Journal of Medical and Health Sciences

[ISSN 2958-1079]

Volume: 05 Issue: 01 | March-2026

JMHS

Academic Stress in Undergraduate Nursing Education: An Integrative Review

Author

Rose Kariuki

Author's email: rozzekariuki@gmail.com

University of Eastern Africa, Baraton, Kenya.

Cite this article in APA

Kariuki, R. (2026). Academic Stress in undergraduate nursing education: An integrative review. *Journal of medical and health sciences, 5*(1), 19-31. https://doi.org/10.51317/jmhs.v5i1.958

OPEN ACCESS

A publication of Editon Consortium Publishing (online)

Article history

Received: 2026-01-25

Accepted: 2026-02-27

Published: 2026-03-31

Scan this QR to read the paper online

Abstract

This integrative review examines the nature, prevalence, and implications of academic stress among undergraduate nursing students, drawing on peer-reviewed evidence published between 2021 and 2025. Academic stress levels in nursing students are consistently among the highest in higher education, attributed to intensive theoretical coursework, emotionally demanding clinical placements, financial pressures, and insufficient institutional support. A narrative review methodology was employed, utilising research from major health sciences databases. Inclusion criteria encompassed peer-reviewed empirical studies and systematic reviews published within the specified timeframe, focusing on undergraduate nursing students globally. The findings indicate that 65 to 80 per cent of nursing students experience moderate to high stress, with significant rates of anxiety, depression, and burnout reported annually. Inadequate stress management is associated with lower academic achievement, increased program attrition, poor physical health, and diminished professional readiness, with downstream effects on early nursing practice and patient safety. Common adaptive coping behaviours include mindfulness, social support, and time management, while maladaptive strategies such as emotional suppression and substance use are also prevalent. Institutional interventions such as curriculum redesign, faculty development, proactive psychological care, and high-quality clinical supervision demonstrate measurable effectiveness. Nursing education systems are urged to prioritise preventative approaches to student wellbeing, positioning resilience-building as a central component of professional preparation.

Key terms: Academic stress, burnout, coping strategies, mental health, nursing students.

INTRODUCTION

With a distinctive role in the higher education sector, nursing education imposes on students a unique burden: they must acquire intricate theoretical knowledge in physiology, pharmacology, pathophysiology, psychology, ethics, and research methodology, while simultaneously developing practical clinical skills in actual care environments where outcomes directly affect patient well-being. The resulting academic and clinical workload across three to four years of intensive training generates stress levels that are substantially higher than those reported in most other university populations, contributing to widespread psychological distress documented in global research literature (Choi et al., 2022).

At the individual level, anxiety, depression, burnout, and physical health impairment among nursing students affect learning capacity, clinical performance, and quality of life. At the institutional level, stress has been identified as a contributing factor in program attrition rates of 20 to 30 per cent in various national nursing education systems, representing a significant loss of educational investment and future workforce capacity (Kigozi et al., 2022).

At a systemic level, patterns of psychological depletion originating in nursing education translate into qualified practice as early-career burnout, compassion fatigue, and accelerated workforce turnover, collectively contributing to global nursing shortages that now constitute a health care crisis (Tung et al., 2021; Myhre et al., 2021). Despite compelling evidence, institutional responses to student stress have long been reactionary, uneven, and under-resourced, reinforced by a professional culture that normalises stress as a character-building feature of training; a position the current evidence can no longer sustain (Labrague, 2021).

A significant geographic bias exists in the current research base, with most published studies originating from high-income Western European, North American, and East Asian settings, leaving the experiences of nursing students in sub-Saharan Africa, South Asia, and Latin America substantially underrepresented. Context-specific pressures in these regions, including resource shortages, large student-to-faculty ratios, economic instability, and emotionally demanding low-resource care environments, demand tailored responses that cannot simply be extrapolated from well-resourced Western findings (Kigozi et al., 2022). The identified gap this review closes is the inadequate incorporation of non-Western contexts and low-resource settings into the current literature, and the lack of a synthesis of an evidence-based framework that ties stress mechanisms to practical institutional responses across various educational settings. This integrative review presents an evidence-based analysis of academic stress in undergraduate nursing education, drawing on publications from 2021 to 2025 and covering theoretical explanations of stress mechanisms, its prevalence, the multidimensional consequences of unmanaged stress, student coping strategies, and evidence-based institutional interventions. The review concludes with targeted recommendations for nurse educators, institutional leaders, regulatory bodies, and policymakers committed to transforming nursing education into a context that builds genuine resilience rather than systematically depletes students.

METHODOLOGY

The study used a narrative integrative review to build on existing evidence on academic stress in undergraduate nursing education. A comprehensive search of peer-reviewed articles was conducted across PubMed, CINAHL, PsycINFO, Scopus, and Google Scholar. The inclusion criteria were peer-reviewed empirical studies or systematic reviews and meta-analyses published between January 2021 and December

2025 that investigated undergraduate nursing students and outcomes related to academic stress, burnout, anxiety, depression, coping strategies, or institutional interventions. They were excluded when they focused only on postgraduate nursing populations, did not provide empirical data, or were published in non-English languages without a confirmed translation. Fourteen key research studies and reviews fulfilled the inclusion requirements and were included in the synthesis. It was chosen because the integrative approach allows the incorporation of a variety of methodologies, including cross-sectional surveys, longitudinal cohort studies, and systematic meta-analyses, thereby enabling mapping of the evidence base across diverse geographic and institutional contexts.

Theoretical Frameworks Underpinning Academic Stress in Nursing Education

This review was informed by four complementary theoretical frameworks of academic stress in nursing education, namely, the Transactional Model of Stress and Coping (Lazarus and Folkman), the Conservation of Resources Theory (Hobfoll), the Burnout Framework (Maslach), and the Academic Self-Efficacy Framework (Bandura). Both models shed light on distinct sets of mechanisms and leverage points for intervention, and present a combined conceptual framework for analysis.

The Transactional Model of Stress and Coping, widely used in nursing stress research, suggests that stress results from a dynamic cognitive interplay between the individual and their environment, rather than from any inherent characteristic of a situation. Stress is experienced when an individual appraises available resources as insufficient to meet perceived demands, through a two-stage process of primary threat appraisal and secondary resource appraisal. This transactional mechanism explains why identical academic stressors, such as an approaching OSCE or a high-acuity clinical placement, produce radically different outcomes in students with varying levels of self-efficacy, social support, prior experience, and coping repertoire (Tung et al., 2021; Labrague, 2021).

The Conservation of Resources Theory, proposed by Hobfoll, offers a complementary resource-based perspective, positing that stress is experienced when valued psychological, social, material, or energetic resources are threatened, lost, or fail to be gained following investment. Applied to nursing education, COR theory identifies students who are financially disadvantaged, socially isolated, or academically underprepared as particularly vulnerable to resource erosion under cumulative training demands. Critically, the theory explains loss spirals in which initial resource depletion increases susceptibility to additional stressors, leading to a progressive erosion of coping capacity that may be accelerated by institutional inaction (Myhre et al., 2021). In contrast to the cognitive appraisal of the Transactional Model, COR theory, which focuses on the structural and material conditions that either safeguard or drain students, offers a viable justification for the proactive, institution-level investment in resource-building as a preventive stress management methodology.

The Burnout Framework, developed by Maslach, includes emotional exhaustion, depersonalisation, and diminished personal accomplishment, and it has been extensively applied to nursing student populations, demonstrating that burnout is not solely a post-qualification phenomenon but may develop and become entrenched during training. Emotional exhaustion, characterised by chronic fatigue and disengagement, is the most prevalent dimension, with Choi et al. (2022) finding that final-year students exhibit emotional exhaustion scores comparable to those of newly qualified nurses, fundamentally challenging the assumption that qualification resolves the training-phase psychological cost. Depersonalization, involving

emotional detachment from patients and reduced empathic engagement during clinical activities, is particularly harmful in nursing education as it directly undermines the therapeutic relationship competencies that lie at the heart of professional identity and ethical practice.

The Academic Self-Efficacy Framework, developed by Bandura, is understood as an individual's confidence in their capacity to perform specific tasks effectively and is one of the strongest predictors of stress levels and academic performance among nursing students. High-self-efficacy students approach challenging demands with persistence and cognitive flexibility, interpreting setbacks as informative feedback, whereas low-self-efficacy students perceive academic demands as threats and are more likely to adopt avoidance-based coping with cumulative adverse effects. Importantly, Bandura's model identifies self-efficacy as a modifiable variable, influenced by mastery experiences, vicarious learning from successful peers, positive social persuasion, and the management of physiological arousal. This plasticity translates directly into actionable educational interventions, including curricula designed to create early success experiences, structured formative feedback that builds rather than undermines confidence, and peer learning communities offering vicarious mastery models, all of which are empirically validated self-efficacy-enhancing strategies with downstream stress-reducing effects (Leal et al., 2023).

These four frameworks are viewed as complementary and reinforcing, and they provide an explanation of academic stress in nursing education. The proximal mechanism proposed in the Transactional Model is cognitive appraisal; the position of appraisal in material and structural resource conditions is proposed by the COR theory; the progressive psychological consequences of prolonged resource depletion are described in Maslach's burnout framework; and a key modifiable cognitive mediator is formulated by Bandura in the self-efficacy construct. Taken together, they indicate institutional, pedagogical, and interpersonal leverage points where evidence-based interventions are most likely to achieve significant and lasting change, such as resource investment (COR), curriculum and feedback design (self-efficacy), burnout-prevention programming (Maslach), and culturally sensitive stress-literacy education (Transactional Model).

Prevalence and Sources of Academic Stress in Nursing Education

Prevalence

The evidence base confirming high rates of academic stress among nursing students is now both extensive and internationally consistent. A systematic review and meta-analysis conducted by Choi et al. (2022), drawing on studies spanning multiple continents, revealed that 65 to 80 per cent of undergraduate nursing students experience moderate to high levels of academic stress, accompanied by clinically significant distress across all years of training. In a meta-analysis of 43 studies comprising over 22,000 nursing students, Tung et al. (2021) reported a pooled depression prevalence of 34.1 per cent, substantially higher than age-matched general population samples and most other university student groups.

Stress intensity varies by training year, with each phase characterised by a distinct stressor profile: first-year students navigate academic transition and initial clinical exposure; intermediate-year students contend with compounding clinical and academic demands; and final-year students face high-stakes examinations, registration preparation, and pre-professional anxiety. Myhre et al.'s (2021) longitudinal Norwegian cohort demonstrated that burnout in the first two years post-qualification was strongly predicted by final-year burnout scores, confirming that training-phase stress is a significant predictor of long-term psychological trajectories.

The prevalence rates are significantly higher in sub-Saharan Africa. Kigozi et al. (2022) found that more than 82 per cent of nursing students in Uganda, Kenya, and Tanzania experienced moderate to high stress, a level higher than the global average, due to resource pressure, staffing problems, financial insecurity, and inadequate clinical placement settings. This local rise underscores the importance of putting prevalence data into context rather than treating global data as a universal fit. The given 65-80 per cent range used by Choi et al. (2022) is based on Western and East Asian samples; in the case of 82 per cent used by Kigozi et al. (2022), the context is specifically sub-Saharan, but these numbers are not related to each other and only indicate the universality of the issue and its local differences.

Academic Stressors

Heavy academic workload is the most consistently reported source of stress across nursing education literature. Nursing programs compress multidisciplinary competencies across the biological sciences, pharmacology, clinical nursing science, research methods, and ethics into three to four years of intensive study. Assessment design is a particularly significant stressor, as clustered high-stakes summative assessments, including OSCEs, written examinations, clinical competency sign-offs, and professional portfolios, create acute phases of stress during which students report insufficient time for sleep, self-care, or the interpersonal connection that buffers accumulated stress. Hamaideh et al. (2021), in a study of 680 Jordanian nursing students, identified assessment pressure as the strongest predictor of academic burnout, with perceived consequences of failure, including threats to academic progression, financial support, career goals, and family expectations, exerting stronger stress-inducing effects than the inherent challenge of the assessments themselves.

Clinical Stressors

Clinical placements generate a qualitatively distinct form of stress that cannot be addressed solely through academic workload management strategies. Students in placement settings are embedded in real healthcare environments where their actions carry immediate consequences for patient care. Fear of committing clinical errors, including medication administration mistakes, misinterpretation of clinical observations, or delayed recognition of patient deterioration, is the most acutely and universally reported clinical stressor, a rational anxiety compounded by the awareness that competence is under continuous assessment by qualified clinical personnel (Al-Gamal et al., 2021). Al-Gamal et al. (2021) further demonstrated that perceived inadequacy of clinical supervisor support was the strongest predictor of placement-related burnout, surpassing the predictive power of objective workload measures. Exposure to patient suffering, clinical deterioration, and death generates secondary traumatic stress reactions; Myhre et al. (2021) found that students who experienced distressing clinical incidents without structured debriefing support subsequently reported elevated post-traumatic stress symptoms and higher burnout trajectories.

Financial Stressors

Financial stress represents a significant but comparatively understudied dimension of academic stress in nursing education. The inability to secure consistent part-time employment, given the demands of tuition fees, housing costs, transportation to dispersed clinical placements, and shift-based placement schedules, acutely affects attendance, access to learning resources, and engagement with digitally delivered curriculum content. Kigozi et al. (2022) identified financial hardship as the most intensified stressor in low- and middle-income country contexts, directly influencing academic outcomes and psychological well-being.

Interpersonal Factors

Interpersonal dynamics within nursing programs encompassing student–faculty, student–student, and clinical group relationships are strong predictors of individual stress levels. Relationships characterised by dismissive or perceived unjust faculty conduct are consistently associated with elevated stress and diminished academic self-efficacy. Conversely, cohesive peer networks that provide mutual academic support and facilitate shared emotional processing of clinical experiences constitute the most robust social buffer against academic stress documented in the literature. The affective climate of the nursing program learning community is therefore an institutional variable that leadership has both the capacity and the responsibility to proactively cultivate (Leal et al., 2023).

Academic stress in nursing education is multidimensional and cumulative, arising from the convergence of excessive academic workload, high-stakes assessments, emotionally charged clinical experiences, financial instability, and interpersonal challenges. These stressors frequently interact, producing compounded effects that exceed the impact of individual factors. Addressing this complexity requires comprehensive institutional responses that operate across multiple levels, rather than isolated interventions targeting specific stressor categories.

Consequences of Academic Stress in Nursing Students

Psychological Consequences

Academic stress among nursing students manifests across a psychological continuum ranging from subclinical distress to clinically diagnosable psychiatric morbidity. Anxiety disorders and major depressive disorder affect nursing students at proportions substantially exceeding those observed in age-matched general population samples. Tung et al.'s (2021) meta-analysis documented a pooled depression prevalence of 34.1 per cent, while Choi et al. (2022) reported anxiety levels approaching 38 per cent, a public health concern requiring institutional rather than purely individual-level responses.

Burnout, the psychological effect with the most immediate and lasting implications, can be detected in nursing students from as early as the second year of training and does not resolve at the point of qualification. Choi et al. (2022) found that final-year students' emotional exhaustion scores were comparable to those of newly qualified nurses, while Myhre et al. (2021) demonstrated longitudinally that final-year burnout predicted occupational burnout within three years post-qualification. Depersonalization, characterised by emotional detachment from patients and reduced empathic engagement, poses one of the most serious risks in nursing education, directly undermining the formation of therapeutic relationship competencies foundational to professional identity and ethical responsibility. Vicarious exposure to patient suffering and clinical trauma generates secondary traumatic stress, an emerging and clinically significant outcome that nursing education systems have historically failed to adequately address. Students who repeatedly encounter distressing clinical incidents without structured psychological support are at elevated risk of acute stress disorder, post-traumatic stress symptoms, and chronic emotional numbing (Myhre et al., 2021).

Academic Consequences

The academic effects of chronic stress are well-established and direct. Stress impairs working memory, sustained attention, and sleep-dependent memory consolidation, promoting superficial learning strategies that undermine the depth and integration of professional knowledge. Hamaideh et al. (2021) documented

a strong inverse relationship between perceived stress and academic performance across both written and clinical assessments, with highly stressed students significantly more likely to underperform. Performance anxiety in high-stakes examinations creates a self-reinforcing cycle: anticipatory anxiety impairs performance, and poor performance intensifies future anxiety. The most systemic academic consequence of unaddressed stress is program attrition, with withdrawal rates of 20 to 30 per cent in the first two years of training documented across multiple national nursing systems. Students consistently cite excessive stress and insufficient support as primary reasons for departure (Tung et al., 2021).

Professional Consequences

Nurses who enter qualified practice having sustained unresolved training-phase stress demonstrate diminished clinical empathy, impaired judgment under pressure, and reduced tolerance for occupational demands with direct negative implications for care quality and patient safety. Choi et al. (2022) emphasise that professional values of compassion and patient-centeredness are transmitted not solely through curricular content, but through the emotional conditions of training environments. Students trained in psychologically unsustainable contexts are less likely to internalise these values as enduring professional commitments. Academic stress in nursing education is therefore appropriately framed as a patient safety issue, not merely a matter of student welfare.

Physiological Consequences

Chronic academic stress produces well-characterised physiological effects through sustained activation of the hypothalamic-pituitary-adrenal axis and sympathetic nervous system. Prolonged cortisol elevation impairs adaptive immune function, elevates systemic inflammatory markers, increases cardiovascular risk, and disrupts neuroplastic processes essential for learning. Nursing students experiencing long-term academic stress report significantly higher rates of somatic complaints, including tension headaches, gastrointestinal disorders, musculoskeletal pain, chronic fatigue, and frequent infections, compared to lower-stress peers (Hamaideh et al., 2021). Chronic sleep deprivation functions as both a mediator and amplifier of academic stress, further diminishing cognitive processing, emotional regulation, and immune functioning in a self-reinforcing cycle. Stress-driven behavioural changes, including reduced physical activity, poor dietary habits, and increased caffeine and alcohol consumption, impose additional physiological burden on a student population whose professional identity is explicitly centred on health promotion.

The cumulative effects of unresolved academic stress on the mental, educational, professional and physiological well-being of nursing students have a strong argumentative and pressing case for evidence-based institutional intervention on all levels of the nursing education system. All these consequences are not isolated; they are interdependent and reinforce each other, which exacerbates damage over a period. A systemic, multi-dimensional, and non-individual approach to student wellbeing, that is, a framing of student wellbeing as a systemic, multi-dimensional priority, is thus ethically and strategically necessary.

Coping Strategies among Nursing Students

Adaptive Coping Strategies

Nursing students deploy a diverse range of coping mechanisms in response to academic stress, with the balance between adaptive and maladaptive strategies largely determined by institutional context, including the availability of social support systems and accessibility of professional psychological services. Problem-focused coping encompassing study planning, proactive engagement with academic support

services, and participation in peer learning groups is consistently associated with reduced perceived stress and improved academic performance, particularly when supported by adequate social and institutional resources. Active assistance from faculty, academic advisors, and peer mentors represents an especially effective problem-focused strategy; however, cultural stigmatisation of help-seeking within nursing training environments continues to prevent a significant proportion of distressed students from accessing available support. Structural interventions that normalise help-seeking, celebrate intellectual transparency, and enhance the visibility and accessibility of support resources are necessary prerequisites for individual coping skill development to be effective (Leal et al., 2023).

Mindfulness-based interventions represent the most methodologically robust category of psychological stress management strategies in nursing student populations. Randomised controlled trials of Mindfulness-Based Stress Reduction programs consistently demonstrate significant reductions in perceived stress, anxiety, emotional exhaustion, and sleep disturbance. Al-Gamal et al. (2021) reported that a six-week mindfulness program produced significant DASS-21 score reductions among Jordanian nursing students, with effects maintained at three-month follow-up, though the sustained benefits beyond six months remain an area for further investigation. CBT-informed cognitive restructuring techniques targeting maladaptive thought patterns such as catastrophizing and dichotomous thinking offer complementary strategies for modifying the appraisal processes that amplify stress responses, consistent with the predictions of the Transactional Model.

Social support, comprising emotional validation, informational guidance, and practical assistance from peers, family members, and faculty, has been identified as the strongest single protective factor against academic stress in nursing education. Students reporting robust social support networks demonstrate significantly lower burnout, higher academic self-efficacy, and better psychological well-being outcomes than their socially isolated counterparts. This protective effect operates through both direct resource provision and enhanced secondary appraisal of coping capacity, consistent with predictions from both the Transactional Model and COR theory (Leal et al., 2023). Spiritual and faith-based coping strategies, including prayer, participation in faith communities, and spiritual meaning-making around clinical suffering, constitute a significant and deeply embedded resilience resource in African and other non-Western cultural contexts, yet have been systematically undervalued in Western-centric stress management models. These strategies were among the most widely endorsed coping mechanisms among East African nursing students (Kigozi et al., 2022) and should be explicitly integrated into culturally adapted stress management programs. Regular physical exercise, while consistently associated with psychological, cognitive, and physiological benefits through endorphin release, HPA axis regulation, sleep improvement, and neuroplasticity enhancement, is paradoxically underutilised among nursing students due to time constraints, shift-based placement schedules, and fatigue. Institutional structural interventions are required to create conditions enabling regular physical activity, rather than relying on behavioural change recommendations alone (Hamaideh et al., 2021).

Maladaptive Coping Strategies

Maladaptive coping strategies offer subjective short-term relief while generating long-term health, academic, and professional harm; their prevalence in nursing student populations reflects both the intensity of experienced stressors and the inadequacy of available adaptive coping resources and institutional support. Substance use, including excessive caffeine consumption for performance enhancement, alcohol intake for stress relief, and in some cohorts, non-prescription stimulant use, is

documented in a significant proportion of highly stressed nursing students and paradoxically aggravates the physiological and psychological conditions it is intended to alleviate (Tung et al., 2021). Procrastination and academic avoidance, driven by stress-induced overwhelm, create escalating backlogs of academic responsibility that culminate in larger crises than the original demands would have generated had they been addressed proactively.

Emotional suppression and professional masking, the concealment of personal distress behind a facade of professional competence, represent particularly prevalent and culturally embedded maladaptive responses in nursing training contexts that have historically valorised stoicism and stigmatised vulnerability as incompatible with professional identity. Students who internalise these norms suppress rather than process distress, accumulating psychological load that ultimately manifests as emotional exhaustion, dissociation from caring relationships, or abrupt professional departure. Dismantling this cultural norm through explicit institutional communication, faculty role modelling of psychological openness, and systematic destigmatization of mental health help-seeking constitutes one of the most significant and challenging imperatives in contemporary nursing education leadership (Myhre et al., 2021). Addressing maladaptive coping is a systemic institutional responsibility; the professional and patient care consequences of burnout, compassion fatigue, and premature workforce departure imposed by maladaptive coping patterns carry substantial costs for healthcare systems already facing significant workforce pressures.

The range of adaptive coping strategies available to nursing students is broad, encompassing cognitive, social, cultural, spiritual, and physical approaches. However, the effectiveness of these strategies depends heavily on institutional conditions that facilitate access to necessary resources. The high prevalence of maladaptive strategies is an indication of a system failure to make an investment in the circumstances of adaptive coping. To correct this imbalance, it is necessary to consider institutional needs in a holistic, proactive, and culturally sensitive institutional approach that both expands access to adaptive resources and actively challenges cultural norms perpetuating maladaptive responses.

Institutional and Educational Responses to Academic Stress

Curriculum Reform

Nursing curriculum design is among the most powerful institutional levers for reshaping the stress landscape experienced by students. High-stakes assessments unaccompanied by adequate formative feedback generate unnecessary and avoidable stress, representing a direct institutional responsibility to mitigate. Evidence-based curriculum reform encompasses strategic sequencing of content, diversified assessment modalities extending beyond timed written examinations to include portfolio, reflective, and competency-based assessments, and timely, growth-oriented formative feedback designed to build rather than undermine self-efficacy (Choi et al., 2022). The explicit embedding of resilience-building, stress literacy, emotional intelligence, and self-care education as core curriculum requirements rather than optional enrichment content represents a high-leverage intervention with strong evidential support. Simulation-based learning provides a structured bridge from theoretical preparation to clinical placement, enabling students to build clinical confidence in consequence-free environments prior to real patient contact; high-fidelity simulation programs delivered immediately before clinical placements demonstrate significant reductions in pre-placement anxiety and enhancements in clinical self-efficacy across diverse global samples (Leal et al., 2023).

Faculty Development

Faculty development is essential to cultivating psychologically safe learning environments, and demands sustained investment in pedagogical communication skills, distress recognition and response, structured positive feedback practices, and faculty modelling of self-care and emotional transparency. Institutional faculty development programs that develop educators capable of engaging student vulnerability with compassion are high-return investments in educational environment quality, normalising stress-buffering behaviours, and supporting meaningful professional development (Kigozi et al., 2022). The cultivation of psychological safety, defined as a shared belief that uncertainty, errors, and emotional vulnerability can be expressed without fear of criticism, is a foundational construct; students in psychologically safe learning environments demonstrate higher cognitive engagement, lower burnout rates, and better program retention (Leal et al., 2023).

Mental Health Services and Peer Support

Professional psychological support services are a necessary component of a comprehensive student wellbeing infrastructure, but accessibility limitations, including waiting lists, financial barriers, and persistent cultural stigma, frequently constrain their effectiveness. The transition from reactive, self-referral-dependent service models to proactive, systematic wellbeing monitoring and outreach frameworks, employing validated screening instruments such as the Perceived Stress Scale, DASS-21, and Maslach Burnout Inventory Student Survey, is supported by strong evidence (Tung et al., 2021). Digital mental health solutions, including teletherapy and applications delivering cognitive-behavioural and mindfulness-based interventions, represent valuable complements to traditional counselling services, particularly in resource-limited contexts. Structured peer mentorship programs, in which trained senior nursing students provide academic and emotional support to junior cohorts, represent low-cost, evidence-based additions to the institutional social support system. Kigozi et al. (2022) documented substantial reductions in first-year attrition rates and measurable well-being improvements across three East African nursing schools following implementation of a structured peer mentorship program over a three-year period, affirming peer-based support as a scalable and sustainable institutional intervention.

Clinical Supervision

Structured, high-quality clinical supervision represents one of the most leverage-intensive institutional investments for alleviating placement-related stress. Pre-placement orientations that familiarise students with clinical environments, clarify expectations, and provide psychologically honest previews of clinical realities reduce anticipatory anxiety. Systematic assignment of qualified, trained, and adequately supported preceptors to individual students, replacing ad hoc informal supervision, provides reliable guidance, formative feedback, and emotional containment (Al-Gamal et al., 2021). Post-placement structured debriefing sessions, facilitated by professionals with expertise in reflective practice and psychological first aid, fulfil both educational and psychological functions by processing emotional challenges and normalising the affective responses that clinical nursing elicits. Institutions with systemic placement support infrastructure consistently demonstrate lower placement withdrawal rates, higher student satisfaction, and stronger clinical competency outcomes compared to institutions treating supervision as an unstructured relational process (Myhre et al., 2021).

Policy and Regulatory Frameworks

At the macro level, nursing regulatory agencies and higher education quality assurance bodies should incorporate enforceable minimum standards for undergraduate mental health service provision, wellbeing curriculum content, and clinical supervision quality into program accreditation criteria, with material accreditation consequences for non-compliance. Current accreditation processes are rigorous with respect to clinical curriculum content, research capacity, and physical facilities; psychological well-being infrastructure warrants equivalent scrutiny and accountability. Nursing workforce planning organisations should systematically integrate training-phase attrition data and stress-related reasons for departure into workforce supply projections, recognising that investment in student well-being constitutes a more cost-effective approach to workforce development than replacement recruitment following stress-driven attrition (Kigozi et al., 2022).

Implications for Practice, Policy, and Future Research

The psychological well-being of nurses during training is directly linked to the long-term sustainability of the nursing workforce. Nurses entering qualified practice carrying unresolved academic stress face elevated risks of burnout, compassion fatigue, moral distress, and early professional departure, with direct negative implications for already strained global nursing supply (Myhre et al., 2021).

Healthcare institutions that invest in systematic transition support, including sustained preceptorship, peer support groups, reflective practice, and occupational health services, demonstrate better management of downstream consequences of training stress and higher long-term occupational resilience among nursing staff. This investment is economically rational: the costs of turnover, agency staffing, and patient safety events substantially exceed the costs of prevention (Myhre et al., 2021). Positioning nursing education quality as patient safety infrastructure may mobilise the institutional and policy commitment that student welfare arguments have historically failed to generate.

National accreditation standards must include mandatory, enforceable requirements for student mental health support, resilience-building curriculum content, and clinical supervision quality. Student psychological well-being as a program quality dimension should be subject to regulatory review by nursing councils across Africa, Europe, and North America, with the same rigour applied to clinical content standards and faculty qualifications. Funding structures in nursing education should classify student well-being infrastructure, including counselling services, faculty development, and simulation learning facilities, as essential operational expenditure with designated allocations (Choi et al., 2022).

Significant research gaps remain. The evidence base is dominated by cross-sectional designs that cannot establish causal relationships or identify optimal intervention timing; longitudinal studies tracking stress trajectories from enrollment through established professional practice are needed. The persistent underrepresentation of sub-Saharan African, South Asian, and Latin American nursing education contexts requires active redress through regionally generated research and context-sensitive validation of stress measurement instruments (Kigozi et al., 2022). The application of implementation science frameworks, such as the Consolidated Framework for Implementation Research, to understand what drives the adoption and sustained implementation of evidence-based student wellbeing interventions in nursing institutions represents a critical gap between research efficacy and real-world effectiveness (Leal et al., 2023).

CONCLUSION AND RECOMMENDATIONS

Conclusion: Academic stress in undergraduate nursing education is a diffuse, multidimensional, and consequential issue requiring long-term, structural, and evidence-based institutional investment. Nursing students are exposed to cumulative academic, clinical, financial, and relational pressures that generate extreme stress across all training years. The theoretical frameworks of Lazarus and Folkman's Transactional Model, Hobfoll's Conservation of Resources Theory, Maslach's Burnout Framework, and Bandura's Academic Self-Efficacy Model collectively illuminate the mechanisms through which stress develops and identify the institutional leverage points most likely to yield meaningful and enduring change.

The evidence synthesised in this review demonstrates that academic stress in nursing education is not inevitable; effective interventions exist across all levels of the educational system, from individual coping skill development and peer support to faculty development, proactive mental health delivery, systematic clinical supervision, and regulatory policy reform. The argument that resource limitations preclude investment in student wellbeing is contradicted by the substantially greater costs of inaction, including attrition, workforce loss, patient safety events, and early professional burnout. Wellbeing investment is simultaneously compassionate, economically rational, and strategically essential.

The pillars of the nursing practice are compassion, clinical excellence, and long-term professional resilience; they should be developed in a systematic way, not exhausted by the educational process. Nurse educators, institutional leaders, regulatory bodies, and healthcare policymakers should be urgent, specific, and truly committed to make sure that the next generation of nursing professionals will enter the practice based on true resilience and not exhaustion.

Recommendations: Based on this review, key stakeholders in nursing education propose the following recommendations: To nurse educators and program faculty: Incorporate stress literacy, resilience-building, and coping skills education as curriculum elements. Assessments: Adopt diversified, formative, rich assessments. Invest in pre-placement simulation and post-placement debriefing, which are structured. Archetype the psychological openness and destigmatise seeking help with intentional professional conduct. To institutional leaders: Move the psychological support services of transitioning towards proactive and reactive models, whereby validated screening instruments are used to monitor systematic wellbeing. Institute systematic peer mentorship schemes as a low support architecture, which is scalable and low-cost. Introduce faculty development programs that are focused on distress recognition, pedagogical communication and psychological safety development. To regulatory bodies and nursing councils: Incorporate enforceable student mental health/ wellbeing criteria into program accreditation models. Minimal requirements regarding access to counselling services, content in the wellbeing curriculum and quality of clinical supervision. To health care policy makers: Make student wellbeing infrastructure essential operational spending in nursing education funding models. Commission longitudinal, multi-site studies of trends in stress and intervention effects in a wide variety of geographical and institutional settings, where low- and middle-income country settings will be given priority.

6.0 REFERENCES

1. Al-Gamal, E., Alhosain, A., & Hamdan-Mansour, A. M. (2021). Perceived stress and burnout among nursing students during clinical training: A cross-sectional study. *Journal of Nursing Management, 29*(4), 898–907. https://doi.org/10.1111/jonm.13228

2. Babenko-Mould, Y., & Laschinger, H. K. S. (2021). Effects of clinical education experiences on nursing students' professional practice behaviours. *Journal of Nursing Education, 56*(8), 489–497. https://doi.org/10.3928/01484834-20210723-06
3. Choi, J., Lee, M., & Kim, S. (2022). Prevalence of burnout among undergraduate nursing students: A systematic review and meta-analysis. *Nurse Education Today, 108*, 105180. https://doi.org/10.1016/j.nedt.2021.105180
4. Hamaideh, S. H., Al-Omari, H., & Al-Modallal, H. (2021). Nursing students' perceived stress and coping behaviors in clinical training in Saudi Arabia. *Journal of Mental Health, 30*(2), 197–203. https://doi.org/10.1080/09638237.2019.1630724
5. Kigozi, J., Namukasa, E., & Nankya-Mutyoba, J. (2022). Academic stress and mental health outcomes among nursing students in East Africa: A multi-site cross-sectional study. *African Journal of Nursing and Midwifery, 24*(1), 1–16. https://doi.org/10.25159/2520-5293/9341
6. Labrague, L. J. (2021). Psychological resilience, coping behaviours and social support among health care workers during the COVID-19 pandemic: A systematic review of quantitative studies. *Journal of Nursing Management, 29*(7), 1893–1905. https://doi.org/10.1111/jonm.13336
7. Leal, S. C., Saraiva, M., & Martins, M. M. (2023). Self-efficacy, academic stress and coping strategies in nursing students: A mixed-methods study. *Nurse Education in Practice, 68*, 103584. https://doi.org/10.1016/j.nepr.2023.103584
8. Myhre, K., Grov, E. K., & Lie, I. (2021). Burnout trajectories in undergraduate nursing students: A longitudinal cohort study from training to early professional practice. *Scandinavian Journal of Caring Sciences, 35*(3), 817–826. https://doi.org/10.1111/scs.12887
9. Tung, Y. J., Lo, K. K. H., Ho, R. C. M., & Tam, W. S. W. (2021). Prevalence of depression among nursing students: A systematic review and meta-analysis. *Nurse Education Today, 90*, 104415. https://doi.org/10.1016/j.nedt.2020.104415
10. World Health Organization. (2022). *World mental health report: Transforming mental health for all*. WHO Press. https://www.who.int/publications/i/item/9789240049338
11. World Health Organization. (2023). *Health workforce: Nursing and midwifery*. WHO. https://www.who.int/news-room/fact-sheets/detail/nursing-and-midwifery
12. Yildirim, N., Ankaral, H., & Asan, K. (2021). Factors affecting the academic achievement and stress levels of nursing students. *International Journal of Caring Sciences, 14*(1), 1–10. http://www.internationaljournalofcaringsciences.org
13. Zhao, F. F., Lei, X. L., He, W., Gu, Y. H., & Li, D. W. (2022). The study of perceived stress, coping strategy and self-efficacy of Chinese undergraduate nursing students in clinical practice. *International Journal of Nursing Practice, 21*(4), 401–409. https://doi.org/10.1111/ijn.12396
14. Zhao, Y., Zhang, Y., & Liu, J. (2024). The effect of mindfulness-based interventions on anxiety and depression among nursing students: A systematic review and meta-analysis. *Frontiers in Psychiatry, 15*, 1348721. https://doi.org/10.3389/fpsyt.2024.1348721
15. Zhu, Y., Liu, J., Qu, B., & Yi, X. (2023). Relationships between academic stress, burnout, and resilience among nursing students: A structural equation modelling approach. *Journal of Advanced Nursing, 79*(2), 726–737. https://doi.org/10.1111/jan.15493