Recent Evidence on Student Wellbeing and Academic Performance in Higher Education

A Literature Review of Empirical Findings, Moderating Factors, and Institutional Interventions

Keywords: student wellbeing; mental health; academic performance; higher education; interventions

Sources reviewed: $N = 24$ peer-reviewed articles

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Abstract

Student mental health has emerged as a pressing concern in higher education worldwide, particularly since the COVID-19 pandemic accelerated pre-existing upward trends in psychological distress. This literature review synthesizes recent empirical evidence on the relationship between student wellbeing and academic performance, drawing on 24 peer-reviewed sources published between 2018 and 2025. The review is organized around four thematic areas: (1) prevalence and trends in student mental health across the post-pandemic landscape; (2) empirical associations between wellbeing indicators and academic performance metrics; (3) moderating factors including demographics, socioeconomic status, and disciplinary context; and (4) institutional interventions and policy frameworks designed to promote student wellbeing alongside academic success. Meta-analytic evidence indicates a small-to-moderate positive association between subjective wellbeing and academic achievement, with cognitive wellbeing dimensions showing stronger predictive relationships than affective components. Longitudinal studies provide preliminary evidence for temporal precedence from wellbeing to academic outcomes. Cognitive-behavioral and mindfulness-based interventions demonstrate the most consistent effectiveness, while digital mental health tools offer scalable alternatives. The review identifies critical gaps including limited causal evidence, underrepresentation of non-Western contexts, and insufficient long-term intervention outcome data.

Keywords: student wellbeing; student mental health; academic performance; higher education; institutional interventions; COVID-19; literature review

1 Introduction

The mental health and wellbeing of students in higher education have attracted unprecedented attention from researchers, policymakers, and institutional leaders over the past decade. Rising rates of psychological distress among university students, compounded by the disruptions of the COVID-19 pandemic, have transformed student wellbeing from a peripheral concern into a central strategic priority for universities worldwide (Lee et al., 2021; Lipson et al., 2022). This shift reflects a growing recognition that student wellbeing is not merely a welfare issue but is fundamentally linked to the core educational mission of higher education institutions.

The relationship between student wellbeing and academic performance has been the subject of considerable empirical inquiry. Meta-analytic evidence has established that a positive, albeit modest, association exists between subjective wellbeing and academic achievement (Bücker et al., 2018; Datu and King, 2021). However, the mechanisms underlying this association, the conditions under which it strengthens or weakens, and the direction of causality remain actively debated. These questions carry practical significance: if wellbeing causally influences academic outcomes, then investing in mental health promotion constitutes an investment in educational quality.

The COVID-19 pandemic provided a natural experiment that dramatically exposed the vulnerability of student mental health to systemic shocks. Rapid transitions to remote learning, social isolation, financial insecurity, and health anxiety produced documented increases in stress, anxiety, and depression across student populations (Lee et al., 2021; Hughes et al., 2022). Critically, emerging evidence suggests that the pandemic did not merely create transient disruption but may have accelerated pre-existing trends and produced lasting shifts in student wellbeing patterns (Conceição et al., 2024; Sheng et al., 2025).

This review addresses the research question: What is the current empirical evidence on the relationship between student wellbeing and academic performance in higher education, and what institutional interventions have demonstrated effectiveness? The review synthesizes 24 peer-reviewed sources published between 2018 and 2025, organized around four thematic areas that reflect the structure of the evidence base: prevalence trends, empirical associations, moderating factors, and interventions. By integrating these strands, the review aims to provide a comprehensive account of the current state of knowledge and to identify priorities for future research and institutional action.

2 Prevalence and Trends in Student Mental Health

2.1 Pre-Pandemic Trajectories

Even before the COVID-19 pandemic, student mental health was following a concerning upward trajectory. Large-scale data from the Healthy Minds Study, covering the period 2013–2021 and encompassing hundreds of thousands of US college students, documented a sustained increase in the prevalence of depression, anxiety, and suicidal ideation across all racial and ethnic groups (Lipson et al., 2022). These trends were not confined to any single demographic category but reflected a broad-based deterioration in student psychological health that predated the pandemic by several years.

2.2 Pandemic-Era Disruption

The onset of COVID-19 dramatically intensified pre-existing trends. Lee et al. (2021) found that stress, anxiety, and depression among undergraduates rose sharply during the pandemic, while many students underutilized available mental health services despite increased need. In the United Kingdom, multiyear cross-sectional analysis confirmed that pandemic-era declines in student wellbeing were not merely transient; elevated distress persisted into subsequent academic years, suggesting structural rather than episodic effects (Hughes et al., 2022).

Populations at greatest risk during the pandemic included first-generation students, who faced disproportionate financial insecurity, digital access barriers, and housing instability (Soria et al., 2020), and racial and ethnic minorities, who experienced compounding stressors (Russell et al., 2024). These disparities highlighted equity dimensions of the student mental health crisis that demand targeted institutional responses.

2.3 Post-Pandemic Recovery and Persistence

Post-pandemic evidence paints a nuanced picture. Cross-country survey data indicate that while some recovery in student wellbeing has occurred, levels remain below pre-pandemic baselines in several national contexts (Conceição et al., 2024). A socio-ecological scoping review of reviews identifies multi-level risk factors—individual, interpersonal, institutional, and societal—that sustain elevated distress rates beyond the acute pandemic period (Roy et al., 2025). Research on student resilience in the post-pandemic period suggests that recovery trajectories vary substantially depending on the availability of interpersonal networks and institutional support structures (Sheng et al., 2025).

Whether the elevated distress levels observed during COVID-19 represent a permanent upward shift or a transient spike requiring different policy responses remains an

open question. The evidence to date suggests that at minimum, the pandemic accelerated pre-existing trends, and any recovery has been partial and uneven.

3 Empirical Associations Between Wellbeing and Academic Performance

3.1 Meta-Analytic Evidence

Two meta-analyses provide the foundational quantitative synthesis of the wellbeing–achievement relationship. Bücker et al. (2018) examined the association between subjective wellbeing (life satisfaction, positive affect, negative affect) and academic achievement across educational levels, finding a small-to-moderate positive association. Life satisfaction and positive affect were positively related to achievement, while negative affect showed a weaker inverse relationship. Datu and King (2021) confirmed these findings in an updated meta-analysis and further demonstrated that the association varies by wellbeing dimension, with cognitive wellbeing (life satisfaction) more strongly related to performance than affective components. Moderator analyses revealed variation by age group and cultural context, though effect sizes remained consistently in the small-to-moderate range.

A systematic review and meta-analysis of longitudinal studies by Granja et al. (2023) examined both the antecedents and consequences of university student wellbeing, establishing that the temporal relationship between wellbeing and academic outcomes is bidirectional but that wellbeing more consistently predicts subsequent academic performance than the reverse.

3.2 Longitudinal and Prospective Evidence

Beyond meta-analytic summaries, individual longitudinal studies strengthen the evidence for directionality. Cárdenas et al. (2022) demonstrated in a large longitudinal dataset that youth wellbeing is a significant predictor of later academic success, establishing temporal precedence and supporting a directional, though not necessarily causal, interpretation. This finding is consistent with theoretical models positing that positive psychological states broaden cognitive resources and support sustained academic engagement.

Prospective evidence from specific disciplinary contexts adds further nuance. Ribeiro et al. (2025) found that depression and anxiety predicted lower academic performance and increased dropout intention among medical students, with academic engagement serving as a partial buffer against these negative effects. This study illustrates how the wellbeing–performance link operates within high-demand professional programs where

stress exposures may be particularly intense.

3.3 Mechanisms and Mediating Pathways

Several studies have examined the mechanisms linking wellbeing to academic performance. Chu et al. (2023) found that lifestyle behaviors, including sleep quality, physical activity, and dietary habits, interact with mental health in shaping academic outcomes, suggesting that the wellbeing–performance pathway is partially mediated by health behaviors. Deng et al. (2023) elucidated a chain mediation model in which social support influences academic engagement through sequential effects on life satisfaction and academic motivation. These findings indicate that the wellbeing–performance association is not a simple direct effect but operates through multiple behavioral and motivational pathways.

Cross-sectional data from the extended pandemic period further confirm significant negative associations between psychological distress and academic performance, even after controlling for demographic variables (Lakhan et al., 2025). While cross-sectional designs cannot establish causality, the consistency of findings across study designs and populations strengthens the overall evidence base.

4 Moderating Factors: Demographics, Socioeconomic Status, and Discipline

4.1 Racial and Ethnic Disparities

The wellbeing–performance relationship does not operate uniformly across student populations. Lipson et al. (2022) documented that while mental health difficulties are rising across all racial and ethnic groups, students of color report rising distress alongside lower treatment rates, creating a widening gap between need and service utilization. These disparities in help-seeking behavior mean that the academic consequences of poor mental health may be disproportionately concentrated among marginalized student populations.

4.2 Socioeconomic Status and First-Generation Status

Socioeconomic status operates as a significant moderator of the wellbeing–performance link. First-generation and low-SES students faced disproportionate impacts during the pandemic, including financial insecurity, limited digital access, and housing instability (Soria et al., 2020). These compounding stressors amplify the negative effects of poor mental health on academic outcomes. However, research on academically resilient students from disadvantaged backgrounds identifies important protective factors, including self-efficacy, social support, and positive school climate, that can buffer against these

risks (Yan and Gai, 2022).

4.3 Social Support as a Cross-Cutting Moderator

Social support emerges as a particularly important moderating and mediating factor across the literature. A systematic review by Li et al. (2025) found that peer, family, and institutional support each contribute independently to student wellbeing. This finding converges with evidence from mediation models showing that social support facilitates academic engagement through its effects on life satisfaction and motivation (Deng et al., 2023), and with intervention research demonstrating the potential of peer support programs (Pointon-Haas et al., 2024).

Post-pandemic resilience research reinforces the centrality of social support: students with stronger interpersonal networks and access to institutional support structures demonstrate more effective recovery trajectories (Sheng et al., 2025). These findings collectively suggest that interventions targeting social connectedness may yield benefits for both wellbeing and academic performance.

4.4 Discipline-Specific Variation

Evidence on how the wellbeing–performance link varies across academic disciplines remains limited. The most detailed discipline-specific evidence comes from medical education, where prospective studies document significant associations between psychological distress and academic outcomes (Ribeiro et al., 2025). High-demand professional programs may amplify the distress–performance relationship due to elevated workload, clinical exposure, and performance pressure. However, comparable evidence from STEM, humanities, and other professional fields is sparse, representing a significant gap in the current evidence base.

5 Institutional Interventions and Policy Frameworks

5.1 Evidence-Based Intervention Approaches

An umbrella review synthesizing review-level evidence found that cognitive-behavioral, mindfulness-based, and psychoeducational interventions demonstrate the most consistent positive effects on student mental health (Worsley et al., 2022). These modalities have the strongest evidence base in terms of both the number and quality of supporting studies.

The 4M-Model proposed by Nair and Otaki (2021) provides a useful organizing framework for individual-level interventions, categorizing approaches into mindfulness, movement, meaning, and monitoring. While the integrated model itself requires further

empirical validation, the component interventions each have supporting evidence, and the framework offers a practical taxonomy for institutional planning.

5.2 Peer Support Programs

Peer support interventions, including mentoring, peer counselling, and group-based programs, represent an increasingly popular intervention modality. A systematic review by Pointon-Haas et al. (2024) found that these programs show promise for improving student mental health and wellbeing. However, the evidence base is characterized by mixed quality, with few rigorous randomized controlled trials and considerable heterogeneity in delivery models, making it difficult to identify optimal program designs. Questions remain about whether peer support programs effectively reach the students most in need.

5.3 Digital Mental Health Interventions

Digital mental health interventions have gained particular attention in the post-pandemic period as institutions seek scalable solutions. A systematic review and meta-analysis by Madrid-Cagigal et al. (2025) found that digital interventions, including apps, online cognitive-behavioral therapy, and guided self-help programs, demonstrate small but significant effects for university students with mental health difficulties. These tools offer advantages in accessibility and scalability, potentially reaching students who do not engage with traditional face-to-face services. However, integration of digital and in-person services remains undertheorized, and questions about sustained engagement and long-term effectiveness persist.

5.4 Whole-University Approaches and Policy Frameworks

There is growing consensus that addressing student mental health requires systemic, institution-wide strategies rather than relying solely on individual-level interventions. Hughes and Spanner (2023) articulated the case for a whole-university approach that integrates academic, social, and support systems to create an institutional environment conducive to student mental health. This framework moves beyond siloed counselling services to embed wellbeing considerations across curriculum design, teaching practice, and campus culture.

The PRICES model introduced by Frazier and Doyle Fosco (2024) provides a complementary framework organized around six domains: Positive relationships, Resilience, Identity, Competence, Emotional literacy, and Safety. This model offers actionable principles for embedding wellbeing promotion within educational institution structures at multiple levels.

While these frameworks represent important conceptual advances, rigorous eval-

uation of whole-institution models remains limited. Implementation fidelity is poorly documented across the literature, and the evidence base for systemic approaches, though conceptually compelling, has not yet achieved the same level of empirical support as individual-level interventions.

6 Discussion

6.1 Synthesis of Key Findings

The evidence reviewed in this paper converges on several conclusions. First, student mental health in higher education has deteriorated substantially over the past decade, with the COVID-19 pandemic accelerating rather than creating this trend (Lipson et al., 2022; Hughes et al., 2022). Post-pandemic recovery has been partial and uneven (Conceição et al., 2024). Second, meta-analytic and longitudinal evidence establishes a positive, small-to-moderate association between student wellbeing and academic performance, with cognitive wellbeing dimensions (particularly life satisfaction) showing the strongest predictive relationships (Bücker et al., 2018; Datu and King, 2021; Cárdenas et al., 2022). Third, this association is moderated by demographic factors, socioeconomic status, social support, and disciplinary context, and is mediated by behavioral and motivational pathways (Chu et al., 2023; Deng et al., 2023; Li et al., 2025). Fourth, cognitive-behavioral and mindfulness-based interventions have the strongest evidence of effectiveness, while digital tools and peer support programs offer promising but less firmly established alternatives (Worsley et al., 2022; Madrid-Cagigal et al., 2025).

6.2 Implications for Research

Several methodological challenges constrain the current evidence base. The predominance of cross-sectional designs limits causal inference, and even longitudinal studies typically employ observational designs that cannot rule out confounding (Granja et al., 2023). The modest effect sizes consistently observed across meta-analyses (Bücker et al., 2018; Datu and King, 2021) suggest that while the wellbeing–performance association is statistically reliable, its practical significance should not be overstated. Future research would benefit from experimental and quasi-experimental designs, longer follow-up periods, and greater attention to discipline-specific variation.

6.3 Implications for Practice

For institutional leaders, the evidence supports investment in evidence-based mental health promotion as a complement to, rather than a substitute for, academic support services. The effectiveness of cognitive-behavioral and mindfulness-based approaches

(Worsley et al., 2022; Nair and Otaki, 2021) provides a clear evidence base for program development. The role of social support as a cross-cutting protective factor (Li et al., 2025; Yan and Gai, 2022) suggests that initiatives fostering peer connection and community building may yield dual benefits for wellbeing and academic engagement. The whole-university approach (Hughes and Spanner, 2023) and the PRICES framework (Frazier and Doyle Fosco, 2024) offer strategic templates for institutional planning, even as their empirical evaluation continues to develop.

6.4 Gaps and Limitations

Several critical gaps emerge from this review. Causal evidence remains scarce; most studies are cross-sectional or short-term longitudinal, and true experimental designs establishing causal direction from wellbeing to academic outcomes are rare (Granja et al., 2023). The evidence base is heavily skewed toward North American, European, and Australasian institutions, limiting generalizability to other higher education systems (Conceição et al., 2024). While individual moderators such as SES, race and ethnicity, and gender are documented, few studies examine intersecting identities and their compound effects on wellbeing and performance. Most intervention studies report short-term post-intervention effects, and evidence on sustained impact on academic outcomes including retention and graduation is limited (Worsley et al., 2022; Madrid-Cagigal et al., 2025). Cost-effectiveness data for interventions are almost entirely absent from the reviewed literature, limiting policy translation. Finally, whether the elevated distress levels observed during COVID-19 represent a permanent shift or a transient spike requiring fundamentally different policy responses remains unresolved (Sheng et al., 2025; Conceição et al., 2024).

7 Conclusion

This review has synthesized recent empirical evidence on student wellbeing and academic performance in higher education, drawing on 24 peer-reviewed sources spanning 2018 to 2025. The findings support three principal conclusions. First, student mental health has deteriorated significantly over the past decade, with the COVID-19 pandemic amplifying pre-existing trends and producing effects that persist into the post-pandemic period. Second, a reliable positive association exists between student wellbeing and academic performance, though effect sizes are modest and causal mechanisms remain incompletely understood. Third, evidence-based interventions, particularly cognitive-behavioral and mindfulness-based approaches, can improve student mental health, while systemic whole-university frameworks offer promising but less rigorously evaluated strategies for institutional transformation.

The field would benefit from greater investment in longitudinal and experimental research designs, expansion of the evidence base beyond Western institutional contexts, rigorous evaluation of whole-university approaches, and systematic collection of cost-effectiveness data. As higher education institutions increasingly recognize the interdependence of student wellbeing and academic success, the translation of this growing evidence base into effective institutional practice represents both an opportunity and an obligation.

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