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Early-Career Academics' Well-Being in Higher Education: A Systematic Review of Individual, Interpersonal, and Organisational Interventions

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Abstract

Early-career academics are particularly vulnerable to stress, burnout, and job insecurity, with potential implications for academic practice, including teaching and professional development in higher education. This systematic review, informed by a multilevel perspective on professional well-being, analysed evaluated interventions supporting early-career academics' well-being, the outcomes they reported, and the conditions under which they were implemented. Following PRISMA 2020 (PROSPERO CRD420251181430), four databases (CINAHL, Web of Science, Scopus, and PubMed) were searched for peer-reviewed studies published in 2015–2025; 13 met inclusion criteria. Interventions were categorised at three levels: individual, interpersonal, and organisational. Two individual-level interventions reported reductions in stress or burnout, whereas interpersonal and organisational programmes mainly reported benefits related to mentoring, perceived support, professional integration, and career development. Methodological heterogeneity and the predominance of satisfaction-based outcomes precluded conclusions about comparative effectiveness. These findings support considering well-being as part of institutional academic development, alongside individual-level approaches.

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Practitioner Notes

1. Address both the structural and the individual sources of early-career academic distress.
2. Develop coordinated support that addresses individual, relational, and organisational needs.
3. Strengthen mentoring, coaching, and peer support to foster professional integration and belonging.
4. Embed early-career academics' well-being within institutional academic development strategies.
5. Evaluate interventions beyond satisfaction, using validated outcome measures and longer follow-up.

Keywords

Emotional wellness; academic development; mentoring; professional well-being; early-career distress

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Introduction

The transition into an academic role is a critical period in which early-career academics are expected to develop teaching expertise, establish professional identities, build scholarly networks, and respond to institutional expectations for teaching, research, and service (McLean & Price, 2019). During this transition, mentoring, induction, peer support, and institutional guidance are not peripheral resources: opportunities to build competence, meaningful workplace relationships, and perceived organisational support have been identified as predictors of early-career academics' work engagement (Crome et al., 2019), and academics at different career stages have called for stronger organisational commitment to caring career pathways and professional development (Stratford et al., 2024).

This career stage is also often associated with emotional strain, work intensification, uncertainty, and role ambiguity (Nicholls et al., 2022; Zhang & Gong, 2024). These pressures are not only individual concerns; they can shape how early-career academics participate in higher education communities, sustain their teaching practice, and envisage a viable academic career (Crome et al., 2019; Stratford et al., 2024). Well-being should therefore be understood not only as an individual health outcome but also as a condition that may support professional learning and the sustainability of academic practice (Mykletun & Harvey, 2012), because deteriorating well-being may compromise individual performance, collegial participation, and long-term academic trajectories (Amer et al., 2022; Cadena-Povea et al., 2025).

Despite growing attention to academic well-being, the evidence on support interventions for early-career academics remains fragmented. Previous reviews have examined mental health interventions for university faculty in general or the risk and protective factors associated with early-career academic work, but not which interventions have been evaluated specifically for early-career academics, what outcomes they report, and under what conditions they are implemented (Hammoudi Halat et al., 2024; Nicholls et al., 2022). This systematic review therefore identifies, synthesises, and critically analyses evaluated interventions designed to support early-career academics, with particular attention to their reported outcomes for well-being, professional integration, relational support, and career sustainability, and to their implementation conditions. It addresses the following research question:

> What support interventions have been implemented and evaluated to promote well-being, professional integration, and sustainable academic careers among early-career academics, what outcomes have they reported, and under what conditions were they implemented?

The paper is structured to answer this question. After the Literature and Method sections, the Results describe the included studies, classify the interventions by their principal level of action (individual, interpersonal, or organisational), and synthesise their reported outcomes and implementation conditions. The Discussion then interprets these findings from a multilevel perspective on professional well-being and considers their implications for academic development, followed by the limitations, future research, and conclusions.

Literature

Well-Being and Distress in Academic Work

The mental health and emotional well-being of academic staff have become a prominent concern in higher education and occupational health research. In a multinational study involving academic staff from 16 countries (*n* = 2,353), 73% reported moderate-to-very-high psychological distress, which was associated with work insecurity, financial concerns, and the structural characteristics of academic work (Rahman et al., 2024), and research in specific institutional contexts has identified clinically relevant levels of anxiety, depression, and stress symptoms (Melnyk et al., 2023). Distress in academia therefore cannot be explained only by individual vulnerability; it must also be understood in relation to the organisational and systemic conditions of academic work.

High demands, interpersonal conflicts, dysfunctional institutional cultures, and insufficient resources can generate distress, with repercussions for productivity, work relationships, and the functioning of organisations (Joyce et al., 2016). In higher education, these conditions are also pedagogically relevant, because academics' capacity to teach, supervise, collaborate, and participate in institutional learning communities may depend partly on their well-being and on the support structures available throughout their professional development (Amer et al., 2022).

In the present review, emotional well-being is conceptualised as a multidimensional continuum that includes affective and evaluative components, such as positive and negative affect and life satisfaction (Diener, 1984; Keyes, 2002), complemented by purpose, personal growth, autonomy, and the quality of interpersonal relationships, which are especially sensitive to uncertainty, performance pressure, and professional identity formation in early academic trajectories (Ryff, 1989). Well-being is therefore examined as part of the conditions that shape professional learning and participation in higher education.

Early-Career Academics and Academic Development

Academic development is used here to refer to intentional forms of support for academics' professional learning, including mentoring, coaching, induction, peer support, reflective practice, and institutional programmes for developing as university teachers. Systematic review evidence indicates that collective and team-based forms of professional development can support university teachers' professional learning and practice (Gast et al., 2017). Interventions aimed at early-career academics' well-being are therefore relevant to university teaching and learning practice when they support professional integration, role clarity, collegial belonging, and sustainable engagement with academic responsibilities, conditions that have been associated with early-career academics' engagement and flourishing (Crome et al., 2019; Stratford et al., 2024). Early-career support is thus a matter not only of reducing distress, but also of enabling academics to participate meaningfully in academic cultures.

From a psychosocial perspective, distress can emerge from a sustained mismatch between job demands and available resources, performance pressure, insufficient organisational support, role ambiguity, or work insecurity (Maslach & Leiter, 2016), and chronic distress can impair work performance and lead to a loss of human capital (Dres et al., 2023). These risks are particularly consequential for early-career academics, who face pressure to accumulate credentials, intensive evaluation, and frequent contract instability (Cadena-Povea et al., 2025) while their teaching

identities and collegial networks are still being formed. Nicholls et al. (2022) identified work insecurity and high expectations as risk factors, and mentorship, peer support, and opportunities for progression as protective elements. Because professional identity is a dynamic and relational process (McLean & Price, 2019) that performativity and metric-based evaluation can turn into a source of insecurity and emotional cost (Zhang & Gong, 2024), early-career support is also a matter of academic development policy and institutional practice.

Support Interventions and the Remaining Evidence Gap

If distress is closely related to working conditions, the work environment itself becomes a key site for intervention. Organisational initiatives aimed at promoting mental health can help prevent or reduce common forms of psychological distress, although their effectiveness depends on the strategy adopted, its fit with the context, and its methodological quality (Joyce et al., 2016), and the literature increasingly supports preventive and sustained approaches over reactive and individualised responses (Mykletun & Harvey, 2012). Recent reviews indicate that some organisational-level interventions can improve the psychosocial work environment and reduce burnout or exhaustion, although the quality of the evidence varies and is often low (Aust et al., 2023; Bes et al., 2023). In higher education, this may require integrated academic development structures that combine mentoring, peer support, professional learning, and institutional responsibility, yet evidence on such interventions remains limited and their implementation is often insufficiently described.

Two recent reviews help to define the gap addressed by the present study. Hammoudi Halat et al. (2024), in a review of 10 publications including 891 participants, reported a large but imprecise pooled effect of mental health interventions for university faculty (95% CI crossing zero), with substantial heterogeneity (I^2 = 84.8%), reinforcing the need to clarify which strategies work, for whom, and under what conditions. Nicholls et al. (2022) synthesised risk and protective factors associated with early-career academics, but did not examine which interventions had been evaluated to act on them or in which contexts. In addition, some training programmes directed at junior faculty have co-existed with worsening burnout indicators when demands increase or time protection is not guaranteed (Riley et al., 2024), underlining the importance of mapping both intervention effects and implementation conditions.

In response to this gap, the present review adopts a multilevel perspective that builds on the distinction between individual- and organisation-directed interventions in occupational health research (LaMontagne et al., 2007) and adds an interpersonal level to capture the relational support that is central to early academic careers. Individual interventions typically focus on coping, self-regulation, and stress management; interpersonal interventions emphasise mentoring, coaching, peer support, and professional belonging; and organisational interventions embed support within institutional structures, policies, resources, and career-development systems. This framework guides the analysis of how evaluated interventions address well-being, professional integration, relational support, and career sustainability, and of their implementation conditions.

Method

This systematic review analysed previously published studies and did not involve human participants; ethical approval was therefore not required, and the review complied with the ethical standards outlined by Purvis and Crawford (2024). The review was performed and reported

according to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA 2020) guidelines (Page et al., 2021) and was registered in the International Prospective Register of Systematic Reviews (PROSPERO: CRD420251181430). A PIO approach (population, intervention, outcomes; no comparator) guided the search strategy and eligibility criteria: the population comprised early-career university teachers and academics; the intervention, mentoring, coaching, academic support, professional development, or institutional support initiatives; and the outcomes, well-being, professional integration, relational support, and career sustainability.

Search Strategy

An exploratory preliminary search was conducted to identify existing reviews and refine the search terms. For the main search, four electronic databases (CINAHL, Web of Science Core Collection, Scopus, and PubMed) were consulted in January 2026 to identify peer-reviewed studies published between January 2015 and December 2025. These databases were selected for their coverage of health sciences and nursing (CINAHL and PubMed) and of multidisciplinary research, including education and psychology (Scopus and Web of Science Core Collection). The period was limited to 2015–2025 to capture recent evidence relevant to current academic working conditions and forms of support in higher education. Studies published in English or Spanish were eligible because these were the languages in which the review team could reliably screen, extract, and appraise full texts; including Spanish also allowed evidence from Spanish-speaking higher education systems to be captured (see Supplementary Material I; all supplementary materials are available in the open repository indicated in the Acknowledgements).

The search combined population terms (e.g., early-career academics, junior faculty, assistant professors, and lecturers), intervention terms (e.g., interventions, programmes, support, and strategies), and outcome terms focused on mental health and well-being (e.g., burnout, stress, anxiety, and depression); the terms are shown in Table 1 and the exact strings for each database in Supplementary Material I.

Table 1

PIO Framework and Search Terms for Identifying Academic Development and Well-Being Support Interventions for Early-Career Academics

	Population		**Intervention**		**Outcomes**
Index terms/MeSH and free-text terms	Early career academic OR Early career researcher OR Junior faculty OR Assistant professor* OR lecturer* OR New faculty	AND	Intervention* OR Program* OR Support* OR Strateg* OR Resource* OR Mentoring OR Mentorship OR Training OR Workshop*	AND	Mental health OR Wellbeing OR Well-being OR Emotional well-being OR Job satisfaction OR Self-care OR Burnout OR Stress OR Anxiety OR Depression

Note. Created by the authors. The asterisk (*) indicates truncation. Terms were adapted to the syntax of each database; in PubMed, CINAHL, and Web of Science, records referring to students, medical trainees, healthcare workers, or junior doctors were excluded with the NOT operator.

Retrieved studies were screened for professional and relational outcomes as well as for mental health and well-being outcomes.

Publication date, language, and peer-review limits were applied using the filters available in each database, and full texts were sought through institutional access and other available academic sources.

Outcomes were grouped into three domains: (1) well-being and distress (emotional well-being, job satisfaction, commitment, self-efficacy, self-care behaviours, perceived stress, burnout, anxiety, and depressive symptoms); (2) professional and relational outcomes (engagement, mentoring, professional integration, role clarity, perceived support, and satisfaction with the work environment); and (3) implementation-related outcomes (feasibility, participation, perceived usefulness, satisfaction with the intervention, and programme uptake or progress). Outcomes could be evaluated through validated instruments or, when these were not available, through clearly defined measures such as ad hoc surveys, participation or progress indicators, self-reported assessments, or usefulness ratings.

Eligibility Criteria

Studies were included if they met all of the following criteria: (a) the population comprised university teachers or academics in the early stages of their careers, according to each study's definition or commonly used categories such as junior faculty, assistant professor, lecturer, early-career researcher, or new faculty; (b) the study evaluated an intervention, understood as any mentoring or coaching programme, professional development activity, institutional support strategy, policy, resource, or structured initiative aimed at supporting early-career academics' well-being, professional learning, integration, or career development; (c) the study reported at least one outcome in the three domains defined above; and (d) the study used a randomised, quasi-experimental, qualitative, descriptive, cross-sectional, or mixed-methods evaluation design.

Reviews, theses, conference proceedings, and other non-peer-reviewed documents were excluded, as were studies of interventions not directed at academic staff development, professional support, mentoring, coaching, well-being, or career sustainability, even when they addressed higher education institutions more broadly.

Study Selection

Records were imported into Rayyan, which was used to remove duplicates. Two reviewers (LF and RA) independently screened titles and abstracts against the eligibility criteria, with disagreements resolved through discussion and, when necessary, a third reviewer (AO). Three reviewers (AR, LF, and RA) independently assessed the full texts, resolving disagreements through consensus.

Quality Assessment

The methodological quality of the included studies was independently assessed by two reviewers (RA and AR) using design-specific tools: the CASP Qualitative Checklist (Critical Appraisal Skills Programme [CASP], 2024a) for qualitative studies, the CASP Checklist for Randomised Controlled Trials (CASP, 2024b), the JBI Analytical Cross-Sectional Studies Checklist (Moola et al., 2020) for cross-sectional studies, and the quantitative descriptive and mixed-methods criteria

of the Mixed Methods Appraisal Tool (MMAT; Hong et al., 2018). For one study conducted in two phases, the cross-sectional phase was appraised with the JBI Analytical Cross-Sectional Studies Checklist and the quasi-experimental phase with the JBI Critical Appraisal Checklist for Quasi-Experimental Studies (Tufanaru et al., 2020).

For each study, the reviewers rated every item of the corresponding tool using its response options (e.g., “yes”, “no”, “can’t tell”, or “unclear”). The scores reported in the Results (e.g., 9/10) indicate the number of items rated “yes” out of the total number of items of each tool: 10 for the CASP Qualitative Checklist, 11 for the CASP Randomised Controlled Trial Checklist, 8 for the JBI Analytical Cross-Sectional Studies Checklist, 9 for the JBI Checklist for Quasi-Experimental Studies, and 5 for the MMAT criteria corresponding to each study category. Overall methodological quality was classified as high when more than 80% of the items were rated “yes”, moderate when 50%–80% were, and low when fewer than 50% were. Because the MMAT developers discourage overall scores (Hong et al., 2018), these scores are reported only to facilitate comparison and are accompanied by the item-level ratings for each study in Supplementary Material III.

Disagreements were resolved through consensus, with a third reviewer (LF) when necessary. Quality assessments informed the interpretation of the findings but did not determine study inclusion.

Data Extraction

A data extraction form, developed in Microsoft Excel and piloted before use, recorded the bibliographic details, country, setting, aim, population, design, and measurement instruments of each study, together with the characteristics of the intervention: its components, support function (mentoring, coaching, peer support, professional learning, or institutional support), implementation modality, duration, level of action, and reported relevance for professional integration or career sustainability. For full-text articles assessed and excluded, reasons for exclusion were recorded; the list is available upon request.

Two reviewers (RA and LF) independently developed the coding guidelines to reduce subjectivity in extraction and classification decisions, and disagreements were resolved through consensus among all authors. Two reviewers (AO and AR) then independently extracted data from all included studies, and RA compared the duplicate extractions; discrepancies were discussed until consensus was reached.

Data Analysis and Synthesis

The review adopted a structured narrative synthesis organised around three dimensions: the main support function of each intervention (individual support, mentoring or coaching, peer and relational support, or institutional and organisational support); its implementation conditions (format, duration, level of structure, target population, delivery mode, and feasibility or acceptability); and its outcomes in the three domains defined above.

Given the heterogeneity of interventions, contexts, designs, and measurement instruments, meta-analysis was not conducted: only four studies reported inferential comparisons of outcomes between groups or over time (Eseadi et al., 2023; Hamzah et al., 2021; Lin et al., 2022; Osilike et al., 2024), and these addressed different constructs (burnout, work engagement, mentoring and

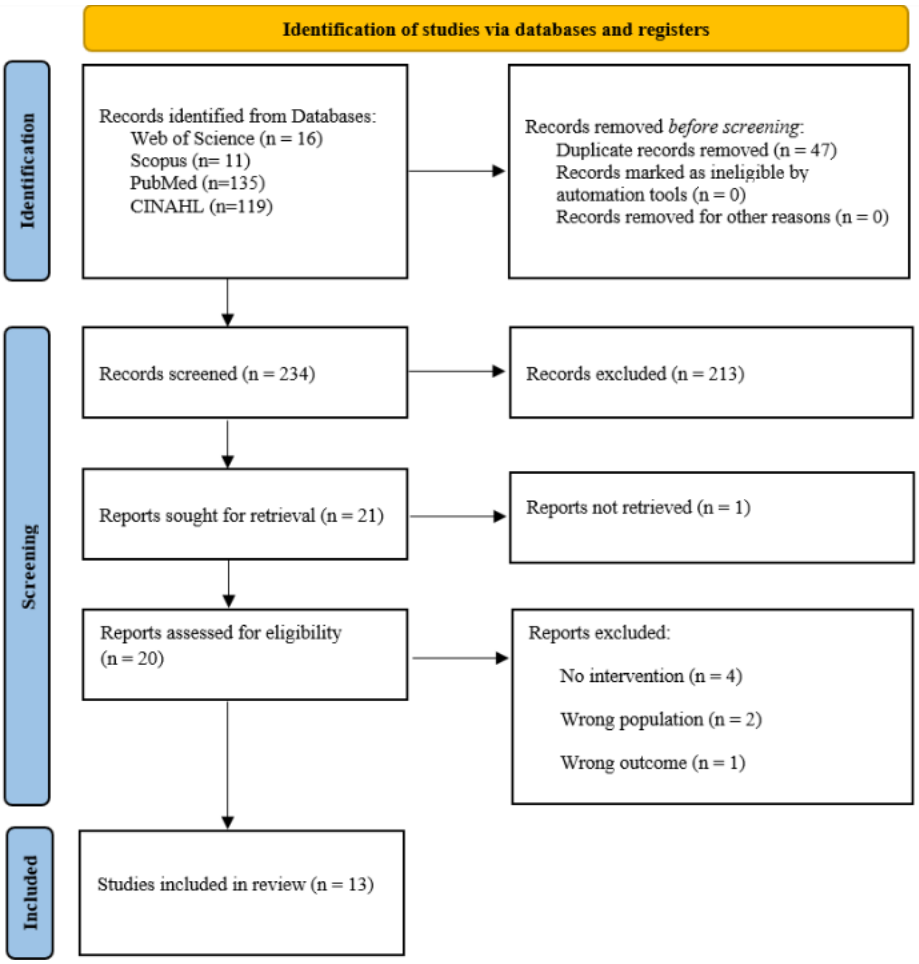
work-environment satisfaction, and stress). The narrative synthesis therefore compared the direction and nature of the reported findings, considering methodological quality, intervention level, implementation conditions, and outcome domains. The review team includes researchers in higher education, academic development, and health and well-being research. These experiences informed the interpretation of the intervention studies, whereas methodological decisions were guided by predefined criteria, PRISMA procedures, and independent duplicate screening, appraisal, and extraction aimed at minimising interpretative bias.

Results

The database searches identified 281 records, of which 47 duplicates were removed. The titles and abstracts of the remaining 234 records were screened against the eligibility criteria, and 213 records were excluded. Of the 21 reports sought for retrieval, one could not be retrieved, leaving 20 full-text reports for eligibility assessment. Seven reports were excluded (no intervention, *n* = 4; wrong population, *n* = 2; wrong outcome, *n* = 1), and 13 studies were included in the synthesis (Figure 1).

Figure 1

PRISMA 2020 Flow Diagram of the Study Selection Process



Note. Created by the authors.

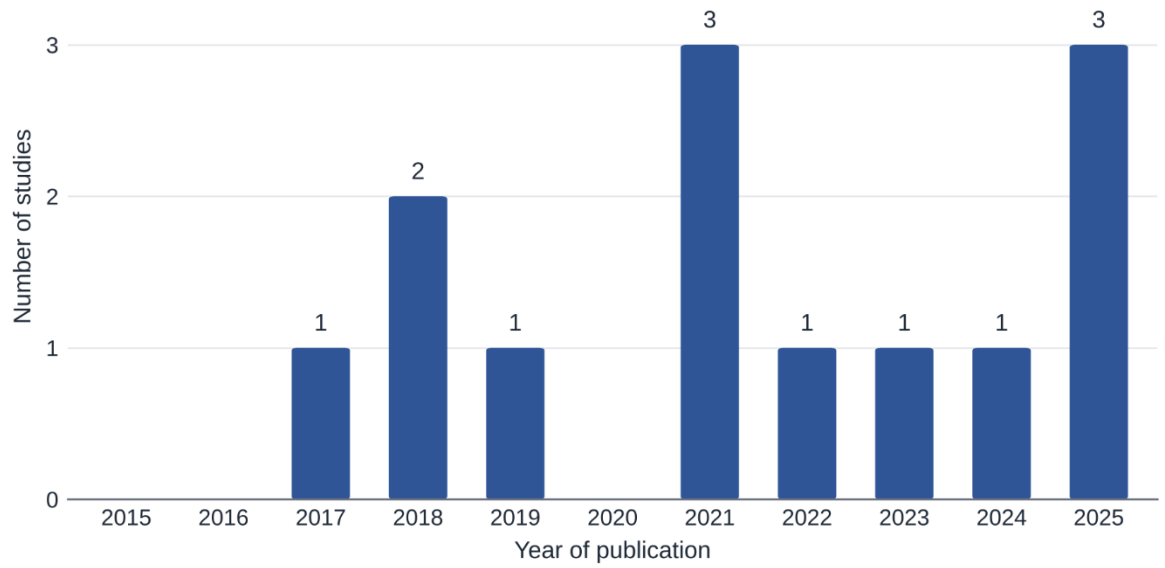
Study Characteristics

A total of 13 studies published between 2017 and 2025 were included.

Nine of the 13 studies were published from 2021 onwards, with peaks in 2021 (*n* = 3) and 2025 (*n* = 3) (Figure 2).

Figure 2

Number of Included Studies by Year of Publication



Note. Created by the authors.

Geographically, most studies were conducted in the United States (*n* = 9; 69.2%), followed by Nigeria (*n* = 2; 15.4%). The remaining two studies were conducted in Malaysia and Indonesia (*n* = 1; 7.7%) and across four sub-Saharan African countries (*n* = 1; 7.7%).

Regarding setting, most studies were conducted in faculties, departments, and centres linked to health sciences, including medicine, pharmacy, paediatrics, anaesthesiology, radiation oncology, and clinical or biomedical research (*n* = 9; 69.2%).

Details of the journals in which the included studies were published are provided in Supplementary Material II.

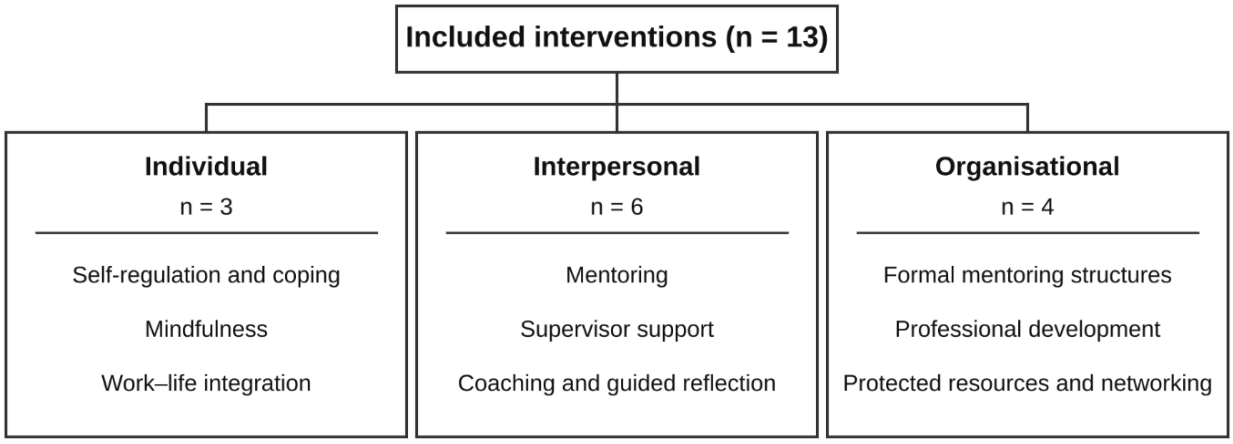
Across the 13 included studies, 74 authors were identified, with a mean of 5.7 authors per article (range: 2–12). No author contributed to more than one publication.

Included Interventions

The studies were grouped according to the main level at which each intervention operated (Figure 3). These categories were not treated as mutually exclusive; they indicate the primary mechanism of support: self-regulation and coping, relational or peer-based support, or institutional support structures.

Figure 3

Typology of Included Interventions by Principal Level of Action



Note. Created by the authors.

Three studies evaluated individual interventions centred on self-regulation, coping, or work–life balance: a workshop, an online rational emotive behaviour therapy programme, and a brief mindfulness programme (Eseadi et al., 2023; Osilike et al., 2024; Pitre et al., 2017).

Six studies were classified at the interpersonal level because they examined mentoring, coaching, supervisor support, or other relational mechanisms, ranging from formal mentoring programmes to more limited or indirect relational components (Ferschl et al., 2021; Hamzah et al., 2021; Lin et al., 2022; Minshew et al., 2021; Palmer et al., 2025; Voytko et al., 2018). Two were multicomponent: the Visiting Scholars in Pediatric Anesthesia Program (ViSiPAP) integrated mentorship, coaching, networking, and interinstitutional collaboration (Ferschl et al., 2021), and the Radiation Oncology AcaDemic Mentorship Program (ROADMAP) combined structured mentor–mentee pairing, formal objectives, committee-based supervision, peer mentoring, mentor training, and administrative support (Lin et al., 2022).

Four studies addressed organisational strategies that integrated institutional resources, such as formal committees, curricula, structured mentorship, networking, and flexible funding (Cranmer et al., 2018; Madden et al., 2025; Merritt et al., 2019; Wilson Chavez & Srikant, 2025). The Academic Competencies Series (ACES) offered a ten-module curriculum on personal development, engagement, and academic writing through in-person sessions and webinars (Merritt et al., 2019), and the Distinguished Scholar Award (DSA) combined flexible funding, structured mentorship, leadership development, grant writing, networking, and support for professional visibility (Madden et al., 2025). Table 2 summarises the main characteristics of the included studies, and Supplementary Material IV provides the full details.

Table 2

Characteristics of Included Studies and Interventions

Study	Country and sample	Design	Intervention	Main reported outcomes
Individual level				
Pitre et al. (2017)	USA; 50 workshop evaluations (40 junior faculty, 10 trainees)	Descriptive programme evaluation	90-minute interactive workshop on work–life integration	High ratings of usefulness, knowledge gains, and intention to apply strategies; no well-being or distress outcomes
Eseadi et al. (2023)	Nigeria; 80 university history lecturers (40 intervention, 40 control)	Randomised controlled trial	Online REBT delivered via Telegram (75 min/week for 10 weeks)	Burnout (OLBI) decreased relative to control; effect maintained at 3-month follow-up
Osilike et al. (2024)	Nigeria; survey *n* = 365 lecturers; intervention phase *n* = 26 (13 intervention, 13 control)	Cross-sectional survey and quasi-experimental pre–post study	Three 60-minute mindfulness-based stress reduction sessions	Baseline work-stress prevalence of 56.7%; stress (DSS) decreased only in the intervention group
Interpersonal level				
Voytko et al. (2018)	USA; 470 paired survey responses (83 mentees, 61 mentors)	Cross-sectional programme evaluation (annual surveys, 2010–2015)	One-to-one mentoring programme for women junior faculty	High satisfaction (mentees 8.4/10; mentors 7.8/10); high mentor–mentee agreement on emotional and professional support
Hamzah et al. (2021)	Malaysia and Indonesia; 134 university lecturers	Cross-sectional correlational study with group comparison	Emailed positive feedback before the survey; perceived supervisor support	Affective well-being (JAWS) and supervisor support predicted work engagement (UWES); positive feedback did not
Minshew et al. (2021)	USA; 45 participants (mentees, graduates, mentors, chairs, and non-participants)	Qualitative evaluation (focus groups and interviews)	Structured team mentoring with internal and external mentors, monthly meetings, and seminars	Programme structure and mentor–mentee relationships valued; limited time and mentor–mentee fit reported as challenges
Ferschl et al. (2021)	USA; 53 faculty and 20 fellows	Mixed methods (post-programme survey and open-ended questions)	ViSiPAP: interinstitutional visiting-scholar exchange combining mentorship, coaching, and networking	Reduced perceived isolation, perceived improvement in well-being, and reported promotion-related benefits
Lin et al. (2022)	USA; 36 enrolled, 32 completed pre–post surveys	Mixed-methods pre–post evaluation	ROADMAP: structured mentor–mentee dyads, goal-setting, peer mentoring, and mentor training	Mentoring and work-environment satisfaction increased; perceived mentoring barriers decreased
Palmer et al. (2025)	USA; 22 enrolled, 21 completed	Mixed-methods pilot evaluation	Appreciative inquiry-based group coaching (three 90-minute group sessions plus individual sessions)	High feasibility and satisfaction; reflection, goal clarity, community, and empowerment reported; PFI results not reported

Study	Country and sample	Design	Intervention	Main reported outcomes
Organisational level				
Cranmer et al. (2018)	USA; 22–23 assistant professors	Descriptive programme evaluation	Departmental mentoring programme with three-mentor committees and formal oversight	High satisfaction; promotion (96%) and tenure (94%) rates over 13 years; no mental health outcomes
Merritt et al. (2019)	Ethiopia, Malawi, South Africa, and Zimbabwe; 18 enrolled, 16 completed	Descriptive implementation report	ACES: ten-module academic competencies curriculum (face-to-face sessions and webinars)	Mean attendance of 90.2% and high acceptability; no well-being outcomes
Wilson Chavez & Srikant (2025)	USA; 32 scholars, 17 respondents	Mixed-methods survey	KL2 mentored career development programme (75% salary support; structured mentoring and curriculum)	Mentoring rated important for career success; burnout and family stress associated with lower perceived career success
Madden et al. (2025)	USA; 12 awardees (2022 and 2023 cohorts)	Mixed-methods process evaluation	DSA: USD 50,000 flexible funding plus mentoring, training, and networking	Components rated highly by respondents (6 of 11); eight K awards, three R01 awards, and five promotions; no well-being outcomes

Note. Studies are grouped by the principal level of action of the intervention. Full study characteristics, instruments, and statistical results are reported in Supplementary Material IV. ACES = Academic Competencies Series; DSA = Distinguished Scholar Award; DSS = Daily Stressors Scale; JAWS = Job-related Affective Well-being Scale; OLBI = Oldenburg Burnout Inventory; PFI = Professional Fulfilment Index; REBT = rational emotive behaviour therapy; ROADMAP = Radiation Oncology AcaDemic Mentorship Program; UWES = Utrecht Work Engagement Scale; ViSiPAP = Visiting Scholars in Pediatric Anesthesia Program.

Implementation varied substantially. Delivery formats included in-person, online, and hybrid modalities, and duration ranged from one-off or short interventions (Osilike et al., 2024; Pitre et al., 2017) to programmes developed over several months or years (Cranmer et al., 2018; Madden et al., 2025; Wilson Chavez & Srikant, 2025).

The included studies were also methodologically heterogeneous: one qualitative study, seven quantitative studies (one randomised controlled trial, two cross-sectional studies, three descriptive programme evaluations, and one study with both a cross-sectional phase and a quasi-experimental phase), and five mixed-methods studies.

Outcome evaluation was equally heterogeneous. A small number of studies (n = 4) used standardised or previously validated psychometric instruments to measure burnout, stress, emotional well-being, or engagement. These included the Oldenburg Burnout Inventory (Eseadi et al., 2023), the Daily Stressors Scale and the Five Facet Mindfulness Questionnaire–Short Form (Osilike et al., 2024), the Job-related Affective Well-being Scale, the Perceived Supervisor Support Scale, and the Utrecht Work Engagement Scale (Hamzah et al., 2021), and the Professional Fulfilment Index (Palmer et al., 2025). Wilson Chavez and Srikant (2025) incorporated a modified version of the Johns Hopkins Mentorship Effectiveness Scale within broader questionnaires on programme experience and professional satisfaction. Most studies (n = 7) used ad hoc programme evaluation tools, including Likert-type surveys, satisfaction surveys,

institutional records, or progress reports, and six included qualitative components through interviews, focus groups, or open-ended questions. Overall, five studies reported results for at least one direct measure of well-being or distress: three used validated instruments (Eseadi et al., 2023; Hamzah et al., 2021; Osilike et al., 2024), although Hamzah et al. (2021) examined affective well-being as a predictor of work engagement rather than as an intervention outcome, and two reported well-being or burnout data using non-validated survey items (Ferschl et al., 2021; Wilson Chavez & Srikant, 2025). A sixth study administered the Professional Fulfilment Index, including its burnout scales, but did not report the results (Palmer et al., 2025). The remaining seven studies reported only satisfaction, perceived usefulness, feasibility, mentoring experiences, perceived benefits, or career-progression indicators (Cranmer et al., 2018; Lin et al., 2022; Madden et al., 2025; Merritt et al., 2019; Minshew et al., 2021; Pitre et al., 2017; Voytko et al., 2018).

Methodological Quality of the Included Evidence

Methodological quality varied notably across the included studies. Scores indicate the number of appraisal items met out of the total number of items of each tool (see Quality Assessment). The qualitative study by Minshew et al. (2021) was assessed as high quality (9/10), with only some uncertainty regarding the researchers' positioning.

The randomised controlled trial by Eseadi et al. (2023) was assessed as moderate quality (7/11), with limitations related to blinding and consistency of treatment between groups.

The cross-sectional studies by Voytko et al. (2018), Hamzah et al. (2021), and phase 1 of Osilike et al. (2024) showed moderate quality (5–6/8), mainly because confounders were not clearly identified or controlled. Phase 2 of Osilike et al. (2024), assessed as quasi-experimental, showed high quality (8/9), with consistent measurements and appropriate statistical analysis.

The descriptive quantitative studies by Pitre et al. (2017), Cranmer et al. (2018), and Merritt et al. (2019) showed low-to-moderate quality (2–3/5), with limitations related to sample representativeness, the appropriateness of the measurements, and the risk of non-response bias.

Among the mixed-methods studies, Ferschl et al. (2021), Lin et al. (2022), and Palmer et al. (2025) were assessed as moderate quality (4/5), with unclear quality of each component, whereas Madden et al. (2025) obtained 1/5 and Wilson Chavez and Srikant (2025) 0/5, both indicating low quality, owing to the absence of a clear justification for the mixed-methods design, limited integration between components, and weaknesses in the quality of both strands.

Overall, the quality appraisal showed marked methodological variability: high quality in the qualitative study and the quasi-experimental phase; moderate quality in the randomised controlled trial, the cross-sectional studies, and three mixed-methods studies; low-to-moderate quality in the descriptive studies; and low quality in two mixed-methods studies (item-level ratings in Supplementary Material III).

Narrative Synthesis of Academic Development and Support Interventions

Among the individual-level studies, the work–life integration workshop received high ratings of perceived usefulness, satisfaction, and intention to apply the strategies learned, but no inferential analyses or well-being outcomes were reported (Pitre et al., 2017). An online rational emotive behaviour therapy programme, evaluated with the Oldenburg Burnout Inventory within a

randomised controlled trial, showed a significant reduction in job burnout after 10 weeks, with effects maintained at three-month follow-up (Eseadi et al., 2023). A brief mindfulness programme showed a significant reduction in stress after the intervention, alongside a weak inverse association between mindfulness and stress ($r = -.11$, $p < .05$); the same study reported a baseline stress prevalence of 56.7% among participants (Osilike et al., 2024).

Among the interpersonal interventions, a cross-sectional study with a group comparison found that affective well-being (β = .49) and supervisor support (β = .27) were significantly associated with higher work engagement ($R^2 = .44$, $p < .001$), while one-off positive feedback was not significantly associated with engagement (Hamzah et al., 2021). In addition, a structured mentoring programme evaluated with a single-group pre–post design showed significant increases in mentoring satisfaction (from 2.57 to 3.90, $p < .001$) and work environment satisfaction (from 3.20 to 4.02, $p < .001$), together with a reduction in perceived mentoring barriers (from 3.29 to 2.14, $p < .001$; Lin et al., 2022). Other mentoring and coaching studies reported perceived benefits related to programme structure, relationship quality, goal clarity, emotional and professional support, trust, belonging, empowerment, and self-reflection (Minshew et al., 2021; Palmer et al., 2025; Voytko et al., 2018). An interinstitutional professional development programme reported perceived benefits for well-being, teaching, and academic development, reduced professional isolation, and tangible academic outputs (45 online academic publications, 39 additional invited presentations, and eight authorships; Ferschl et al., 2021).

Among the organisational-level studies, a longitudinal departmental mentoring programme with three-mentor committees and formal oversight reported high overall satisfaction ($M = 4.61$, $p <$ .001 compared with neutral) and favourable outcomes in promotion (143/148; 96%) and tenure (59/63; 94%) over a prolonged period (2005–2017; Cranmer et al., 2018). A regional capacity-building programme co-facilitated by institutions from different countries showed high feasibility, benefits in networking, and development of transferable academic skills, although operational limitations related to adaptation, scheduling, and connectivity were reported (Merritt et al., 2019). A structured mentorship, training, and career development programme (KL2) found that mentorship quality was significantly associated with perceived career success ($p = .046$), while burnout and family-related stress were associated with lower perceived professional success ($p < .001$); the study also reported a high prevalence of burnout and work–life balance challenges (11 of 15 respondents; Wilson Chavez & Srikant, 2025). Finally, a flexible funding and support programme with periodic meetings was rated highly by the scholars who completed the summative evaluation (6 of 11), and progress reports recorded continued productivity, eight NIH career development (K) awards, three R01 awards, and five promotions to associate professor across the two cohorts (Madden et al., 2025).

Results by Outcome Domain

By outcome domain (see Supplementary Material V for the classification of each study), the most direct evidence on emotional well-being and distress came from the two individual-level studies that reported reductions in burnout or stress (Eseadi et al., 2023; Osilike et al., 2024), complemented by perceived benefits in emotional regulation or well-being after group coaching and an interinstitutional exchange (Ferschl et al., 2021; Palmer et al., 2025) and by an association between burnout and lower perceived career success (Wilson Chavez & Srikant, 2025). Most evidence concerned professional and relational outcomes: work engagement (Hamzah et al.,

2021); mentoring and perceptions of the work environment (Lin et al., 2022; Minshew et al., 2021; Voytko et al., 2018); professional identity, networking, and academic transition (Ferschl et al., 2021; Minshew et al., 2021; Palmer et al., 2025); and career progression and productivity (Cranmer et al., 2018; Madden et al., 2025; Wilson Chavez & Srikant, 2025). Pitre et al. (2017) and Merritt et al. (2019) reported only implementation-related outcomes.

Discussion

This review asked what support interventions have been implemented and evaluated to promote the well-being, professional integration, and sustainable careers of early-career academics, what outcomes they have reported, and under what conditions they were implemented. The evidence on evaluated support interventions remains limited, methodologically heterogeneous, and concentrated predominantly in health sciences and medical education contexts, particularly in the United States. This concentration may partly reflect the databases searched (see Limitations and Future Research), but it may also indicate that intervention research has developed mainly in settings where professional development structures are more formalised, visible, and evaluable. It also limits the transferability of the findings to disciplines and institutions where support systems for early-career academics may be less established or less systematically evaluated.

The heterogeneity of the included studies prevents conclusive comparisons of effectiveness, a challenge shared by organisational and workplace well-being research, where diversity in intervention design, implementation conditions, outcome measures, and evaluation methods limits the synthesis of robust evidence (Aust et al., 2023; Bes et al., 2023). Nevertheless, the findings show differentiated patterns: individual interventions mainly addressed self-regulation, coping, stress reduction, and burnout management; interpersonal interventions focused on relational support, mentoring quality, professional clarity, and sense of community; and organisational interventions were more closely linked to academic progression, continuity, institutional support, and career sustainability. Because outcome domains differed systematically across levels, these patterns describe what each type of intervention targeted and measured rather than which type was more effective. The absence of recurring authors also suggests a fragmented evidence base, without a consolidated programme of research on early-career academic support.

Two of the three individual interventions reported reductions in burnout or stress with strategies focused primarily on self-regulation (Eseadi et al., 2023; Osilike et al., 2024), whereas the work–life integration workshop was positively rated but did not measure distress or well-being (Pitre et al., 2017). Such interventions may help early-career academics manage immediate work-related pressures, but their capacity to address the structural determinants of academic distress is likely to be limited (Joyce et al., 2016; LaMontagne et al., 2007), because they do not necessarily alter the relational, pedagogical, or institutional conditions through which sustainable academic practice develops. They are therefore likely to remain more compensatory than transformative when implemented in isolation.

Interpersonal interventions addressed a broader set of mechanisms and were associated with stronger support networks, professional integration, mentoring satisfaction, goal clarity, perceived support, and sense of community (Ferschl et al., 2021; Hamzah et al., 2021; Lin et al., 2022; Minshew et al., 2021; Palmer et al., 2025; Voytko et al., 2018). Among the multicomponent

models, ViSiPAP reported perceived benefits in both emotional and professional domains (Ferschl et al., 2021), and ROADMAP reported increases in satisfaction with mentoring and with the work environment (Lin et al., 2022). These findings suggest that sustained relational interventions may offer broader developmental value than isolated or one-off initiatives, because they address daily professional experience, community integration, role clarification, and access to support networks. However, no included study directly compared sustained relational programmes with isolated interventions, and the contrast observed by Hamzah et al. (2021) between supervisor support and one-off feedback derives from a cross-sectional design. The value of mentoring is also likely to depend on the quality, continuity, and trustworthiness of the relationship, as limited time and poor mentor–mentee fit were reported as barriers (Minshew et al., 2021). Perceived support, goal clarity, professional belonging, and sense of community are therefore not peripheral outcomes; they are closely connected to engagement, career satisfaction, and career sustainability (Crome et al., 2019; DeCastro et al., 2014).

At the organisational level, interventions embedded support within formal structures, institutional resources, mentoring systems, structured curricula, flexible funding, and career development opportunities (Cranmer et al., 2018; Madden et al., 2025; Merritt et al., 2019; Wilson Chavez & Srikant, 2025), mainly targeting academic progression, promotion, productivity, visibility, and continuity in academic careers. They may also help buffer stressors associated with contemporary university work, such as performance pressure, competition for resources, and uncertainty regarding stability and progression (Rahman et al., 2024), although only one organisational study reported well-being-related data, and it did so as a correlate of perceived career success rather than as an intervention outcome (Wilson Chavez & Srikant, 2025). The high promotion and tenure rates reported by Cranmer et al. (2018) suggest a possible relationship between structured organisational support and longer-term academic trajectories, although the descriptive design of the study precludes causal inference. Notably, most interventions supported individuals within existing working conditions, whereas few attempted to modify workloads, job design, or institutional policies, despite occupational health research recommending attention to organisational and psychosocial working conditions (Ohadomere & Ogamba, 2021; Schulte et al., 2024). Institutionally embedded and sustained approaches may therefore address multiple dimensions of early-career academic support, an interpretation consistent with reviews of organisational-level interventions in other occupational settings, where the evidence is also mixed and of variable quality (Aust et al., 2023; Bes et al., 2023).

Across the included studies, the strength of inference was not equivalent: only two studies measured intervention-related changes in burnout or stress with validated instruments (Eseadi et al., 2023; Osilike et al., 2024), whereas others evaluated indirect outcomes such as mentoring satisfaction, perceived support, professional progress, feasibility, usefulness, or programme satisfaction. The literature therefore captures implementation, acceptability, and perceived usefulness more consistently than robust impact on emotional well-being or academic practice, and the field has not yet consolidated a shared evaluation framework for interventions aimed at early-career academics. Both types of evidence are valuable, but they are not equivalent: the challenge is to determine not only whether an intervention is well received, but whether it produces meaningful and sustained changes in well-being, professional integration, teaching confidence, mentoring quality, institutional participation, or career sustainability. Future evaluation frameworks should therefore align intervention components, mechanisms of change, and outcome measures

more explicitly with the psychosocial and professional processes they aim to address (Bakker et al., 2023).

A final issue concerns the relationship between early-career support and academic practice. None of the included studies directly assessed teaching quality, pedagogical development, or changes in everyday academic work; teaching-related evidence was limited to participants' perceived benefits (Ferschl et al., 2021). However, many interventions addressed conditions closely connected to sustainable academic practice, such as mentoring quality, professional integration, role clarity, collegial support, networking, institutional belonging, and career progression. The contribution of this review is therefore not to demonstrate direct effects on teaching quality, but to identify the forms of support through which early-career academics may be better equipped to participate sustainably in teaching, research, and institutional life.

Practical Implications

The findings suggest that support for early-career academics may need to extend beyond isolated well-being activities or individual coping strategies. Although individual interventions may contribute to stress management, the programmes that reported a broader range of emotional, relational, and professional outcomes tended to include formal mentoring structures, explicit development goals, periodic meetings, peer support, institutional backing, and, in some cases, protected time, flexible funding, or opportunities for academic visibility. However, this pattern may partly reflect the outcomes that these studies chose to measure, and the available evidence does not allow conclusions about the effectiveness of these programmes compared with single-level interventions.

Universities could therefore consider designing early-career academic support as a structured and sustained developmental process that integrates mentoring, peer learning, induction, professional development, and well-being support into coherent institutional frameworks, with clear responsibilities, adequate resources and protected time, equitable access, and monitoring of participation and outcomes, particularly during the transition into academic roles.

For academic developers, heads of department, and institutional leaders, this implies embedding mentoring, networking, and career-development opportunities within everyday academic work and workload allocation rather than adding them to existing workloads, because support activities that lack protected time may be difficult to access and may be experienced as additional demands (Bailey et al., 2026; Knight et al., 2021).

Theoretical Implications

One of the central contributions of this review to higher education and academic development scholarship is its reframing of early-career academics' well-being as a multilevel phenomenon. Rather than viewing well-being solely as an individual capacity for coping, the findings are consistent with understanding it as shaped by relational, organisational, and institutional conditions. Interventions focused solely on self-regulation may alleviate immediate distress, but they are unlikely to transform the structural and cultural dynamics that generate insecurity, overload, and isolation in the early stages of an academic career. This view aligns with research indicating that academic well-being cannot be reduced to the absence of stress or burnout and that resources such as autonomy, competence, relatedness, meaningful workplace relationships,

organisational support, and viable career pathways shape academic experience (Crome et al., 2019; Iqbal Ruiz et al., 2025; Stratford et al., 2024).

The findings also position support interventions at the intersection of well-being and professional formation: mentoring, belonging, recognition, and professional integration may matter not only as protective resources but also as conditions through which early-career academics develop engagement and a sustainable sense of membership in the profession. This interpretation is compatible with systemic approaches to career sustainability that emphasise the interaction between individuals, changing occupational contexts, and time (De Vos et al., 2020), and it supports treating academic well-being and academic development as analytically distinguishable but practically interconnected domains.

The review also identifies a conceptual and evaluative gap. The included studies mainly measured satisfaction, perceived usefulness, and indicators of professional progress, and paid much less attention to participation in academic communities, professional identity development, or engagement with teaching and learning. This pattern is consistent with evidence that academic well-being is conceptualised inconsistently and often operationalised through heterogeneous or proxy indicators (Iqbal Ruiz et al., 2025), and future theoretical work should examine how well-being, identity development, professional learning, and sustainable participation in higher education interact over time.

Limitations and Future Research

This review has several limitations. First, the number of included studies was small, and the evidence was concentrated in a limited range of disciplinary and geographical contexts, particularly health sciences, medical education, and the United States. This concentration may partly reflect the choice of databases: although Scopus and Web of Science Core Collection index education and psychology journals, the search did not include education- or psychology-specific databases such as ERIC or APA PsycInfo, which may have contributed to the predominance of studies from health sciences and medical education. The heterogeneity of designs justified a narrative synthesis but did not allow effect sizes to be compared or a hierarchy of intervention effectiveness to be established.

Second, many studies relied on small, self-selected samples, descriptive or mixed evaluations, and uneven use of validated and ad hoc instruments, and several focused on satisfaction, feasibility, perceived usefulness, or professional progress rather than on direct measures of emotional well-being or distress. Moreover, none of the included studies directly assessed outcomes related to teaching practice, pedagogical development, or changes in everyday academic work, so the relevance of the findings for higher education practice must be interpreted mainly through indirect outcomes such as mentoring quality, professional integration, perceived support, and career sustainability. In addition, the summary quality ratings were derived from item counts and the thresholds described in the Method; they facilitate comparison but should not be read as precise estimates of risk of bias, and no formal assessment of the certainty of the evidence for each outcome was undertaken.

Third, selection bias may have resulted from restricting the review to peer-reviewed studies published in English or Spanish; no Spanish-language study met the inclusion criteria, and relevant studies published in other languages, institutional reports, programme evaluations, or

grey literature may have been excluded. Because the search required mental health or well-being terms, evaluations reporting only professional or career-related outcomes may have been missed, and one potentially eligible evaluation of a junior faculty development programme (Riley et al., 2024) was not retrieved by the database searches and is therefore not included in the synthesis. Eligibility also relied on each study's definition of early-career status or on commonly used academic ranks such as lecturer or assistant professor, so some samples may have included academics beyond the early-career stage.

Future research should broaden contextual diversity by incorporating studies from other disciplines, university systems, and institutional settings with different levels of resources. It should also develop more robust and longitudinal designs, including controlled comparisons of single-level and multicomponent interventions, with clearer mechanisms of change, more precise descriptions of implementation, and sufficient follow-up to assess whether effects are sustained, and it should improve measurement coherence by combining validated instruments of well-being and distress with relational, organisational, and professional development indicators, such as mentoring quality, professional integration, role clarity, engagement, perceived institutional support, teaching confidence, and career progression.

A critical priority is to examine more explicitly whether and how these interventions relate to academics' professional learning and teaching-related development. The current evidence base rarely examines whether support interventions affect teaching confidence, pedagogical reflection, curriculum engagement, supervisory practice, or participation in teaching and learning communities; addressing this gap would help connect early-career support with the broader quality and sustainability of academic practice.

The main evidence gaps and priority areas for future research are summarised in Figure 4.

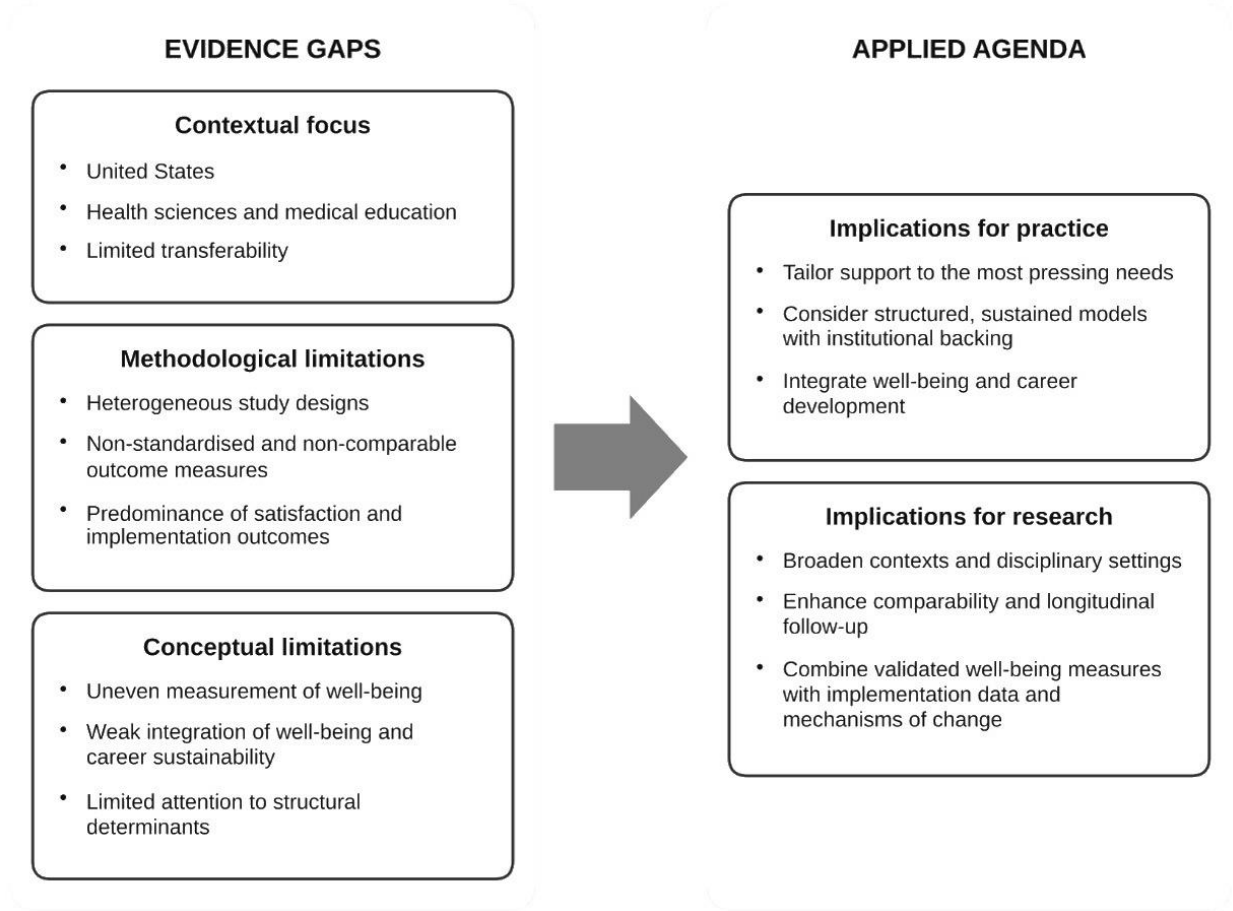
Conclusion

This systematic review shows that interventions targeting early-career academics constitute an emerging and methodologically heterogeneous field. The available evidence suggests differentiated patterns across levels of action: individual interventions may reduce emotional distress through self-regulation and coping strategies; interpersonal approaches may strengthen support, professional clarity, mentoring quality, and sense of belonging; and organisational strategies appear more closely linked to academic progression, institutional integration, and career sustainability. However, the small number of studies, their concentration in health-related disciplines and the United States, and their methodological constraints require cautious interpretation, and firm conclusions about comparative effectiveness remain premature.

A central contribution of this review is the repositioning of early-career academics' well-being as a relational and institutional issue, rather than solely an individual one. Interventions integrating personal support, structured mentoring, peer or community-based approaches, institutional resources, and professional development tended to report benefits across a broader range of outcomes, although direct comparisons between intervention levels were not available. Early-career well-being may therefore be treated as one of the conditions that enable sustainable academic practice, rather than as a separate concern.

Figure 4

Evidence Gaps and Future Directions for Early-Career Academic Support Interventions



Note. Created by the authors.

Universities may therefore benefit from moving beyond isolated initiatives towards integrated frameworks of induction, mentoring, coaching, peer learning, and professional support that recognise that early-career academics' capacity to teach, supervise, collaborate, and participate in institutional life may depend partly on the relational and organisational conditions in which their academic identities and practices are formed. Overall, supporting early-career academics' well-being emerges not only as a matter of occupational health, but also as a potential condition for sustainable academic careers. Whether such support also contributes to talent retention, equity, and the quality of teaching and learning in higher education remains an important question for future research.

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The study complies with the ethical standards outlined by Purvis and Crawford (2024). Ethical approval was not required for this systematic review because it analysed data from previously published studies; the broader research project within which the review was conducted received approval from the Research Ethics Committee with Medicines (CEIm) of Hospital Universitari Arnau de Vilanova, Lleida, Spain (CEIC-3326). Consent to participate and consent for publication were not applicable.

Data availability. The data supporting this review are openly available in the CORA. Repositori de Dades de Recerca (https://doi.org/10.34810/DATA3834) as Supplementary Materials I–V: search strategies and language rationale (I), journal metrics (II), item-level quality appraisal using CASP, JBI, and MMAT (III), full study characteristics, instruments, and statistical results (IV), and classification of studies by outcome domain (V).

Use of artificial intelligence. Artificial intelligence tools were used exclusively to generate visual materials based on the findings of this study, specifically Microsoft 365 Copilot (GPT-5 Chat model; Microsoft Corporation, Redmond, WA, USA). No AI tools were used for data extraction, quality appraisal, or data analysis. The use of AI complies with the ethical principles outlined by Crawford et al. (2026).

The authors list the following CRediT contributions: LF-C: Conceptualisation, methodology, investigation, data curation, formal analysis, validation, writing-original draft. RMA-A: Conceptualisation, methodology, investigation, data curation, formal analysis, validation, writing-original draft. AO-V: Methodology, validation, writing-review & editing, interpretation of results. AR-P: Conceptualisation, writing-review & editing. All authors approved the final manuscript and agree to be accountable for the content of the work.

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