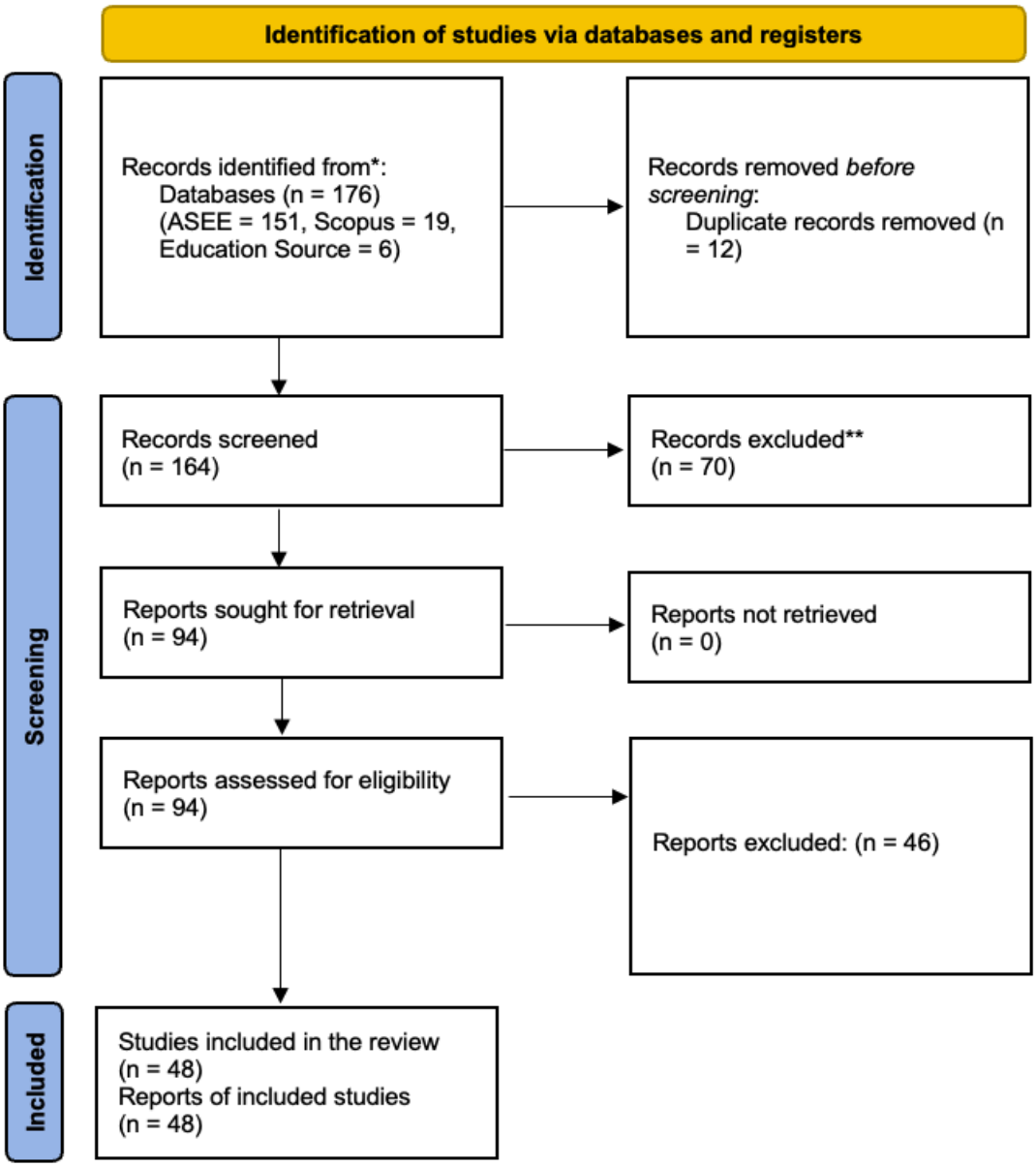

Figure 1. PRISMA [20] flow diagram of the present systematized review.

Table 1. Characteristics of included studies (*n*=48)

Characteristic	**Category**	**n**	**%**
Publication type	Journal paper	6	12.5
	Conference paper	42	87.5
Publication years	2018-2020	6	12.5
	2021-2023	27	56.25
	2024-2025	15	31.25
Databases	ASEE	26	54.17
	Scopus	16	33.33
	Education Source	6	12.5

Findings

As a result of this systematized review, five themes emerged: 1) Engineering education culture leads to significant increases in distress, 2) Cultural stigma and silence around mental health decrease help-seeking, 3) Faculty behavior normalizes engineering education's cultural impacts on mental health, 4) Added effects of discrimination exacerbate effects of engineering education culture on mental health, and 5) Structural and pedagogical interventions decrease effects of engineering education culture on mental health. We describe each theme individually.

Theme 1: Engineering education culture leads to significant increases in distress

Reviewed literature shows that engineering culture includes a high-stress environment that may harm students' well-being and lead them to mental health challenges. Engineering students reported higher levels of stress, anxiety, and depression compared to their peers in other majors, and they view this pressure as a natural part of their field [5], [21]. For example, Jensen et al. found that 95% of students believed high stress is “normal” in engineering, while 92% reported experiencing more stress than non-engineers. These findings suggest that stress is not just common but also deeply normalized. Students internalize a culture where overwork, burnout, and emotional suppression are perceived as integral to being a “real” engineer [22], [23], [24]. Students also described heavy workloads, competitive grading, and high expectations as reinforcing a zero-sum model of success, where struggling indicates weakness and achievement requires self-sacrifice [23], [25], [26]. Prestige narratives exacerbate this issue by associating rigor and suffering with merit, thereby normalizing sleep deprivation, constant productivity, and burnout as symbols of success [27]. Jensen and Cross found that 22-30% of students reported severe stress, anxiety, or depression, showing that these cultural norms cause measurable psychological harm [28]. Even wellness interventions, such as taking breaks, revealed that students often felt guilty for resting, highlighting the depth of internalized stress culture [29].

Theme 2: Cultural stigma and silence around mental health decrease help-seeking

Reviewed work shows that stigma and silence around mental health are deeply embedded in engineering education. Students often see mental health struggles as a weakness, and this belief negatively shapes students’ willingness to seek support in times of trouble. Even though engineering students report a high level of stress, anxiety, and depression, they are less likely to seek help compared to their peers in other fields [7], [11]. Instead, literature suggests students believe that mental health concerns should be managed privately, and they should avoid seeking help because of fear of judgment, weakness, or reputational harm [30], [31]. Wright et al. described six major barriers to help-seeking: 1) heavy workloads and time pressures, 2) a belief that mental health is a lower priority than homework, 3) a tendency to delay care until a crisis, 4) a competitive environment with high expectations, 5) shame, and 6) stigma [32]. Students emphasized that seeking help marks them as weak in a discipline where toughness and competitiveness are prized [7], [26]. Similarly, Sanchez et al. highlight that silence around mental health will be reinforced when peers, mentors, and faculty rarely encourage students to seek help [4]. Students view counseling as incompatible with engineering’s culture, irrelevant to their context, and stigmatized within the discipline. Even when services are available, many students avoid them because they do not align with the discipline's cultural norms [9], [10].

Theme 3: Faculty behavior normalizes engineering cultural impacts on mental health

Literature also suggests that faculty play a crucial role in maintaining or dismantling the culture of engineering education. Many studies mentioned that faculty messages signal to students whether vulnerability and help-seeking are acceptable. When faculty and mentors display empathy, flexibility, and genuine concern, students feel supported and are more willing to seek help, normalizing mental health [33]. For instance, Pettit et al. found that student-led wellness gained more strength when faculty and staff engaged in Mental Health First Aid training and added "mindfulness moments" to classes [26], which helps students to normalize emotional conversation. Similarly, Wilson et al. reported that faculty who modeled care by integrating check-ins, posting resources, and offering flexibility could reduce stigma and encourage help-seeking [34]. In contrast, indifferent or dismissive responses from faculty exacerbated distress. Mirabelli et al. and Jensen & Cross further showed that students internalized a "shared suffering" culture in which overwork was normalized and help-seeking was discouraged, often reinforced by faculty silence or rigidity [30], [31]. Several studies argue that faculty behavior is a vital component of engineering education culture. Panuganti et al. emphasized that faculty who dismiss emotional concerns or equate worth with performance foster harmful expectations, while Jenson et al. demonstrated that redesigning faculty practices, through training, policy change, and everyday action, can challenge the culture of toughness and silence [25], [35].

Theme 4: Added effects of discrimination exacerbate the effects of engineering education culture on mental health

This review finds that marginalized students experience engineering education culture in ways that exacerbate mental health distress. Studies consistently show that women, students of color, LGBTQ+ students, and international students face stigma, exclusion, and silence that intensify stress and discourage help-seeking. Vahidi et al. demonstrated how Black, Latinx, and Indigenous students experience racialized trauma where exclusionary norms and hyper-competition act as systemic stressors [14]. Kali et al. reported that female students, in particular, felt uncomfortable voicing their concerns [9]. Also, studies found that some female students lacked trust in the university's institutions, such as support services, which discouraged them from expressing their feelings or meeting their needs. Beddoes and Danowitz explained how women felt pressure to hide their struggles in male-dominated classes [36]. Even Kali & Secules found that students, especially women, perceived faculty as disengaged from their emotional needs [37]. Robert and Leydens demonstrated that underrepresented students experienced a lack of belonging due to their gender, disability, and social class [23]. They also showed how students internalized a culture of stress and suffering, and avoided disclosing their struggles out of fear of being weeded out. To cope, students engaged in self-care practices and worked to build networks that reshaped the culture. One study [38] showed that the specifics of racial and ethnic culture can strongly influence students' mental health. Whitwer et al. found a similar pattern: female, LGBTQ+, and first-generation students reported higher levels of distress but still used counseling less often because of stigma [15].

Theme 5: Structural and pedagogical interventions decrease the effects of engineering education culture on mental health

This review highlighted the importance of structural and pedagogical interventions for changing engineering culture and the positive impact that such changes can have on mental health. Many studies emphasize that changing the culture of engineering education is not just about asking

students to “take care of themselves,” but rather that real change happens when programs and faculty redesign structures and teaching practices to make mental health an active, positive part of the system. Jensen et al. highlighted how pedagogical practices, such as embedding mental health into coursework, promoting healthy boundaries and self-care, and modeling supportive practice, can reduce stress [25]. Petitt et al. found that student-led wellness programs were more effective when paired with structural support, such as faculty training and funding for wellness activities [26]. Choi and Buswell shared that giving students time in class for mental health activities, led by faculty, helped them to normalize self-care [29]. Finally, Williams et al. demonstrated that mastery-based learning allowed students to revise assignments until they succeeded, reducing anxiety compared to traditional grading [39]. These kinds of pedagogical changes were found to reduce students' pressure and increase their sense of support. Wilson et al. described how workshops in which professors learned strategies such as modeling wellness, checking in with students, and posting mental health resources in class were beneficial [34].

Discussion

This review shows that engineering education culture is not neutral; it shapes how students think, feel, and act. The five identified themes work together as a single system, not as five separate issues. Taken together, the themes describe a reinforcing cycle. First, stress and overwork are normalized through program structure (Theme 1). Then, the resulting stigma and silence discourage help-seeking (Theme 2). Next, faculty practices can reinforce or disrupt these norms (Theme 3). Furthermore, these dynamics intensify for marginalized students through added discrimination-related stressors (Theme 4). Finally, the literature highlights structural and pedagogical levers that can interrupt the cycle (Theme 5). The entirety of this cycle, described further in this discussion section, is important to understand and influence to advance positive mental health outcomes in college engineering.

Across included studies, demanding structures such as credit loads, grading design, and competition signal what it means to be an "engineer." These signals normalize overwork, silence, and endurance [6], [27]. Students then align to those signals to create expressions like "If I can make it, I will belong.” This identity delays disclosure of need even when services exist [7], [40]. Cultural and structural norms lead students to experience high levels of stress and perceive it as a normal part of being an engineer. As a result, students begin to believe that struggling is expected and that stigma prevents them from asking for help. *Theme 1* underscores the program structure and expectations, normalizes high stress as an expected part of “being an engineer,” encourages students to endure heavy workloads, and views struggle as unavoidable. Engineering programs are described as stressful environments, where the pressure and high expectations are often treated as a part of the field. Students internalize these norms and feel compelled to endure them as a requirement of their program. Many believe they must accept high expectations and heavy workloads without rest and view struggling as unavoidable. This stress culture not only harms students' well-being but also intensifies stress. This normalization of stress also sets the stage for Theme 2, where silence and stigma further discourage help-seeking.

Over time, this mindset becomes internalized and is associated with elevated psychological distress. The system, rather than addressing these issues, often reinforces them by continuing to reward endurance over well-being. Overall, program structures create norms; those norms shape identities; identities drive behaviors; and those behaviors produce a high level of distress. One of

the strongest pattern found in the literature was the normalization of stress. Behaviors such as lack of sleep, skipped meals, and working while ill are treated as evidence of commitment rather than as harm [7], [23], [27]. Students feel guilty about resting, which leads them to overwork because strain is tied to professional identities among engineering students [29]. These patterns illustrate how deeply engineering education culture shapes mental health outcomes and point to the need to redefine rigor through designing assessments, credit loads, and workloads that challenge students intellectually without normalizing self-harm.

Theme 2 highlights that stigma and silence around mental health are central features of engineering education culture. Students' fear of appearing weak often makes them avoid expressing their feelings. They internalized the belief that toughness defines an engineer, which keeps them from using counseling and support services. As students manage distress privately, they reinforce a cycle that normalizes silence. The literature also highlighted that stigma and silence are central features of engineering education culture. Students fear being perceived as weak, and they are worried about their grades and reputation; therefore, they postpone care until a crisis [11], [30]. Even when counseling is available, they view it as misaligned for engineers [9], [24]. This is not an access problem but instead a cultural-fit problem. The practical move is to embed supports inside engineering spaces and to name help-seeking as a professional skill that all engineers should engage with.

Theme 3 highlights that faculty shape the culture of engineering education through the signals they send about care and vulnerability. Faculty empathy and flexibility serve as protective factors that normalize help-seeking, whereas faculty indifference and silence are significant risk factors that discourage disclosure. In many cases, faculty foster a culture of discouragement by their silence about mental health that contributes to academic underachievement and even school dropout. Faculty play a vital role in either reinforcing or disrupting cultural patterns. Studies have shown that behaviors such as routine check-ins, resource postings, flexible policies, and Mental Health First Aid training can help reduce stigma and encourage students to disclose distress and be more willing to seek help. [26], [34]. Unlikely, dismissive responses and rigid rules reinforce harm and teach students to be silent [9], [31]. Faculty behavior thus functions as local culture in practice, with empathy acting as a protective factor and indifference as a significant risk factor. Faculty development is not an optional add-on but a central lever for changing engineering education culture.

Theme 4 shows that the culture of stress and silence does not affect engineering students equally and that marginalized students often experience an added layer of pressure that intensifies distress and reduces help-seeking. Marginalized students, such as women, students of color, LGBTQ+ students, international students, and first-generation students, report more pressure, distress, and mistrust of services [9], [12], [36]. Studies describe that racialized and gendered experiences deepen distress and are associated with more negative intentions for help-seeking [14], [23]. Cultural norms around emotional restraint matter as well; for example, some Asian students avoid disclosure to prevent stigma [38]. Large-scale evidence shows higher distress for female, LGBTQ+, and first-generation students with lower treatment use [15]. These findings underscore that equity and justice must be built into the culture-change efforts from the outset, not added later as an afterthought. While all engineering students face heavy workloads and stress, women, students of color, LGBTQ+ students, and international students also contend with

stigma, exclusion, and a lack of trust in institutional support. This "double pressure," combined with "double identity-based stigma," leads to a higher level of distress and lower use of services.

Theme 5 highlights concrete interventions that can reshape engineering education culture by reducing structural stressors and making support more visible and acceptable. The literature points to interventions such as structural reforms (e.g., mastery-based grading, revision policies, and calibrated credit loads) that reduce anxiety without lowering standards [25], [39]. Pedagogical practices, including counselors and resource hubs in engineering buildings, "mindfulness moments," and scheduled check-ins, normalize care as part of the course [26], [29], [34]. Faculty development, such as Mental Health First Aid and trauma-informed training, helps faculty respond early and avoid harm from well-intended but dismissive practices [9], [35]. Together, these strategies show that structural and pedagogical reform are not only possible but essential for shifting engineering education away from a culture of endurance and toward one that supports inclusion, dignity, and mental health. Structural changes such as reducing credit loads, revising grading systems, and embedding wellness resources within engineering spaces can remove systematic barriers that heighten stress. Pedagogical practices such as integrating wellness into class activities, modeling supportive behaviors, and giving students a second chance through mastery-based learning can normalize care and reduce stigma in the daily academic environment. Combining these interventions creates a reinforcing system: *structures make support accessible, while classroom practice makes support more acceptable.* This approach shifts the culture of engineering education programs from endurance and silence toward well-being and inclusion.

Implications

The findings highlight the need for systematic action in engineering education to shift the stress culture away from norms of endurance and overwork toward open, normalized discussions of mental health. Faculty play a central role in shaping this environment, and training invitations, such as Mental Health First Aid, can equip them to model empathy and reduce stigma and integrate flexibility, wellness activities, and resource sharing into daily teaching. Counseling and wellness services should be embedded within engineering spaces to reduce barriers and build trust. To support marginalized students, engineering programs must center student voices and provide inclusive, trauma-informed mental health support. Together, these implications call for a multi-level approach that integrates structural reform, faculty accountability, and visible, equitable mental health support to foster a culture of well-being in engineering education.

Limitations

The review has several limitations. First, most included studies came from conference proceedings rather than journal articles, which may limit the depth and rigor of the evidence base. However, it is important to note that these conversations are happening more in conference papers than in journals in the engineering education field. Second, many of the studies were descriptive, lacking theoretical frameworks or longitudinal design. This lack may reduce the ability to explain the mechanisms of mental health or track changes over time. Third, inclusion criteria required that studies report at least one construct related to engineering culture and at least one mental health outcome. While this choice ensured clear alignment, it may also have excluded relevant studies through analysis rather than being reported directly by the author.

Conclusions and Future Work

This systematic review of n=48 papers revealed a clear understanding that the engineering education stress culture is not incidental but rather taught, learned, and reinforced. This review examined how cultural norms contribute to high levels of distress among students. This review shows that stigma, silence, and signals from faculty can turn strict policies into harmful experiences, more so for marginalized students. This study finds that the solution to mental health issues in engineering education has to be both structural and cultural. When programs combine assessment reform and built-in supports with clear instructor messaging, help-seeking is treated as a professional skill rather than a weakness. This change reframes rigor as resilient performance, thereby improving mental health and fostering broader inclusion [6], [34], [39]. Two gaps emerged from this review. First, we found most studies were descriptive and did not use explicit theory to explain why culture shapes mental health. Lack of theory weakens construct clarity, makes variable choice ad hoc, and limits cumulative knowledge. Future work should use a theoretical framework to guide study design, clarify the relationships among variables, and generate deeper insights. Second, we found that only a few papers followed students across semesters or years or reported pre-post change. As a result, we cannot see trajectories, test temporal ordering, or evaluate the durability of interventions. To address this gap, future work should employ longitudinal designs to capture changes and patterns over time to examine patterns and changes across time and gain deeper insight into how environmental, cultural, and structural factors shape students' mental health.

References

[1] S. K. Lipson *et al.*, "Trends in college student mental health and help-seeking by race/ethnicity: Findings from the national healthy minds study, 2013–2021," *J. Affect. Disord.*, vol. 306, pp. 138–147, Jun. 2022, doi: 10.1016/j.jad.2022.03.038.

[2] A. Danowitz and K. Beddoes, "Characterizing Mental Health and Wellness in Students Across Engineering Disciplines," in *2018 CoNECD - The Collaborative Network for Engineering and Computing Diversity Conference Proceedings*, Crystal City, Virginia: ASEE Conferences, Apr. 2018, p. 29522. doi: 10.18260/1-2--29522.

[3] M. D. Ahandani, P. Njeck, and O. N. Okoani, "Examining the Effect of Social, Cultural, and Political Factors on the Wellness of International Students in Engineering Doctoral Programs: A Collaborative Inquiry," in *2025 ASEE Annual Conference & Exposition*, 2025. Accessed: Apr. 28, 2026. [Online]. Available: https://peer.asee.org/examining-the-effect-of-social-cultural-and-political-factors-on-the-wellness-of-international-students-in-engineering-doctoral-programs-a-collaborative-inquiry

[4] M. Sanchez-Pena, A. McAlister, N. Ramirez, D. Samuel, S. Kamal, and X. Xu, "Stigma of mental health conditions within engineering culture and its relation to help-seeking attitudes: Insights from the first year of a longitudinal study," Jun. 2023. doi: 10.18260/1-2--44256.

[5] K. Jensen, J. Sanders, E. Johnson, J. F. Mirabelli, and S. R. Vohra, "ASEE PEER - Board 233: CAREER: Supporting Mental Health and Wellness in Engineering Culture to Promote Equitable Change," 2023. Accessed: Nov. 26, 2025. [Online]. Available: https://peer.asee.org/board-233-career-supporting-mental-health-and-wellness-in-engineering-culture-to-promote-equitable-change

[6] K. J. Jensen and K. J. Cross, “Engineering stress culture: Relationships among mental health, engineering identity, and sense of inclusion,” *J. Eng. Educ.*, vol. 110, no. 2, pp. 371–392, 2021, doi: 10.1002/jee.20391.

[7] K. Jensen, E. Johnson, J. Mirabelli, and S. Vohra, “ASEE PEER - CAREER: Characterizing Undergraduate Engineering Students’ Experiences with Mental Health in Engineering Culture,” 2022. Accessed: Nov. 26, 2025. [Online]. Available: https://peer.asee.org/career-characterizing-undergraduate-engineering-students-experiences-with-mental-health-in-engineering-culture

[8] N. Ban *et al.*, “ASEE PEER - ‘It’s very important to my professors…at least most of them’: How messages from engineering faculty and staff influence student beliefs around seeking help for their mental health,” 2023. Accessed: Nov. 26, 2025. [Online]. Available: https://peer.asee.org/it-s-very-important-to-my-professors-at-least-most-of-them-how-messages-from-engineering-faculty-and-staff-influence-student-beliefs-around-seeking-help-for-their-mental-health

[9] M. Kali, S. Secules, and C. McCall, “Including Alice: Uncovering the Narrative of One Student’s Experience at the Intersection of International Student Status and Mental Health,” Jan. 2021. doi: 10.18260/1-2--36097.

[10] S. Wilson *et al.*, “Identifying common perceived stressors and stress-relief strategies among undergraduate engineering students,” in *2022 ASEE Annual Conference & Exposition Proceedings*, Minneapolis, MN: ASEE Conferences, Aug. 2022, p. 41009. doi: 10.18260/1-2--41009.

[11] S. A. Wilson, A. K. Huth, S. X. Lamer, J. H. Hammer, and M. Whitwer, “ASEE PEER - Investigating Perceptions that Predict Mental Health Related Help-Seeking in First-Year Engineering Students,” 2024. Accessed: Dec. 15, 2025. [Online]. Available: https://peer.asee.org/investigating-perceptions-that-predict-mental-health-related-help-seeking-in-first-year-engineering-students

[12] S. C. Davis, S. B. Nolen, N. Cheon, E. Moise, and E. W. Hamilton, “Engineering climate for marginalized groups: Connections to peer relations and engineering identity,” *J. Eng. Educ.*, vol. 112, no. 2, pp. 284–315, 2023, doi: 10.1002/jee.20515.

[13] N. K. Koujel and J. C. Major, “An Exploration of the Intersectional Distribution of Physical, Social, and Emotional Resources in Engineering,” in *2024 IEEE Frontiers in Education Conference (FIE)*, Washington, DC, USA: IEEE, Oct. 2024, pp. 1–9. doi: 10.1109/FIE61694.2024.10893500.

[14] E. Vahidi, M. O. Onyango, K. A. Thomas, K. J. Cross, and W. Gaskins, “ASEE PEER - Racialized Trauma for Black, Latin, and Indigenous Engineering Students: A Systematic Literature Review.,” 2024. Accessed: Nov. 26, 2025. [Online]. Available: https://peer.asee.org/racialized-trauma-for-black-latin-and-indigenous-engineering-students-a-systematic-literature-review

[15] M. D. Whitwer, S. A. Wilson, J. H. Hammer, and B. Gomer, “Mental health and treatment use in undergraduate engineering students: A comparative analysis to students in other academic fields of study,” *J. Eng. Educ.*, vol. 114, no. 1, p. e20629, 2025, doi: 10.1002/jee.20629.

[16] M. J. Grant and A. Booth, “A typology of reviews: an analysis of 14 review types and associated methodologies,” *Health Inf. Libr. J.*, vol. 26, no. 2, pp. 91–108, 2009, doi: 10.1111/j.1471-1842.2009.00848.x.

[17] “Scopus | Abstract and citation database | Elsevier,” www.elsevier.com. Accessed: Dec. 15, 2025. [Online]. Available: https://www.elsevier.com/products/scopus
[18] “Education Source Ultimate | EBSCO.” Accessed: Dec. 15, 2025. [Online]. Available: https://about.ebsco.com/products/research-databases/education-source-ultimate
[19] “ASEE Home.” Accessed: Dec. 15, 2025. [Online]. Available: https://www.asee.org/
[20] “PRISMA 2020 statement,” PRISMA statement. Accessed: Dec. 15, 2025. [Online]. Available: https://www.prisma-statement.org/prisma-2020
[21] M. Sanchez-Pena and C. Otis, “Comparing Wellbeing Indicators, Perception of Stress, Competition, and Achievement Between Undergraduate Engineering, Other STEM, and Non-STEM Majors,” Jul. 2021. doi: 10.18260/1-2--36819.
[22] L. Hargis, C. Wright, E. Usher, J. Hammer, S. Wilson, and M. Miller, “Relationship Between Mental Health Distress and Help-Seeking Behaviors Among Engineering Students,” in *2021 ASEE Virtual Annual Conference Content Access Proceedings*, Virtual Conference: ASEE Conferences, Jul. 2021, p. 37657. doi: 10.18260/1-2--37657.
[23] K. Robert and J. A. Leydens, “ASEE PEER - Dignity and well-being: Narratives of modifying the culture of engineering education to improve mental health among underrepresented STEM students,” 2023. Accessed: Nov. 26, 2025. [Online]. Available: https://peer.asee.org/dignity-and-well-being-narratives-of-modifying-the-culture-of-engineering-education-to-improve-mental-health-among-underrepresented-stem-students
[24] S. Wilson, J. Hammer, M. Miller, C. Wright, L. Hargis, and E. Usher, “ASEE PEER - Identifying mental health related help-seeking beliefs in undergraduate engineers,” 2022. Accessed: Nov. 26, 2025. [Online]. Available: https://peer.asee.org/identifying-mental-health-related-help-seeking-beliefs-in-undergraduate-engineers
[25] K. Jensen, S. R. Vohra, J. F. Mirabelli, A. J. Kunze, I. Miller, and T. E. Romanchek, “ASEE PEER - CAREER: Supporting Undergraduate Mental Health by Building a Culture of Wellness in Engineering,” 2021. Accessed: Dec. 15, 2025. [Online]. Available: https://peer.asee.org/career-supporting-undergraduate-mental-health-by-building-a-culture-of-wellness-in-engineering
[26] C. Petitt, G. Kremer, T. Cyders, E. McCarty, R. F. Lindsey, and R. Pytosh, “ASEE PEER - Board 188: Student-centered and led approaches for improving Mental Health,” 2023. Accessed: Nov. 26, 2025. [Online]. Available: https://peer.asee.org/board-188-student-centered-and-led-approaches-for-improving-mental-health
[27] K. Robert, J. Deters, and J. A. Leydens, “ASEE PEER - The Prestige Game: Making Visible the Mental Health Effects of Institutional Prestige Seeking on Underrepresented STEM Students,” 2024. Accessed: Nov. 26, 2025. [Online]. Available: https://peer.asee.org/the-prestige-game-making-visible-the-mental-health-effects-of-institutional-prestige-seeking-on-underrepresented-stem-students
[28] K. Jensen and K. Cross, “Work in Progress: Understanding Student Perceptions of Stress as Part of Engineering Culture,” in *2018 ASEE Annual Conference & Exposition Proceedings*, Salt Lake City, Utah: ASEE Conferences, Jun. 2018, p. 31312. doi: 10.18260/1-2--31312.
[29] N. Choi and N. Buswell, “How Does an Engineering Student Take a Break? A Course-Based Exercise for Promoting Mental Wellness,” in *2024 ASEE Annual Conference & Exposition Proceedings*, Portland, Oregon: ASEE Conferences, Jun. 2024, p. 47536. doi: 10.18260/1-2--47536.

[30] K. Jensen and K. Cross, “Board 73: Student Perceptions of Engineering Stress Culture,” in *2019 ASEE Annual Conference & Exposition Proceedings*, Tampa, Florida: ASEE Conferences, Jun. 2019, p. 32418. doi: 10.18260/1-2--32418.
[31] J. Mirabelli, A. Kunze, J. Ge, K. Cross, and K. Jensen, “Work in Progress: Identifying Factors that Impact Student Experience of Engineering Stress Culture,” in *2020 ASEE Virtual Annual Conference Content Access Proceedings*, Virtual On line: ASEE Conferences, Jun. 2020, p. 35645. doi: 10.18260/1-2--35645.
[32] C. Wright, L. Hargis, E. Usher, J. Hammer, S. Wilson, and M. Miller, “Identifying Engineering Students’ Beliefs About Seeking Help for Mental Health Concerns,” in *2021 ASEE Virtual Annual Conference Content Access Proceedings*, Virtual Conference: ASEE Conferences, Jul. 2021, p. 37269. doi: 10.18260/1-2--37269.
[33] N. Khorsandi Koujel, S. Panuganti, and J. Major, “Bridging Support Networks: The Role of Formal and Informal Mentors inUndergraduate Engineering Students’ Emotional Well-Being and Academic Success,” in *2025 ASEE Annual Conference & Exposition Proceedings*, Montreal, Quebec, Canada: ASEE Conferences, Jun. 2025, p. 56013. doi: 10.18260/1-2--56013.
[34] S. Wilson, K. Jensen, and J.-A. Tait, “Supporting Undergraduate Engineering Student Mental Health,” 2023, doi: 10.21427/MATP-QP66.
[35] S. Panuganti, A. Pawley, J. Hess, and I. Anakok, “Student Panel Session: Exploring Mental Health and its Relationship with Engineering Culture Faculty,” in *2024 IEEE Frontiers in Education Conference (FIE)*, Oct. 2024, pp. 1–3. doi: 10.1109/FIE61694.2024.10893525.
[36] K. Beddoes and A. Danowitz, “ASEE PEER - In Their Own Words: How Aspects of Engineering Education Undermine Students’ Mental Health,” 2022. Accessed: Dec. 15, 2025. [Online]. Available: https://peer.asee.org/in-their-own-words-how-aspects-of-engineering-education-undermine-students-mental-health
[37] M. B. Kali and S. Secules, “The New Normal: Student Perspectives on Supportive University Policies during COVID and Beyond,” in *2022 CoNECD (Collaborative Network for Engineering & Computing Diversity) Proceedings*, New Orleans, Louisiana: ASEE Conferences, Feb. 2022, p. 39146. doi: 10.18260/1-2--39146.
[38] Q. Chen, M. Sanchez-Pena, and N. Ramirez, “An Exploration of Asian Engineering Students’ Mental Health Conditions, Support, and Stigma-Related Barriers to Help-Seeking,” in *2024 IEEE Frontiers in Education Conference (FIE)*, Oct. 2024, pp. 1–8. doi: 10.1109/FIE61694.2024.10893044.
[39] M. Williams, M. Brinton, K. M. Degoede, and E. D. Dalton, “ASEE PEER - Student Anxiety and Belonging in a Mastery-Based-Learning Course,” 2024. Accessed: Dec. 15, 2025. [Online]. Available: https://peer.asee.org/student-anxiety-and-belonging-in-a-mastery-based-learning-course
[40] S. A. Wilson, J. H. Hammer, J. A. Henderson, and S. S. Frizell, “ASEE PEER - Board 310: Improving the Validity of an Instrument to Measure Mental Health Help-Seeking Beliefs for Diverse Institutional Contexts,” 2024. Accessed: Nov. 26, 2025. [Online]. Available: https://peer.asee.org/board-310-improving-the-validity-of-an-instrument-to-measure-mental-health-help-seeking-beliefs-for-diverse-institutional-contexts

Appendix A. Final list of included papers.

No.	IEEE Reference
1	M. Sánchez-Peña, X. R. Xu, N. Ramirez, and N. Sambamurthy, “Engineering students and professionals living with a mental illness: an exploration of their experiences and challenges,” in 2019 IEEE Frontiers in Education Conference (FIE), Oct. 2019, pp. 1–5. doi: 10.1109/FIE43999.2019.9028416.
2	K. Jensen, J. Sanders, E. Johnson, J. F. Mirabelli, and S. R. Vohra, “ASEE PEER - Board 233: CAREER: Supporting Mental Health and Wellness in Engineering Culture to Promote Equitable Change,” 2023. Accessed: Nov. 26, 2025. [Online]. Available: https://peer.asee.org/board-233-career-supporting-mental-health-and-wellness-in-engineering-culture-to-promote-equitable-change
3	K. Jensen and K. Cross, “Board 73: Student Perceptions of Engineering Stress Culture,” in 2019 ASEE Annual Conference & Exposition Proceedings, Tampa, Florida: ASEE Conferences, Jun. 2019, p. 32418. doi: 10.18260/1-2--32418.
4	J. Sanders, E. Johnson, J. Mirabelli, A. Kunze, S. Vohra, and K. Jensen, “‘“Not a Therapist”’: Why Engineering Faculty and Staff Do/n’t Engage in Supporting Student Mental Health and Wellbeing,” 2024.
5	K. Jensen, E. Johnson, J. Mirabelli, and S. Vohra, “ASEE PEER - CAREER: Characterizing Undergraduate Engineering Students’ Experiences with Mental Health in Engineering Culture,” 2022. Accessed: Nov. 26, 2025. [Online]. Available: https://peer.asee.org/career-characterizing-undergraduate-engineering-students-experiences-with-mental-health-in-engineering-culture
6	J. Mirabelli, A. Kunze, J. Ge, K. Cross, and K. Jensen, “Work in Progress: Identifying Factors that Impact Student Experience of Engineering Stress Culture,” in 2020 ASEE Virtual Annual Conference Content Access Proceedings, Virtual On line: ASEE Conferences, Jun. 2020, p. 35645. doi: 10.18260/1-2--35645.
7	Q. Chen, M. Sanchez-Pena, and N. Ramirez, “An Exploration of Asian Engineering Students’ Mental Health Conditions, Support, and Stigma-Related Barriers to Help-Seeking,” in 2024 IEEE Frontiers in Education Conference (FIE), Oct. 2024, pp. 1–8. doi: 10.1109/FIE61694.2024.10893044.
8	C. Petitt, G. Kremer, T. Cyders, E. McCarty, R. F. Lindsey, and R. Pytosh, “ASEE PEER - Board 188: Student-centered and led approaches for improving Mental Health,” 2023. Accessed: Nov. 26, 2025. [Online]. Available: https://peer.asee.org/board-188-student-centered-and-led-approaches-for-improving-mental-health
9	N. Choi and N. Buswell, “How Does an Engineering Student Take a Break? A Course-Based Exercise for Promoting Mental Wellness,” in 2024 ASEE Annual

Conference & Exposition Proceedings, Portland, Oregon: ASEE Conferences, Jun. 2024, p. 47536. doi: 10.18260/1-2--47536.

10 K. J. Jensen, J. F. Mirabelli, A. J. Kunze, T. E. Romanchek, and K. J. Cross, "Undergraduate student perceptions of stress and mental health in engineering culture," Int. J. STEM Educ., vol. 10, no. 1, p. 30, Apr. 2023, doi: 10.1186/s40594-023-00419-6.

11 S. Wilson, J. Hammer, M. Miller, C. Wright, L. Hargis, and E. Usher, "ASEE PEER - Identifying mental health related help-seeking beliefs in undergraduate engineers," 2022. Accessed: Nov. 26, 2025. [Online]. Available: https://peer.asee.org/identifying-mental-health-related-help-seeking-beliefs-in-undergraduate-engineers

12 M. B. Kali and S. Secules, "The New Normal: Student Perspectives on Supportive University Policies during COVID and Beyond," in 2022 CoNECD (Collaborative Network for Engineering & Computing Diversity) Proceedings, New Orleans, Louisiana: ASEE Conferences, Feb. 2022, p. 39146. doi: 10.18260/1-2--39146.

13 K. Jensen, "The Time is Now to Build a Culture of Wellness in Engineering," Stud. Eng. Educ., vol. 2, p. 42, Jun. 2021, doi: 10.21061/see.67.

14 C. Wright, L. Hargis, E. Usher, J. Hammer, S. Wilson, and M. Miller, "Identifying Engineering Students' Beliefs About Seeking Help for Mental Health Concerns," in 2021 ASEE Virtual Annual Conference Content Access Proceedings, Virtual Conference: ASEE Conferences, Jul. 2021, p. 37269. doi: 10.18260/1-2--37269.

15 E. Vahidi, M. O. Onyango, K. A. Thomas, K. J. Cross, and W. Gaskins, "ASEE PEER - Racialized Trauma for Black, Latin, and Indigenous Engineering Students: A Systematic Literature Review.," 2024. Accessed: Nov. 26, 2025. [Online]. Available: https://peer.asee.org/racialized-trauma-for-black-latin-and-indigenous-engineering-students-a-systematic-literature-review

16 C. J. Wright, S. A. Wilson, J. H. Hammer, L. E. Hargis, M. E. Miller, and E. L. Usher, "Mental health in undergraduate engineering students: Identifying facilitators and barriers to seeking help," J. Eng. Educ., vol. 112, no. 4, pp. 963–986, 2023, doi: 10.1002/jee.20551.

17 M. Sanchez-Pena, A. McAlister, N. Ramirez, D. Samuel, S. Kamal, and X. Xu, "Stigma of mental health conditions within engineering culture and its relation to help-seeking attitudes: Insights from the first year of a longitudinal study," Jun. 2023. doi: 10.18260/1-2--44256.

18 M. Sanchez-Pena and C. Otis, "Comparing Wellbeing Indicators, Perception of Stress, Competition, and Achievement Between Undergraduate Engineering, Other STEM, and Non-STEM Majors," Jul. 2021. doi: 10.18260/1-2--36819.

19 S. Wilson, K. Wilder, W. Blackburn-Lynch, J. Hammer, and D. Dailey, “ASEE PEER - Investigating mental health distress and help-seeking perceptions in first-year engineering students,” 2022. Accessed: Dec. 15, 2025. [Online]. Available: https://peer.asee.org/investigating-mental-health-distress-and-help-seeking-perceptions-in-first-year-engineering-students

20 K. Jensen, S. R. Vohra, J. F. Mirabelli, A. J. Kunze, I. Miller, and T. E. Romanchek, “ASEE PEER - CAREER: Supporting Undergraduate Mental Health by Building a Culture of Wellness in Engineering,” 2021. Accessed: Dec. 15, 2025. [Online]. Available: https://peer.asee.org/career-supporting-undergraduate-mental-health-by-building-a-culture-of-wellness-in-engineering

21 A. Danowitz and K. Beddoes, “Characterizing Mental Health and Wellness in Students Across Engineering Disciplines,” in 2018 CoNECD - The Collaborative Network for Engineering and Computing Diversity Conference Proceedings, Crystal City, Virginia: ASEE Conferences, Apr. 2018, p. 29522. doi: 10.18260/1-2--29522.

22 G. Sallai, J. Vicente, K. Shanachilubwa, and C. G. P. Berdanier, “Coping Landscapes: How graduate engineering students’ coping mechanisms correspond with dominant stressors in graduate school | NSF Public Access Repository,” Jan. 2022, Accessed: Dec. 15, 2025. [Online]. Available: https://par.nsf.gov/biblio/10356675-coping-landscapes-how-graduate-engineering-students-coping-mechanisms-correspond-dominant-stressors-graduate-school

23 S. A. Wilson, A. K. Huth, S. X. Lamer, J. H. Hammer, and M. Whitwer, “ASEE PEER - Investigating Perceptions that Predict Mental Health Related Help-Seeking in First-Year Engineering Students,” 2024. Accessed: Dec. 15, 2025. [Online]. Available: https://peer.asee.org/investigating-perceptions-that-predict-mental-health-related-help-seeking-in-first-year-engineering-students

24 M. Williams, M. Brinton, K. M. Degoede, and E. D. Dalton, “ASEE PEER - Student Anxiety and Belonging in a Mastery-Based-Learning Course,” 2024. Accessed: Dec. 15, 2025. [Online]. Available: https://peer.asee.org/student-anxiety-and-belonging-in-a-mastery-based-learning-course

25 J. Abiade and J. Moliski, “Work-in Progress: Identity and Transitions Laboratory: Utilizing Acceptance and Commitment Therapy framework to support engineering student success,” in 2020 ASEE Virtual Annual Conference Content Access Proceedings, Virtual On line: ASEE Conferences, Jun. 2020, p. 35705. doi: 10.18260/1-2--35705.

26 K. Beddoes and A. Danowitz, “ASEE PEER - In Their Own Words: How Aspects of Engineering Education Undermine Students’ Mental Health,” 2022. Accessed: Dec. 15, 2025. [Online]. Available: https://peer.asee.org/in-their-own-words-how-aspects-of-engineering-education-undermine-students-mental-health

27 K. J. Jensen and K. J. Cross, “Engineering stress culture: Relationships among mental health, engineering identity, and sense of inclusion,” J. Eng. Educ., vol. 110, no. 2, pp. 371–392, 2021, doi: 10.1002/jee.20391.

28 S. Bork and J.-L. Mondisa, “Work in Progress: Using Photovoice to Examine the Mental Health Experiences of Engineering Graduate Students During COVID-19,” in 2021 ASEE Virtual Annual Conference Content Access Proceedings, Virtual Conference: ASEE Conferences, Jul. 2021, p. 36525. doi: 10.18260/1-2--36525.

29 L. Hargis, C. Wright, E. Usher, J. Hammer, S. Wilson, and M. Miller, “Relationship Between Mental Health Distress and Help-Seeking Behaviors Among Engineering Students,” in 2021 ASEE Virtual Annual Conference Content Access Proceedings, Virtual Conference: ASEE Conferences, Jul. 2021, p. 37657. doi: 10.18260/1-2--37657.

30 M. D. Whitwer, S. A. Wilson, J. H. Hammer, and B. Gomer, “Mental health and treatment use in undergraduate engineering students: A comparative analysis to students in other academic fields of study,” J. Eng. Educ., vol. 114, no. 1, p. e20629, 2025, doi: 10.1002/jee.20629.

31 S. Khorshid, R. Marchiori, and S. Song, “Assessing Stress Levels and Stressors Among Architecture, Engineering, and Construction (AEC) Students: Underpinnings for Mental Health Curricula Development,” Jun. 2024. doi: 10.18260/1-2--46610.

32 S. Wilson et al., “Identifying common perceived stressors and stress-relief strategies among undergraduate engineering students,” in 2022 ASEE Annual Conference & Exposition Proceedings, Minneapolis, MN: ASEE Conferences, Aug. 2022, p. 41009. doi: 10.18260/1-2--41009.

33 S. Wilson, K. Jensen, and J.-A. Tait, “Supporting Undergraduate Engineering Student Mental Health,” 2023, doi: 10.21427/MATP-QP66.

34 S. Khorshid and S. Song, “Work in Progress: Assessing the Need for Mental Health Curricula for Civil, Architecture, and Construction Engineering,” in 2023 ASEE Annual Conference & Exposition Proceedings, Baltimore , Maryland: ASEE Conferences, Jun. 2023, p. 44175. doi: 10.18260/1-2--44175.

35 N. Ban et al., “ASEE PEER - ‘It’s very important to my professors…at least most of them’: How messages from engineering faculty and staff influence student beliefs around seeking help for their mental health,” 2023. Accessed: Nov. 26, 2025. [Online]. Available: https://peer.asee.org/it-s-very-important-to-my-professors-at-least-most-of-them-how-messages-from-engineering-faculty-and-staff-influence-student-beliefs-around-seeking-help-for-their-mental-health

36 S. Panuganti, A. Pawley, J. Hess, and I. Anakok, “Student Panel Session: Exploring Mental Health and its Relationship with Engineering Culture Faculty,” in 2024 IEEE

Frontiers in Education Conference (FIE), Oct. 2024, pp. 1–3. doi: 10.1109/FIE61694.2024.10893525.

37 L. Chase and R. Sleezer, “The Effects of Length of Participation on Student Mental Health, Professional Identity, and Perceptions of Inclusion in Project-Based Engineering Programs,” in 2024 ASEE Annual Conference & Exposition Proceedings, Portland, Oregon: ASEE Conferences, Jun. 2024, p. 48094. doi: 10.18260/1-2--48094.

38 K. Robert and J. A. Leydens, “ASEE PEER - Dignity and well-being: Narratives of modifying the culture of engineering education to improve mental health among underrepresented STEM students,” 2023. Accessed: Nov. 26, 2025. [Online]. Available: https://peer.asee.org/dignity-and-well-being-narratives-of-modifying-the-culture-of-engineering-education-to-improve-mental-health-among-underrepresented-stem-students

39 M. L. Sanchez-Pena, N. Ramirez, X. (rose) Xu, and D. B. Samuel, “ASEE PEER - Work in Progress: Measuring Stigma of Mental Health Conditions and Its Impact in Help-seeking Behaviors Among Engineering Students,” 2021. Accessed: Dec. 15, 2025. [Online]. Available: https://peer.asee.org/work-in-progress-measuring-stigma-of-mental-health-conditions-and-its-impact-in-help-seeking-behaviors-among-engineering-students

40 M. Sanchez-Pena and M. A. Sajjad, “Work in Progress: Stigma of Mental Health Conditions and its Relationship to Conditions’ Knowledge and Resource Awareness among Engineering Students,” in 2024 ASEE Annual Conference & Exposition Proceedings, Portland, Oregon: ASEE Conferences, Jun. 2024, p. 48513. doi: 10.18260/1-2--48513.

41 S. Bork, J. Mondisa, and N. Young, “Exploring the Relationship Between Culture and Science, Engineering, and Mathematics Graduate Students’ Mental Health (Full Paper),” in 2022 ASEE Annual Conference & Exposition Proceedings, Minneapolis, MN: ASEE Conferences, Aug. 2022, p. 41183. doi: 10.18260/1-2--41183.

42 S. A. Wilson, J. H. Hammer, J. A. Henderson, and S. S. Frizell, “ASEE PEER - Board 310: Improving the Validity of an Instrument to Measure Mental Health Help-Seeking Beliefs for Diverse Institutional Contexts,” 2024. Accessed: Nov. 26, 2025. [Online]. Available: https://peer.asee.org/board-310-improving-the-validity-of-an-instrument-to-measure-mental-health-help-seeking-beliefs-for-diverse-institutional-contexts

43 C. Spence, L. Nyberg, J. Chasmar, J. Nelson, and M. Tsugawa, “Working Full Time and Earning an Engineering Degree: Wellbeing in a Co-Op-Based Engineering Program,” Integr. Eng. Dep. Publ., Aug. 2022, [Online]. Available: https://cornerstone.lib.mnsu.edu/ie-fac-pubs/113

44 K. Robert, J. Deters, and J. A. Leydens, “ASEE PEER - The Prestige Game: Making Visible the Mental Health Effects of Institutional Prestige Seeking on Underrepresented

STEM Students," 2024. Accessed: Nov. 26, 2025. [Online]. Available: https://peer.asee.org/the-prestige-game-making-visible-the-mental-health-effects-of-institutional-prestige-seeking-on-underrepresented-stem-students

45 L. Chase and R. Sleezer, "ASEE PEER - The Effects of Length of Participation on Student Mental Health, Professional Identity, and Perceptions of Inclusion in Project-Based Engineering Programs," 2024. Accessed: Jan. 19, 2026. [Online]. Available: https://peer.asee.org/the-effects-of-length-of-participation-on-student-mental-health-professional-identity-and-perceptions-of-inclusion-in-project-based-engineering-programs

46 M. Kali, S. Secules, and C. McCall, "Including Alice: Uncovering the Narrative of One Student's Experience at the Intersection of International Student Status and Mental Health," Jan. 2021. doi: 10.18260/1-2--36097.

47 L. Chase, C. Sleezer, R. Sleezer, and M. Soledad, "Engineering Stress Culture in Project-based Engineering Programs," in 2022 ASEE Annual Conference & Exposition Proceedings, Minneapolis, MN: ASEE Conferences, Aug. 2022, p. 40526. doi: 10.18260/1-2--40526.

48 K. Jensen and K. Cross, "Work in Progress: Understanding Student Perceptions of Stress as Part of Engineering Culture," in 2018 ASEE Annual Conference & Exposition Proceedings, Salt Lake City, Utah: ASEE Conferences, Jun. 2018, p. 31312. doi: 10.18260/1-2--31312.