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Review Article

Determinants of Healthcare Staff Turnover: A Scoping Review

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Abstract

Introduction: Turnover among healthcare staff represents a persistent global challenge with substantial consequences for workforce stability, quality of care, and organizational performance. Understanding the multidimensional factors contributing to turnover is essential for developing effective retention strategies, particularly in healthcare systems facing increasing demand and resource constraints. This review aimed to map and categorize the range of factors associated with turnover and turnover intention among healthcare staff and to identify key thematic patterns in the existing literature.

Methods: A structured literature search was conducted across four major international databases (PubMed, Web of Science, Scopus, and Science Direct) for studies published between 2020 and 2025, using predefined keywords and Boolean operators. The review was conducted and reported in line with PRISMA principles. After de-duplication, records were screened at the title, abstract, and full-text levels using predefined eligibility criteria. All eligible studies (n = 129) contributed to descriptive mapping; a core subset (n = 30) was prioritized for in-depth thematic analysis. A thematic approach was used to capture recurring patterns and relationships across studies.

Results: The thematic mapping of the evidence suggested four overarching domains associated with turnover and turnover intention: individual factors, job and organizational factors, managerial and leadership factors, and external or social factors. Prominent challenges included workload and staffing shortages, burnout and job stress, inadequate managerial support, limited career development opportunities, and work–life imbalance. While individual characteristics played a role, organizational and managerial determinants emerged as the most consistently reported contributors to turnover across diverse healthcare settings.

Conclusion: Turnover among healthcare staff is a multifactorial issue, predominantly driven by modifiable organizational and leadership factors. Addressing these determinants through supportive management practices, improved working conditions, and targeted retention policies may substantially reduce turnover and strengthen workforce sustainability. The findings provide a comprehensive evidence base to inform future research and policy interventions in healthcare workforce management.

Keywords: Turnover, Turnover intention, Healthcare staff, Nursing workforce, Thematic synthesis

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Introduction

Human resources in health systems are more than a production input; they are a core pillar of effective and sustainable service delivery. In practice, the real-world impact of many technologies, medicines, and healthcare infrastructures depends largely on the knowledge, skills, and motivation of healthcare workers(1, 2). Workforce sustainability has increasingly been challenged in recent years by turnover and turnover intention. Turnover refers to employees' actual departure from an organization, whereas turnover intention refers to the self-reported intention or plan to leave. Turnover intention is often treated as a proximal antecedent of actual turnover and is widely used as a key retention-related outcome in health workforce research (3, 4). Turnover can disrupt the workforce supply-demand balance and ultimately undermine continuity of care (1, 5, 6). In healthcare, due to the high-stakes nature of services and their direct implications for patient safety and quality of care, the consequences of turnover may be particularly pronounced (4, 7). Replacing skilled clinical staff is often time-consuming, and transitional periods may be associated with increased workload and operational risks (4, 5, 8). From an organizational perspective, staff departures may also reduce tacit knowledge, experience, and social capital within care settings (1, 2).

The economic and operational implications of turnover are also substantial. Replacing healthcare workers often involves recruitment, selection, onboarding, and reduced productivity during the early months, which can impose a considerable organizational burden (1, 9). Moreover, many health systems worldwide face mounting pressure due to rising service demand, demographic shifts, and occupational strain and burnout among staff (3-5). In

some contexts, turnover may co-occur with broader workforce instability and movement across roles or settings, which can adversely affect access and continuity of services (6, 7). Increased exits are often accompanied by heavier workloads for remaining staff and, if sustained, may intensify a cycle of work pressure and reduced retention (4, 5, 10).

Determinants of turnover in healthcare represent a multilevel constellation of individual, organizational, and environmental factors that interact to shape decisions to stay or leave. At the individual and psychosocial level, work–life imbalance, chronic work stress, and burnout-related processes have been repeatedly reported (4, 5, 10). Individual psychological resources—such as psychological capital, resilience-related capacities, and empowerment—may function as protective factors associated with lower intention to leave (3, 5). At the organizational level, leadership style, perceived support/recognition, fairness, and work environment conditions may influence job satisfaction and turnover intention(1, 2, 8). Workplace climate and interpersonal mistreatment (e.g., incivility) have also been linked to higher turnover intention (2, 7). At the macro level, broader contextual pressures and system-level constraints may act as enabling or exacerbating forces shaping turnover dynamics (6, 7). Although a substantial body of research has examined these issues across countries and settings, cultural and structural differences can lead to variability and, at times, inconsistency in findings—making evidence-informed decision-making more challenging for managers and policymakers(1, 5).

Therefore, despite the extensive literature on health workforce management, there remains a need for a structured mapping of evidence on factors associated with turnover and turnover intention among healthcare workers. In particular, an approach that categorizes determinants across individual, organizational, managerial, and external domains can help clarify recurring patterns and highlight the breadth and nature of existing research. Such a review can integrate dispersed evidence, identify common themes across contexts, and provide a clearer overview to inform more coherent and actionable retention strategies. Accordingly, this study was designed to map, categorize, and summarize the range of factors associated with turnover and turnover intention in the healthcare workforce, with the aim of supporting managerial and policy decision-making related to workforce sustainability in health systems.

Methods

Search strategy and information sources

This scoping review aimed to map and categorize factors associated with turnover and turnover intention among healthcare workers. The review was conducted in accordance with the PRISMA-ScR (Preferred Reporting Items for Systematic Reviews and Meta-Analyses Extension for Scoping Reviews) guidelines. The search strategy was developed using key terms combined with Boolean operators (AND/OR) and, where applicable, controlled vocabulary. We searched four international databases: PubMed, Web of Science, Scopus, and ScienceDirect. The search was restricted to studies published from 2020 to 2025. All databases were searched on December 2, 2025. All retrieved records were imported into the Zotero reference management software to organize citations and support duplicate removal. The study selection process is reported in accordance with PRISMA, and the flow of records through identification, screening, and inclusion is presented in Figure 1.

Keywords and Search Strings

The search combined controlled vocabulary (where applicable) and free-text terms related to healthcare personnel, turnover/turnover intention, and determinants/factors. Core terms included: ("turnover" OR "turnover intention" OR "intention to leave") AND ("nurse*" OR "health personnel" OR "healthcare worker*" OR "clinical staff") AND ("factor*" OR "determinant*" OR "predictor*" OR "associated factor*"). The complete database-specific search strategies (including all four databases) are provided in Supplementary Table S1 .

Deduplication and Study Screening

After importing records into the Zotero reference manager, duplicates were identified and removed. Screening was then performed in multiple stages, including title screening, abstract screening, and full text assessment. Decisions for borderline or ambiguous cases were finalized through repeat review and team discussion. Eligibility criteria at each stage were applied based on an overarching PEO framework (Population–Exposure–Outcome) and the study's direct relevance to turnover or turnover intention in healthcare workers.

Eligibility Criteria framework (PEO-based)

Studies were included if they:

- Investigated healthcare personnel (with emphasis on nurses/clinical staff)
- Examined factors associated with turnover and/or turnover intention
- Were primary empirical studies (quantitative, qualitative, or mixed-methods)
- Were available as full-text in English

Studies were excluded if they:

- Were reviews, editorials, commentaries, protocols, letters, dissertations, or conference abstracts without full text
- Did not report determinants/factors of turnover/turnover intention
- Focused on non-healthcare populations
- Lacked sufficient methodological detail or full text

For in-depth thematic synthesis, a core subset of eligible studies was prioritized; details are reported in the Results section.

Language Considerations and Quality Assessment

No language limits were applied during searching;

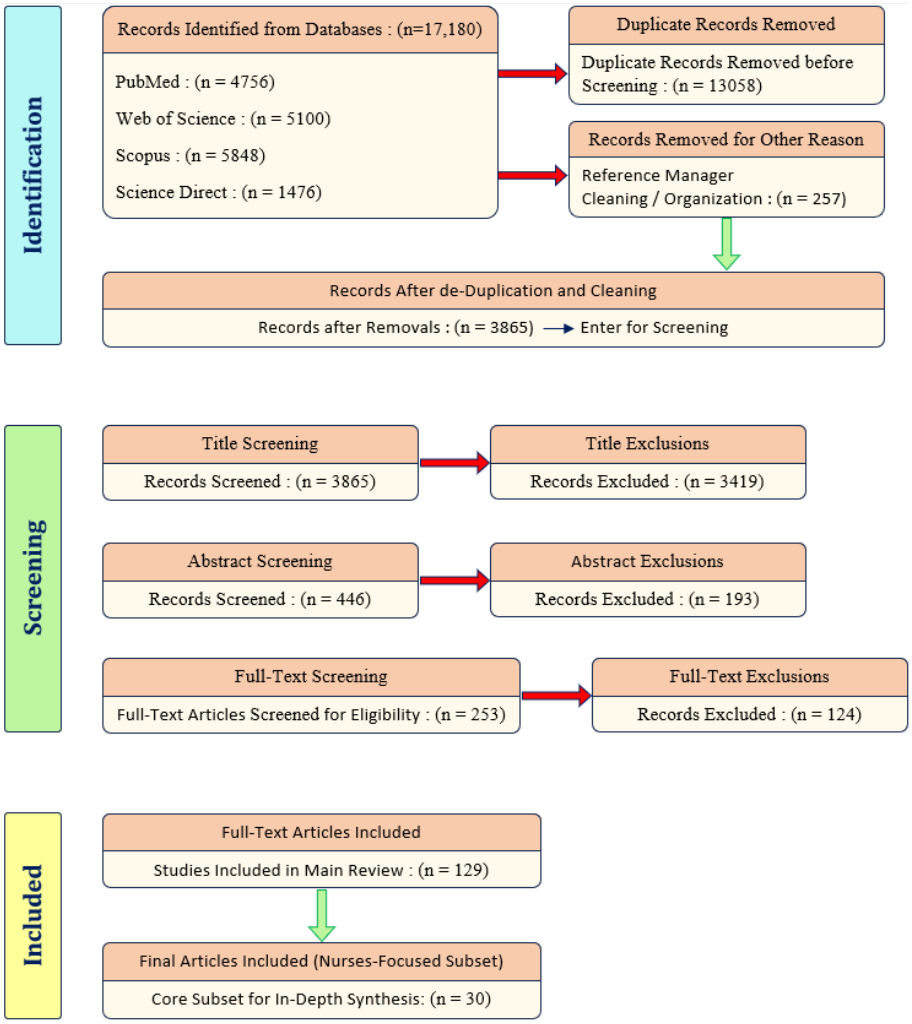

Figure 1. PRISMA flowchart

however, during full-text screening and data extraction, only studies with an English full text were included to ensure consistent data extractability for synthesis. Given the heterogeneity of study designs and methods, the primary emphasis of this review was on a thematic synthesis of evidence and the systematic extraction of key factors and findings.

Quality Appraisal or Risk of Bias Assessment

In line with scoping review methodology, a formal methodological quality appraisal or risk-of-bias assessment was not conducted. The aim of this review was to map the breadth and nature of the available evidence rather than to critically appraise study quality or estimate pooled effects.

Results

Study selection

The database search yielded 17,180 records (PubMed = 4,756; Web of Science = 5,100; Scopus = 5,848; ScienceDirect = 1,476). After reference management and deduplication, 3,865 records proceeded to title screening, of which 446 advanced to abstract screening. Full-text assessment was conducted for 253 reports, and 129 studies met the initial full-text eligibility criteria. All eligible studies (n = 129) contributed to the overall evidence mapping. For in-depth thematic synthesis, a purposive subset of studies (n = 30) was selected based on their richness of reported data, clarity in reporting determinants of turnover, and explicit focus on nurses/clinical staff. This approach is consistent with scoping review methodology, where a subset of information-rich studies may be used to facilitate deeper thematic analysis (Figure 1).

Core studies for in-depth thematic synthesis

All eligible studies (n = 129) contributed to descriptive mapping. For in-depth thematic synthesis and tabulation, a core subset (n = 30) was prioritized based on: (i) availability of English full text, and (ii) explicit focus on nurses/clinical staff turnover determinants enabling consistent cross-study extraction.

Characteristics of the included studies (core synthesis; n = 30)

The core set comprised predominantly quantitative observational studies, with most using cross-sectional survey designs (e.g.,(1, 3, 8, 10). A smaller number employed alternative designs, including a short-time-lagged longitudinal approach (7), a mixed-methods

case study incorporating qualitative insights (2), and an intervention/experimental design using structured self-management training (9). Settings were largely hospital-based, spanning general inpatient units and acute-care hospitals (1, 8), as well as specialized contexts such as emergency departments (5) and intensive care environments where ethical strain was prominent (6). Sample sizes varied substantially, from smaller unit-level or subgroup analyses (2, 7), to very large national or multi-site nurse samples (1).

Across studies, the most common outcomes were turnover intention (intention to leave the job, organization, profession, or country) (e.g.,(1, 3, 5, 10), while fewer studies examined retention-related constructs (e.g., intention to stay) or modeled intention outcomes alongside organizational/psychological mediators (4).

Thematic synthesis of determinants: four main themes

The thematic synthesis identified determinants clustered into four domains:

- Individual Factors
- Job and Organizational Factors
- Managerial and Leadership Factors
- External/Social Factors

To reduce overlap with Table 1, we highlight cross-study patterns and representative evidence below; detailed subthemes and study-by-study mappings are provided in Table 1.

Individual Factors

Across the core studies, individual-level determinants were most consistently expressed through psychological strain and resources. Burnout- and distress-related indicators (including emotional exhaustion and related wellbeing burdens) repeatedly appeared as proximal correlates of turnover intention, particularly in contexts where emotional demands were salient (4). In contrast, positive psychological resources—such as psychological capital, resilience, and empowerment—were commonly described as protective factors associated with lower turnover intention or stronger retention-related pathways (3, 5). Capability-related perceptions also mattered: lower self-efficacy coupled with higher emotional exhaustion was linked to elevated turnover intention in hospital nursing samples (10). Demographic and career-stage correlates (e.g., age, tenure, experience) were reported more often as secondary or modifying factors alongside stronger psychosocial and organizational drivers (1, 8).

Job and Organizational Factors

Job and organizational conditions emerged as central upstream determinants across settings. High workload, job demands, and constrained resources—particularly in high-pressure environments—were associated with turnover intention (e.g., emergency nursing profiles characterized by high demands and limited resources (5)). Operational stressors such as staffing constraints and limited recovery opportunities were also described as drivers of sustained strain and disengagement (2). In addition, adverse interpersonal experiences within the work context—such as mistreatment and incivility—were documented as meaningful predictors that increase psychological distress and intention to leave (7). Overall, the evidence indicates that job design and work environment quality are key levers shaping turnover-related outcomes across diverse clinical contexts.

Managerial and Leadership Factors

Managerial and leadership determinants featured prominently as modifiable factors. Leadership-related constructs were linked to turnover intention through pathways involving perceived support, recognition, and fairness-related perceptions (e.g., humble leadership associated with lower turnover intention among hospital nurses (8)). Qualitative evidence similarly highlighted experiences of not being heard or valued by senior management as contributors to leaving intentions and, in some cases, actual leaving decisions (2). Where modeled

Table 1. Thematic challenges matrix.

Main theme	Sub theme	Determinants	Reference
Individual factors	Burnout, emotional exhaustion, and psychological distress	High levels of burnout, emotional exhaustion, secondary traumatic stress, moral distress and general psychological distress substantially increased nurses' turnover intention or reduced intention to stay across multiple settings.	(1, 2, 4, 6, 7, 9-19)
	Positive psychological resources and professional commitment (resilience, psychological capital, self-efficacy, empowerment, engagement, compassion satisfaction)	Higher resilience, psychological capital, self-efficacy, internal locus of control, psychological empowerment, work engagement, compassion satisfaction and professional/occupational commitment buffered the effects of job stressors and were consistently associated with lower turnover intention and higher intention to stay.	(1, 3-5, 7, 9, 10, 12, 16, 17, 20-24)
	Demographic and career characteristics (age, gender, education, tenure, work experience)	Younger and less experienced nurses, as well as some demographic subgroups, often reported higher turnover intention and lower intention to remain in the profession, although demographic variables were usually secondary predictors.	(1, 4, 8, 12, 13, 15, 20-22, 24-28)
	Work–family conflict, lack of recovery time and personal life strain	Work–family conflict, insufficient recovery time between shifts, chronic fatigue and strain on personal life contributed to stronger turnover intention and actual decisions to leave nursing positions.	(2, 7, 13, 25, 29)
	Moral sensitivity and value-related factors	High moral sensitivity combined with frequent exposure to ethically challenging or morally distressing situations amplified moral distress and was linked to stronger turnover intention among nurses.	(6, 14)
	Personality traits and stable dispositions	Stable personality traits and individual dispositions shaped how nurses experienced job characteristics, satisfaction and burnout, indirectly influencing their turnover intention.	(19)

Table 1. Continued.

Main theme	Sub theme	Determinants	Reference
Job and organizational factors	High workload, time pressure, long shifts and overtime	Chronic high workload, time pressure, long or irregular shifts and substantial overtime were among the most consistent job-related predictors of higher turnover intention and actual turnover across studies.	(1-7, 9-20, 22-30)
	Inadequate staffing, resource shortages and difficult working conditions	Understaffing, lack of supporting resources and equipment (including PPE in pandemic contexts), and generally poor working conditions increased stress and contributed to higher turnover intention, especially in low-resource hospitals.	(2-7, 9, 11-13, 15-17, 19, 20, 24, 25, 27, 28, 30)
	Job satisfaction, pay, benefits and promotion opportunities	Low overall job satisfaction, inadequate pay and benefits, and limited promotion or career advancement opportunities were strongly associated with higher turnover intention or lower intention to stay in many settings.	(1, 3, 15, 17-20, 22, 24-28)
	Practice environment quality and job resources (autonomy, control, professional growth)	Poor practice environments—characterized by low autonomy, limited control over scheduling, lack of professional development opportunities and unsupportive team climate—were linked to stronger turnover intention, whereas richer job resources and development opportunities supported retention.	(1-5, 8, 9, 12, 13, 15-17, 19-21, 23, 24, 27, 29, 30)
	Emotionally demanding and unsafe work (COVID19 exposure, ethically difficult care, mistreatment)	Frequent exposure to ethically difficult cases, infectious disease risks (e.g., COVID19) and mistreatment or incivility from patients and families created intense emotional demands, increasing burnout and turnover intention.	(5-7, 9, 11, 13, 14, 17)
	Presenteeism culture (working while ill)	Organizational norms and workload pressures that encouraged nurses to work while ill (presenteeism) contributed to greater emotional exhaustion and higher turnover intention.	(11)
	Task design, role allocation and scope of practice	How tasks were allocated across nursing roles, particularly the extent to which duties could be delegated to LPNs, influenced workload distribution and was associated with differences in turnover rates.	(30)
Managerial and leadership factors	Leadership style (supportive, humble, ethical) versus poor or authoritarian leadership	Supportive, humble and ethical leadership styles were associated with lower turnover intention, whereas authoritarian or unsupportive leadership and poor supervision predicted higher intention to leave.	(2, 3, 6, 8, 12, 14, 18, 19, 22-24, 26-28)
	Supervisor and organizational support, recognition and organizational justice	High perceived supervisor and organizational support, fair treatment, recognition and organizational justice consistently reduced turnover intention, while low support or perceptions of unfairness increased it.	(3-5, 7, 9-25, 27-30)
	Communication, involvement in decisions and feeling valued	Lack of meaningful communication from managers, limited involvement of nurses in decision making and feeling unheard or devalued by leadership contributed to frustration and decisions to leave.	(2, 13, 15, 22, 26)
	Support for education, training and professional development	Insufficient managerial support for ongoing education and professional development weakened organizational commitment and was associated with higher turnover intentions; conversely, strong support for learning and development improved retention.	(15, 20, 21, 23, 24, 27, 29)
	Family supportive supervisory behaviors and work–life balance policies	Managers who actively supported employees' family and personal life responsibilities helped reduce work–family conflict and turnover intention, whereas a lack of such support aggravated intentions to leave.	(2, 25, 29)
	Managerial response to ethical challenges and moral distress	Limited ethical support structures, lack of ethics consultation and inadequate managerial response to morally distressing situations intensified moral distress and were associated with stronger turnover intention.	(6, 7, 14)
External/social factors	Health system constraints, structural reforms and chronic resource shortages	System-level constraints such as structural reforms, governance changes and chronic resource shortages placed additional pressure on frontline staff and undermined retention across diverse health systems.	(2-7, 11-13, 15-20, 24, 25, 27, 28, 30)
	Economic conditions, salary levels and alternative job or migration opportunities	Weak national economic conditions, low relative salaries and attractive alternative jobs or migration opportunities reinforced turnover intention and contributed to loss of nurses from public and low-resource health systems.	(6, 13, 15, 18, 19, 22, 24-28)
	Labor market and regulatory policies (scope of practice, working hours regulation, nationalization)	Regulatory frameworks and labor policies—such as scope of practice rules, working hours regulations and nationalization initiatives—shaped turnover patterns by constraining or enabling organizations to design attractive nursing roles.	(22, 25, 27, 30)
	Pandemic and crisis contexts (e.g., COVID19)	Pandemic-related factors—including fear of infection, risk to family members, rapidly changing protocols and intense surge workloads—markedly increased psychological strain and intention to leave, especially among frontline workers.	(7, 12-14, 17)
	Social perceptions, stigma and risk to family members	Negative societal attitudes or stigma towards frontline healthcare workers and concerns about transmitting disease to family members undermined morale and contributed to higher turnover intention.	(13)

explicitly, leadership-related variables were embedded within broader organizational mechanisms and climate-based explanations rather than purely individual-level accounts (8).

External and Social Factors

External/social determinants were not measured uniformly, but several studies situated turnover intention within broader contextual pressures, including workforce instability and system-level constraints during periods of shock (e.g., pandemic-era dynamics and labor market context (7)). Some findings suggested that such contextual pressures can amplify internal organizational strain and elevate turnover intention even when individual-level risks are considered (5). Overall, the core set indicates that external context may act as a background accelerator of turnover risk, particularly during system shocks or chronic resource scarcity.

Presentation of the thematic evidence base

To provide a structured overview of the extracted evidence, we summarized the findings in a thematic challenges table (Main theme → Subtheme → Determinants→ References). This matrix consolidates recurrent determinants and

explicitly links each subtheme to the contributing studies using the PDF ID-based reference convention, as shown in Table 1. Notably, high-frequency subthemes included burnout and emotional exhaustion (e.g., (4)) and empowerment/engagement related protective factors (e.g., (3)), alongside work environment and job demand conditions (e.g., (5)) and leadership/support mechanisms (e.g., (8)).

Descriptive frequency of themes

To provide an indication of the relative emphasis of the evidence base, we summarized how often each major category appeared among the 30 core studies (descriptive counts, not effect-size weighting). The most frequently represented categories were:

- Burnout and mental health (n = 6)
- Work environment and job demand (n = 5)
- Moral distress/ethics/mistreatment (n = 5)
- Leadership and management (n = 4)
- Retention programs/HR strategies (n = 4).
- Less frequently represented categories included job satisfaction/motivation (n = 2)
- Commitment/identity/resilience (n = 2)

Other multi-factor studies (n = 2)

Discussion

This review synthesized evidence from 30 core studies to clarify determinants of turnover and turnover intention among healthcare workers. Our thematic structure—individual factors, job/organizational factors, managerial/leadership factors, and external/social factors—suggests that turnover-related outcomes are best understood as the product of interacting pressures rather than any single driver. Within the core synthesis, psychological strain (e.g., burnout and emotional exhaustion) frequently appeared in close proximity to turnover intention, often alongside organizational context variables such as workload and perceived support (4, 5). This multilevel pattern is consistent with broader conceptual accounts that frame turnover intention as a downstream consequence of interconnected work conditions, motivation, satisfaction, and strain processes (31).

Across the core studies, demographic characteristics and career stage tended to function as risk modifiers rather than standalone explanations. Instead, individual-level psychological states—such as emotional exhaustion, stress, and related well-being indicators—were more consistently aligned with turnover intention and intention to stay constructs in healthcare samples (3, 10). Where core evidence highlighted the importance of psychological resources (e.g., empowerment-related variables and engagement-like constructs), these factors appeared to operate as protective buffers against leaving intentions (3, 8). This interpretation aligns with the broader literature, suggesting that individual-level resources can attenuate the impact of demands, although they rarely eliminate turnover risk when organizational pressures remain high (32). In long-term care contexts, the comparison evidence further supports that job stress and related strain processes can remain strongly associated with turnover intention, reinforcing the plausibility of stress-mediated pathways (33).

A dominant finding in our core synthesis is that job and organizational conditions—particularly workload intensity, resource constraints, and work environment quality—are central drivers of turnover intention. Core studies in demanding clinical settings highlight how high demands and constrained resources shape turnover-related outcomes (5, 6), while operational conditions and workplace experiences contribute to sustained strain and disengagement (2, 7, 34). Conceptually, this pattern aligns with demand–resource interpretations in prior modeling work, suggesting retention improves when organizations strengthen resources (e.g., autonomy, supportive climate, adequate staffing) and deteriorates when demands remain chronically elevated (31, 35). Across both the core set and comparison literature, turnover intention frequently clusters with high stress exposure and limited recovery capacity, and work conditions often remain influential even after individual characteristics are considered (32, 36).

Within the core studies, managerial and leadership factors emerged as modifiable levers shaping turnover intention through perceived support, recognition, and fairness-related perceptions (8, 14). Qualitative core evidence further emphasized relational experiences—being heard, valued, and supported—as context elements associated with decisions to stay or leave (2, 13). Comparison literature provides convergent support that leadership behaviors may be associated with turnover intention via mechanisms such as distress reduction and perceived support, shaping climate, and downstream wellbeing (37-39). However, both the core and external evidence suggest leadership effects are strongest when accompanied by structural improvements (e.g., staffing and workload redesign), because supportive management may buffer but not fully offset sustained excessive demands (5, 40).

Although external/social determinants were not measured uniformly across the core evidence, several core studies contextualized turnover intention within broader system pressures, including period-specific shocks and wider workforce instability (7, 24). In our synthesis, these factors often appeared as background accelerators—amplifying the effects of internal organizational strain rather than replacing it as a primary explanation (5, 7). This contextual framing is consistent with evidence outside the core set, suggesting that labor market alternatives and macroeconomic pressures can meaningfully shape turnover decisions, particularly when internal job conditions provide insufficient compensatory resources (35, 36).

Notably, several core studies reflect that external pressures may have different salience across settings (e.g., high acuity units vs general wards), implying that retention strategies should be calibrated to context rather

than assumed to have uniform effects across healthcare systems (6, 24). Comparative evidence in acute care contexts also suggests that management quality and system organization can become especially influential under high stress, where mismanagement and resource constraints can intensify, leaving intentions (41).

Our core synthesis includes evidence from high acuity contexts where ethical strain and intense clinical burden are prominent, suggesting that turnover intention in these settings may reflect a distinct combination of operational stress and moral/ethical load (6, 24). This observation is strengthened when compared with broader literature showing that turnover intention can intersect with organizational priorities such as patient safety culture—linking workforce stability to quality and safety outcomes rather than treating turnover as a purely HR endpoint (42). Accordingly, our findings imply that retention interventions in emergency and ICU environments should incorporate both operational supports (staffing, workload design) and psychosocial/ethical supports (communication practices, psychological safety), while also strengthening safety culture as a retention-relevant organizational asset (6, 42).

Two mechanisms from the comparison evidence help deepen the interpretation of our core themes. First, interprofessional relationships and collaboration can contribute to turnover intention, suggesting that the relational architecture of care delivery matters for retention alongside workload and pay (43). This fits naturally with our core observation that "work environment" is not only structural but also social, shaping the everyday experience of support, conflict, and team functioning (2, 13). Second, pressured or compulsory extra-role behaviors may act as a hidden workload that increases strain and turnover intention (44). This mechanism offers a useful interpretive lens for core studies where staff report escalating demands beyond formal job requirements, especially in under-resourced settings (5, 7).

Taken together, our thematic mapping supports an integrated pathway in which job/organizational pressures and leadership climate influence turnover outcomes through proximal psychological mechanisms such as stress, burnout, engagement, and satisfaction. In the core set, this pattern is visible where burnout-related constructs and work environment conditions co-occur with turnover intention outcomes (4, 5), while leadership-linked variables often appear as modifiable factors shaping the work experience and retention orientation (8, 14, 45). The broader literature provides convergent support for this model, including work that frames turnover intention as embedded in a wider system of motivation, satisfaction, and absenteeism-related dynamics (31), and studies emphasizing the interplay of demand and resource conditions (35).

The convergent evidence suggests that effective retention strategies should be designed as multicomponent programs rather than single-point fixes. At the organizational level, priority should be given to work redesign that reduces chronic overload and improves staffing adequacy, particularly in high-pressure contexts where demand–resource imbalance is prominent (5, 35). In parallel, leadership development and managerial practices that enhance perceived support, fairness, and psychological safety are likely to improve the relational climate that underpins retention, especially when linked to mechanisms such as reduced distress and improved engagement (8, 37). Given that team functioning and interprofessional relationships may influence leaving intentions, interventions that strengthen collaboration and address conflict pathways can add retention value beyond structural changes alone (13, 43). Finally, workforce policies should be sensitive to external pressures (e.g., labor market alternatives and household economic strain), because these factors can undermine internal improvements if not acknowledged through flexible scheduling, family supportive policies, and context-specific incentives (7, 36). In high acuity settings where ethical strain and operational stress co-occur, integrating psychosocial supports with safety culture initiatives may yield dual benefits for staff retention and care quality (6, 42).

A key strength of this work is the structured thematic synthesis, which allowed integration of heterogeneous study designs and operational definitions into an interpretable framework aligned with practical retention levers. However, several limitations should be acknowledged. First, much of the underlying evidence was observational and frequently cross-sectional, which limits causal inference and may be vulnerable to common-method bias, particularly when predictors and outcomes (e.g., work environment perceptions and turnover intention) are measured via self-report in the same survey/timepoint, potentially inflating observed associations. Second, studies varied in their definitions and measurements of turnover-related outcomes (e.g., intention to leave vs. intention to stay, organizational vs. professional leaving intentions), which constrain direct comparability and preclude a fully quantitative pooled estimate. Third, heterogeneity in populations, settings, and contextual conditions means that the relative importance of determinants may differ across clinical areas and health systems, particularly in high acuity contexts where ethical strain and operational stress may be elevated (6, 24). Accordingly, the conclusions should be interpreted as identifying robust thematic patterns rather than single universal effect sizes.

Conclusion

In conclusion, the findings of this scoping review suggest that addressing turnover may require coordinated attention to organizational, leadership, and contextual factors. Strategies that simultaneously address excessive demands, strengthen supportive and fair work environments, and recognize external constraints are most likely to produce durable improvements in retention and workforce stability—particularly in high-pressure clinical

settings where turnover risk may carry downstream consequences for service continuity and care quality.

Declaration

Artificial intelligence (AI) tools were used to assist with language editing, translation, and word refinement. The authors reviewed and verified all content and take full responsibility for the final manuscript.

Authors' Contribution

Conceptualization: Ali Bahrami, Yousef Shaabani
Formal analysis: Ali Bahrami, Yousef Shaabani
Methodology: Ali Bahrami, Yousef Shaabani
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Validation: Ali Bahrami, Yousef Shaabani
Visualization: Ali Bahrami
Writing–original draft: Ali Bahrami
Writing–review & editing: Ali Bahrami, Yousef Shaabani

Competing Interests

The authors declare no conflicts of interest.

Ethical Approval

No human or animal subjects were involved.

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Supplementary files

Supplementary file 1 contains Table S1.

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