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Positive and Negative Leadership Styles and Burnout among Nurses: A Systematic Review and Meta-Analysis

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ABSTRACT: Although burnout among nurses carries serious consequences for staff well-being, patient safety, and the quality of care delivered, leadership remains one of the few organizational factors that can realistically be changed. This review sought to quantitatively synthesize the available evidence linking both supportive and harmful leadership styles to burnout among nurses. We systematically searched PubMed, ScienceDirect, and CINAHL/EBSCO for quantitative, English-language studies published from 2016 through 2026. Of the 47 studies retained for the review (protocol pre-registered as PROSPERO CRD420261430556), 33 provided correlation-based effect sizes suitable for the random-effects meta-analyses. Positive leadership was significantly associated with lower burnout (25 studies, $n = 10,308$; $r = -0.294$, 95% CI $[-0.355, -0.231]$, $p < 0.001$), while negative leadership was significantly associated with higher burnout (8 studies, $n = 5,437$; $r = 0.531$, 95% CI $[0.356, 0.669]$, $p < 0.001$). Positive leadership was linked to lower overall burnout, emotional exhaustion, and depersonalization; negative leadership showed its strongest documented association with emotional exhaustion ($r = 0.552$, 95% CI $[0.317, 0.723]$). Constructive styles (authentic, transformational, servant, ethical, empowering leadership) were linked to favourable outcomes, whereas destructive styles (toxic, despotic, authoritarian, exploitative, passive leadership) were linked to poorer outcomes. These findings support investment in constructive leadership development alongside efforts to curb harmful supervisory practices, though the substantial heterogeneity and predominantly observational nature of the evidence base warrant caution. To our knowledge, this review is the first to jointly pool correlations for both supportive and harmful leadership against multiple burnout dimensions in the nursing literature.

1. INTRODUCTION

Nurses carry a heavy load: shift work, clinical complexity, constant accountability for patient outcomes, and the emotional weight of caring for people in distress. That combination makes burnout a persistent problem for the profession (Dall'Ora et al., 2020; Li et al., 2024). The World Health Organization frames burnout as an occupational phenomenon, not a medical condition, and ties it to prolonged job stress that workers and organizations failed to keep under control. It shows up in three

ways: exhaustion, a growing cynicism toward the job, and a shrinking sense of accomplishment at work (World Health Organization, 2019). Nurses stay in constant contact with patients, families, physicians, and the wider care team, so their well-being shapes the continuity and quality of the care those people receive (Cummings et al., 2018; Li et al., 2024).

Leadership behaviour is one organizational factor that shapes nurses' work environment and well-being more than most (Cummings et al., 2018; Niinihuhta and Häggman-Laitila, 2022). Transformational, authentic, servant, ethical, empowering, and inclusive leadership build trust, motivate staff, create psychological safety, and support professional growth (Cummings et al., 2018; Niinihuhta and Häggman-Laitila, 2022; Avolio and Gardner, 2005). Toxic, destructive, despotic, exploitative, passive-avoidant, laissez-faire, and authoritarian leadership do the opposite: poor communication, unfair treatment, unclear roles, fear, and conflict wear nurses down and leave them without adequate support (Einarsen et al., 2007; Schyns and Schilling, 2013; Tepper, 2000).

The Job Demands-Resources model offers one way to explain this link. Burnout builds when job demands outpace the resources available to meet them (Bakker and Demerouti, 2017). Constructive leadership functions as a resource in this framework: it supplies emotional support, role clarity, autonomy, recognition, fairness, and room to grow professionally, and those resources cut emotional exhaustion and withdrawal (Boamah et al., 2017; Cummings et al., 2018). Harmful leadership works the other way. It behaves like an added demand, piling on emotional strain, uncertainty, friction between colleagues, and a loss of control over one's own work (Bakker and Demerouti, 2017; Maslach and Leiter, 2016; Schyns and Schilling, 2013; Tepper, 2000).

Several prior reviews already connect leadership to nurse burnout and broader well-being at work. Wei et al. (2020) identified authentic and transformational leadership as potentially protective against burnout. Niinihuhta and Häggman-Laitila (2022) placed leadership within a wider well-being framework. Cummings et al. (2018) linked leadership style to workforce and work-environment outcomes more broadly. None of these reviews pooled correlation estimates across supportive and harmful leadership categories statistically, and none tested how the association shifts across individual burnout dimensions. A quantitative synthesis can close that gap and establish both the direction and the size of these relationships. This systematic review and meta analysis addresses that gap through the following research questions:

RQ1. How does positive leadership relate to burnout among nurses?

RQ2. How does negative leadership relate to burnout among nurses?

RQ3. Which specific leadership styles appear most often in the literature, and which show the most consistent association with burnout or its dimensions?

RQ4. How does the association between leadership style and burnout differ across burnout dimensions, specifically emotional exhaustion, depersonalization, and reduced personal accomplishment?

To answer these questions, this review pooled the quantitative evidence on how supportive and harmful leadership styles relate to nurse burnout. We pooled correlations separately for positive and negative leadership, tested their links to overall burnout, emotional exhaustion, and depersonalization, and reported any outcome with too few comparable data points narratively instead of statistically.

2. MATERIALS AND METHODS

2.1 Study Design and Protocol Registration

This review combines a systematic review with a correlational meta-analysis to examine how leadership styles relate to burnout among nurses. We followed the Preferred Reporting Items for Systematic Reviews and Meta Analyses 2020 statement (PRISMA 2020) (Page et al., 2021) throughout. Before selecting any study or extracting any data, we drafted a protocol and registered it prospectively with the International Prospective Register of Systematic Reviews (PROSPERO; CRD420261430556).

2.2 Search Strategy and Eligibility Criteria

We systematically searched three databases (PubMed, ScienceDirect, and CINAHL/EBSCO) from inception through June 2026, combining keyword clusters for nurses, leadership, leadership styles, and burnout. Search terms included nurse, registered nurse, nursing staff, leadership, leadership style, transformational leadership, authentic leadership, servant leadership, ethical

leadership, empowering leadership, toxic leadership, destructive leadership, authoritarian leadership, and burnout. Each database uses different syntax, so we adapted the search string to fit each platform; the full strings appear in Supplementary Table S1.

A study qualified for inclusion if it met all six criteria: (1) used a quantitative cross-sectional, longitudinal, cohort, survey-based, or controlled quasi-experimental design; (2) sampled nurses or nursing staff; (3) assessed a clearly defined leadership style or behaviour; (4) measured overall burnout or at least one burnout dimension; (5) reported a quantitative association between leadership and burnout; and (6) was published as an English-language journal article between 2016 and 2026.

We excluded editorials, commentaries, protocols, conference abstracts, qualitative studies, non-peer-reviewed work, studies in non-nursing populations, studies of nursing students not yet in clinical practice, and any study that did not assess a specific leadership style or burnout outcome. To qualify for the meta-analysis specifically, a study needed a reported zero-order correlation coefficient linking leadership to burnout; studies without comparable correlation data went into the narrative synthesis instead.

2.3 Study Selection, Data Extraction, and Quality Assessment

We import the retrieve records into reference management software and remove duplicates before screening. We then screen titles and abstracts against the eligibility criteria and retrieved full texts for studies that looked potentially eligible. We documented every exclusion decision; Figure 2 shows the full selection process as a PRISMA 2020 flow diagram.

We extracted the data using a standardized spreadsheet to extract author, publication year, country, study design, setting, sample size, leadership style and its measurement instrument, burnout outcome and its measurement instrument, the reported correlation coefficient, and the main findings. When a study reported more than one burnout outcome, we prioritized overall burnout scores; failing that, we chose emotional exhaustion, since it is the most commonly reported burnout dimension.

We group the reported leadership styles into two categories. Positive/constructive covered transformational, authentic, servant, ethical, empowering, clinical, engaging, inclusive, proactive, and related approaches. Negative/destructive covered toxic, destructive, despotic, narcissistic, exploitative, passive-avoidant, tyrannical, laissez-faire, and authoritarian leadership. Studies that could not enter the quantitative pooling still contributed: we captured their patterns through thematic synthesis instead (Thomas and Harden, 2008).

We appraise the methodology quality of each included study with the Joanna Briggs Institute critical appraisal checklist that matched its design (Joanna Briggs Institute, 2024). We scored each item as "Yes," "No," "Unclear," or "Not applicable," then classified studies into low, moderate, or high risk of bias tiers based on the pattern of "No" or "Unclear" ratings. These risk-of-bias scores served a descriptive purpose only; we did not drop any study on that basis alone.

2.4 Statistical Analysis

We used the Pearson correlation coefficient (r) linking leadership and burnout as the primary effect size throughout. Before pooling, we converted individual correlations to Fisher's Z values, then transformed the pooled estimates back into correlation coefficients for easier interpretation. We modelled positive and negative leadership separately, using random effects meta analysis with the restricted maximum likelihood estimator.

For each pooled model, we derived the effect estimate, its 95% confidence interval, the Z statistic, and a two-sided p -value. We quantified heterogeneity across studies with Cochran's Q , the I^2 index, and the between-study variance estimate (τ^2) (Higgins et al., 2003). We also computed prediction intervals to show the likely range of effects in future, comparable settings. We ran all statistical procedures in R using the metafor package (Viechtbauer, 2010) and set statistical significance at $p < 0.05$ a priori.

We ran outcome-specific subgroup analyses wherever at least three studies contributed comparable data on overall burnout, emotional exhaustion, depersonalization, or reduced personal accomplishment, and described outcomes with fewer than three studies narratively instead. An exploratory meta-regression then compared the pooled associations among the three most commonly studied positive leadership styles: authentic, ethical, and transformational leadership.

We screened for small-study effects by inspecting funnel plots and applying Egger's regression test (Egger et al., 1997). We also ran leave one out sensitivity analyses to check whether any single study drove the pooled results disproportionately. Fewer than

10 studies fed the negative leadership model, so we read its small study effect results with corresponding caution (Sterne et al., 2011).

2.5 Bibliometric Mapping

The thematic landscape of the retrieved literature was mapped through a keyword co-occurrence analysis conducted in VOSviewer (Van Eck and Waltman, 2010). Bibliographic records for all studies retrieved through the Section 2.2 search strategy were exported from PubMed, Science Direct, and CINAHL/EBSCO, and a custom thesaurus file was used to consolidate variant spellings and phrasings of the same keyword prior to mapping. The co-occurrence analysis used full counting, applying a minimum occurrence threshold of five, which 199 terms met. Nodes in the resulting overlay map were colour-coded by each term's average year of publication (2021–2024) and sized according to how frequently the term occurred.

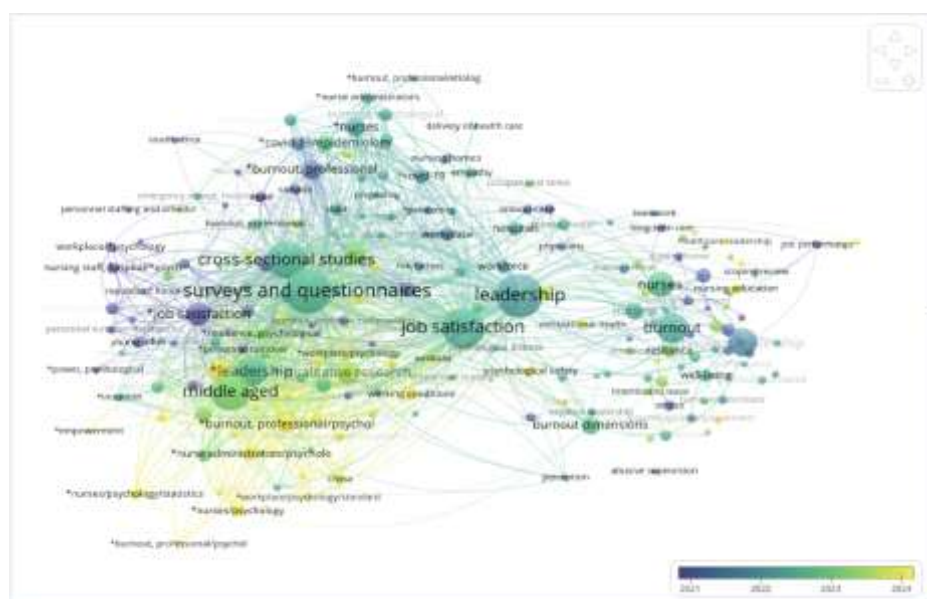


Figure 1. Keyword Co-occurrence Network Map (Overlay Visualization by Average Publication Year)

Three broad thematic clusters emerged from the map. Terms associated with methodology, such as cross-sectional studies and job satisfaction, dominated an earlier cluster from 2021–2022. A second, densely connected cluster tied leadership, burnout, and nurses together throughout the entire period examined. The most recent cluster (2023–2024) brought together positive leadership, negative leadership, burnout dimensions, resilience, and psychological capital, pointing to a growing tendency in the field to distinguish leadership valence and specific burnout dimensions a shift that mirrors the focus of the present review.

2.6 PRISMA 2020 Checklist

In the interest of transparent, complete reporting, this review was conducted in accordance with the 27 item PRISMA 2020 checklist (Page et al., 2021). A section-by-section summary of checklist compliance is presented in Table 1.

Table 1. Summary of PRISMA 2020 Reporting Compliance by Section

PRISMA 2020 section	Items	Items addressed	Notes
Title	1	1/1	—
Abstract	1	1/1	—
Introduction	2	2/2	—

Methods	11	11/11	Certainty assessment (Item 15) explicitly reported as not performed; see Section 4
Results	7	7/7	Certainty of evidence (Item 22) explicitly reported as not performed; see Section 4
Discussion	1	1/1	—
Other information	4	4/4	Registration (Section 2.1); funding, competing interests, and data availability (Declarations)

Note. Every one of the 27 checklist items was addressed. For two of them Items 15 and 22, both relating to certainty of evidence, compliance took the form of an explicit statement that a formal certainty assessment (e.g., GRADE) was not undertaken, in line with PRISMA 2020's guidance that non-applicable or unperformed items be stated outright rather than left out of the report.

3. RESULTS AND DISCUSSION

3.1 Study Selection

Figure 2 traces the full study selection procedure. Of the records that survived screening, 47 satisfied the eligibility criteria and entered the systematic review, and 33 of these supplied correlation-based effect estimates adequate for the primary meta-analysis; the remaining 14 fed into the narrative synthesis instead.

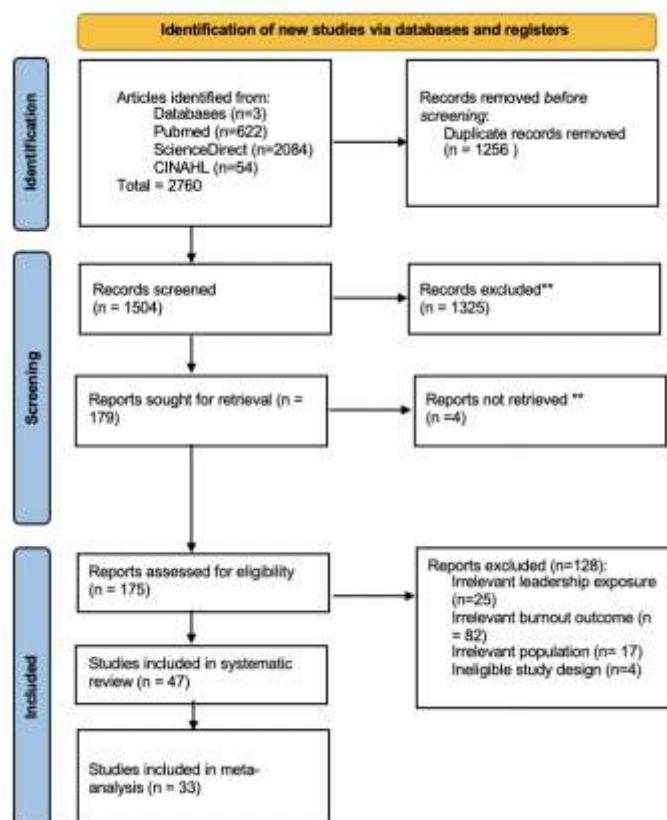


Figure 2. PRISMA 2020 Flow Diagram of Study Selection

3.2 Study Characteristics of Included Studies

Publication dates for the included studies spanned 2016 to 2026, drawing on evidence from 22 countries. Hospital and hospital-affiliated settings accounted for the bulk of the investigations. China led in study volume ($n = 10$), with Saudi Arabia and Canada tied for second ($n = 5$ each).

In terms of design, the evidence base was dominated by 36 analytical cross-sectional studies, complemented by 10 longitudinal or temporally separated studies and a single controlled quasi-experimental study, together enrolling 22,796 participants.

Studies examining positive leadership approaches ($n = 34$) outnumbered those examining negative leadership styles ($n = 13$). Emotional exhaustion emerged as the burnout outcome assessed most often, and burnout itself was most frequently captured using the Maslach Burnout Inventory (MBI) or one of its adapted versions (Maslach and Jackson, 1981; Schaufeli et al., 1996). A full breakdown of study characteristics appears in Supplementary Table S2.

This uneven split itself speaks to RQ3: with positive leadership styles appearing in the literature more than twice as often as negative ones, constructive leadership has clearly drawn substantially more research attention than its harmful counterpart.

Table 2. Summary Characteristics of Included Studies ($N = 47$)

Characteristic	Category / summary	n (%)
Publication period	2016–2026	47 (100.0)
Study design	Analytical cross-sectional	36 (76.6)
	Longitudinal / temporally separated	10 (21.3)
	Controlled quasi-experimental	1 (2.1)
Leadership category	Positive leadership	34 (72.3)
	Negative leadership	13 (27.7)
Primary burnout outcome	Emotional exhaustion only	26 (55.3)
	Overall burnout only	16 (34.0)
	Multiple burnout dimensions	5 (10.6)
Country	China	10 (21.3)
	Saudi Arabia	5 (10.6)
	Canada	5 (10.6)
	United States	4 (8.5)
	Pakistan	4 (8.5)
	Other 17 countries	19 (40.4)
Sample size	Total sample	22,796
	Median (range)	318 (78–2,337)

3.3 Risk of Bias Assessment

We appraise the methodology quality of each included study with the Joanna Briggs Institute (JBI) critical appraisal tool corresponding to its design (Joanna Briggs Institute, 2024), scoring every item as "Yes," "No," "Unclear," or "Not applicable" and then sorting studies into low, moderate, or high risk-of-bias tiers according to how many "Unclear" or unfavourable ratings they accumulated. This assessment served a descriptive purpose only; no study was dropped from the review on the strength of its risk-of-bias outcome alone.

3.4 Main Meta-analysis

The core meta-analysis examined how leadership style corresponds to burnout among nurses, expressing the pooled effect size as Pearson's correlation coefficient (r). As in the overall approach described earlier, individual correlations were first converted to Fisher's Z values for pooling and then back-transformed into correlation coefficients to ease interpretation.

Positive and negative leadership were modelled in separate random-effects analyses using the restricted maximum likelihood approach, each yielding a pooled correlation estimate, 95% confidence interval, Z statistic, and two-sided p-value. Heterogeneity across the contributing studies was gauged via Cochran's Q statistic, the I^2 index, and the between-study variance (τ^2).

The results pointed to a significant inverse relationship between positive leadership and burnout: across the 25 contributing studies ($n = 10,308$), higher levels of positive leadership tracked with lower burnout ($r = -0.294$, 95% CI $[-0.355, -0.231]$, $p < 0.001$), albeit against a backdrop of considerable heterogeneity ($I^2 = 91.2\%$).

Negative leadership moved in the opposite direction, showing a significant positive relationship with burnout: the eight contributing studies ($n = 5,437$) linked greater negative leadership to more burnout ($r = 0.531$, 95% CI $[0.356, 0.669]$, $p < 0.001$), again with substantial between-study heterogeneity ($I^2 = 98.3\%$).

Table 3. Main Meta-analysis Results for Leadership and Burnout Among Nurses

Meta-analysis	k	Total n	Pooled r	95% CI	p-value	I^2 (%)	Prediction interval
Positive leadership and burnout	25	10,308	-0.294	-0.355 to -0.231	<0.001	91.2	-0.555 to 0.020
Negative leadership and burnout	8	5,437	0.531	0.356 to 0.669	<0.001	98.3	-0.056 to 0.845

Note. Estimates reflect random-effects models fitted by restricted maximum likelihood, with correlations pooled on the Fisher's Z scale and converted back to r for ease of interpretation. Abbreviations (used throughout Tables 3–4): k, number of contributing studies; r , pooled correlation coefficient; CI, confidence interval; I^2 , proportion of total variability attributable to heterogeneity.

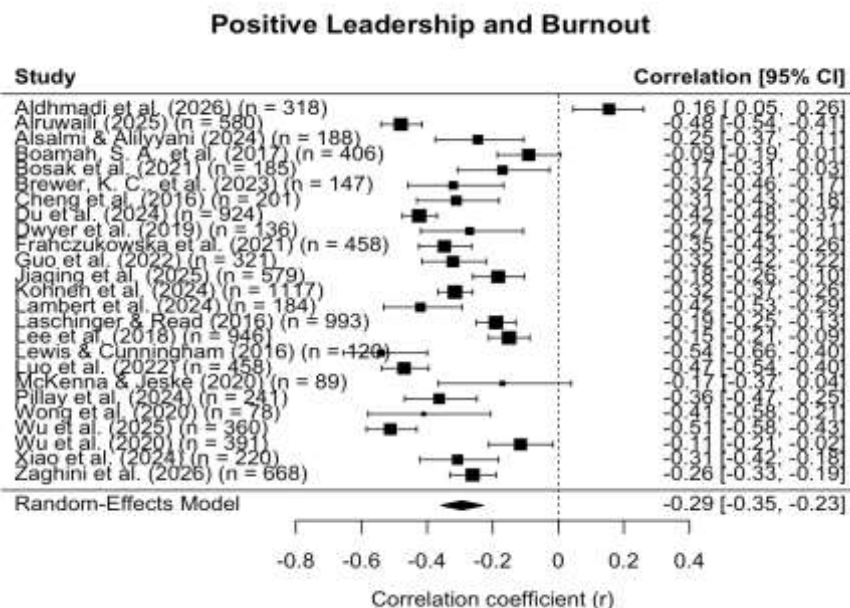


Figure 3. Forest Plot of the Association Between Positive Leadership and Burnout Among Nurses

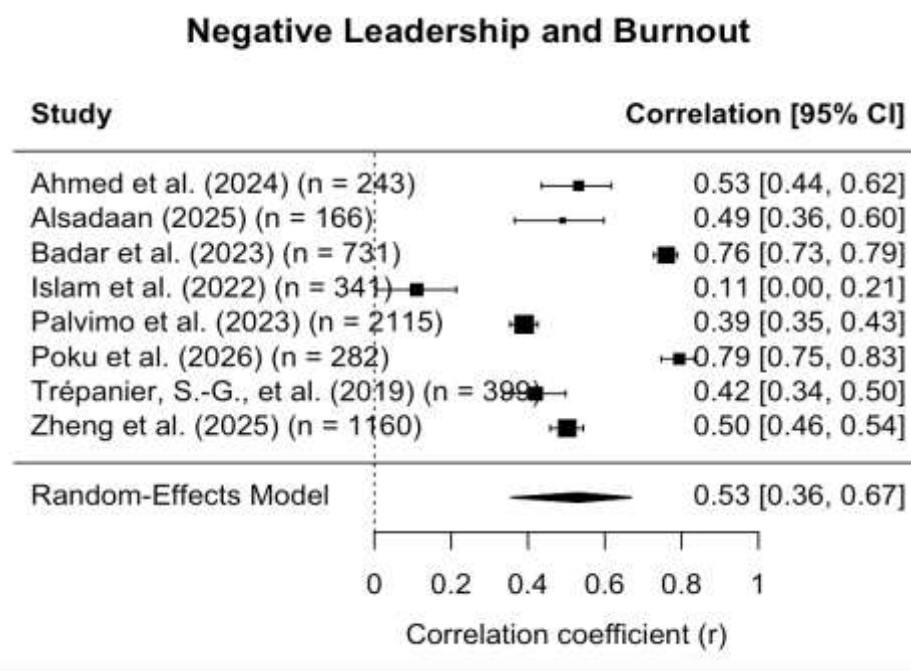


Figure 4. Forest Plot of the Association Between Negative Leadership and Burnout Among Nurses

3.5 Subgroup Analysis

Building on RQ1, RQ2, and RQ4, we next broke the analysis down by individual burnout dimension. This subgroup approach confirmed that positive leadership tracked with reductions in overall burnout, emotional exhaustion, and depersonalization alike, while negative leadership was tied specifically to a rise in emotional exhaustion.

These associations were not uniform in strength. For positive leadership, the tightest relationship was with depersonalization ($r = -0.349$), followed by overall burnout ($r = -0.309$) and then emotional exhaustion ($r = -0.287$); for negative leadership, emotional exhaustion stood out as by far the strongest link ($r = 0.552$).

Taken together, these patterns confirm that the leadership–burnout relationship is not a single, uniform effect but instead shifts in strength across the specific dimension of burnout under consideration.

Table 4. Outcome-Specific Subgroup Meta-analysis of Leadership and Burnout Among Nurses

Leadership category	Burnout outcome	k	Pooled r	95% CI	p-value	I ² (%)
Positive leadership	Overall burnout	11	−0.309	−0.415 to −0.195	<0.001	92.0
Positive leadership	Emotional exhaustion	16	−0.287	−0.347 to −0.224	<0.001	87.5
Positive leadership	Depersonalization	3	−0.349	−0.513 to −0.160	<0.001	87.4
Negative leadership	Emotional exhaustion	6	0.552	0.317 to 0.723	<0.001	98.5

Note. Modelling approach and abbreviations follow Table 3. The positive leadership–depersonalization estimate is based on only three studies and should accordingly be read with caution.

3.6 Exploratory Meta-Regression of Positive Leadership Styles

Turning to RQ3, we ran an exploratory meta-regression contrasting the pooled effects of the three positive leadership styles that appeared most often in the literature: authentic, ethical, and transformational leadership.

Each of the three styles was significantly and negatively associated with burnout on its own, yet the moderator test found no statistically meaningful difference in effect size between them ($QM = 2.68$, $df = 2$, $p = 0.262$). In answer to RQ3, then, authentic, ethical, and transformational leadership remain the most heavily studied positive styles in this literature, but none can be said to outperform the others in its association with burnout.

Table 5. Exploratory Meta-Regression Comparing Positive Leadership Styles

Leadership style	k	Pooled r	95% CI	p-value
Authentic leadership	9	−0.203	−0.310 to −0.091	<0.001
Ethical leadership	4	−0.311	−0.393 to −0.225	<0.001
Transformational leadership	6	−0.329	−0.456 to −0.189	<0.001
Moderator test (style)	—	—	—	$QM = 2.679$, $df = 2$, $p = 0.262$

Note. Random-effects models were estimated using restricted maximum likelihood. Analysis restricted to the three most frequently examined positive leadership styles; $k = 19$ of 25 studies in the positive leadership meta-analysis. k = number of studies; r = pooled correlation coefficient; CI = confidence interval; QM = omnibus test of moderators (categorical leadership style).

3.7 Narrative Synthesis of Outcomes Not Pooled

A handful of leadership–burnout relationships fell short of the three-study threshold needed for formal pooling and are reported here narratively instead. Two studies linked positive leadership, specifically clinical leadership ($r = -0.430$) and authentic leadership ($r = -0.312$), to lower reduced personal accomplishment (Luo et al., 2022; Pillay et al., 2024).

On the harmful side, overall burnout was elevated in association with tyrannical or laissez-faire leadership ($r = 0.420$) and authoritarian leadership ($r = 0.502$) (Trépanier et al., 2019; Zheng et al., 2025), and a single study additionally tied destructive leadership to both higher depersonalization ($r = 0.370$) and reduced personal accomplishment (Alsadaan, 2025).

Taken as a whole, this narrative evidence echoes the direction of the pooled results: constructive leadership tends to accompany better burnout-related outcomes, while harmful leadership tends to accompany worse ones.

3.8 Assessment of Small-Study Effects and Sensitivity Analysis

Egger's regression test found no statistically significant funnel-plot asymmetry for positive leadership ($z = -0.564$, $p = 0.573$), and the negative-leadership model likewise showed no significant asymmetry ($z = 0.109$, $p = 0.913$), though with only eight studies feeding that analysis, this latter result warrants a cautious reading.

The leave-one-out procedure confirmed the stability of the pooled estimates: removing any single study one at a time left the results statistically significant throughout, with positive-leadership correlations holding between -0.311 and -0.283 and negative-leadership correlations between 0.479 and 0.578 .

In short, no individual study was found to be exerting undue influence over either the direction or the significance of the pooled findings.

3.9 Discussion

This review set out to test leadership as a modifiable lever for reducing burnout among nurses, a question that matters because burnout is far from a purely individual problem: it is tied to weaker care quality, lower patient satisfaction, more adverse events, and compromised patient safety more broadly (Dall'Ora et al., 2020; Li et al., 2024). The pathway plausibly runs through leadership's influence on nurses' day-to-day work environment, interpersonal dynamics, access to resources, and sense of organizational support (Cummings et al., 2018; Hult et al., 2023; Niinihuhta and Häggman-Laitila, 2022).

Our central finding, that lower burnout accompanies positive leadership and higher burnout accompanies negative leadership, fits comfortably within Job Demands–Resources (JD-R) theory, which holds that adequate workplace resources can offset the toll that sustained job demands take on employee well-being (Bakker and Demerouti, 2017). In a nursing context specifically, styles such as authentic, transformational, servant, ethical, and empowering leadership plausibly build up autonomy, fairness, recognition, social support, professional growth, and psychological safety (Cummings et al., 2018; Niinihuhta and Häggman-Laitila, 2022). In turn, these resources may equip nurses to cope more effectively with emotional strain, workload, staffing pressure, and interpersonal conflict (Bakker and Demerouti, 2017; Dall'Ora et al., 2020). This reading is consistent with earlier work tying authentic leadership and empowering work environments to less burnout and greater job satisfaction among nurses (Boamah et al., 2017). A caveat is in order, though: since the vast majority of these studies were observational, they cannot establish that leadership causes lower burnout, only that the two are associated.

On the flip side of the ledger, negative leadership tracked with more burnout, most notably emotional exhaustion. Styles such as toxic, destructive, despotic, authoritarian, exploitative, tyrannical, laissez-faire, and passive-avoidant leadership likely drive this up by breeding fear, perceived unfairness, mistrust, weak psychological safety, poor communication, and thin support (Mackey et al., 2017; Montano et al., 2017; Schyns and Schilling, 2013). This dovetails with earlier evidence connecting destructive leadership to worse mental health, lower job satisfaction, emotional exhaustion, disengagement, and withdrawal (Montano et al., 2017; Schyns and Schilling, 2013). Hostile supervision in particular may cut deep, since it chips away at nurses' sense of dignity, fairness, and control over their own work (Mackey et al., 2017). Layered onto the already-demanding nature of nursing work, such behaviour could speed up the depletion of emotional and psychological reserves (Dall'Ora et al., 2020; Maslach and Leiter, 2016).

As the three positive styles studied most often, authentic, ethical, and transformational leadership each carried a statistically significant negative association with burnout outcomes, and the moderator test found no meaningful difference in magnitude between them ($QM = 2.68$, $df = 2$, $p = 0.262$). That pattern echoes prior reviews suggesting that several constructive leadership approaches can yield favourable workforce outcomes, rather than pointing to any single leadership model as inherently superior (Cummings et al., 2018; Hult et al., 2023; Niinihuhta and Häggman-Laitila, 2022). The considerable heterogeneity left unexplained by leadership style alone hints that factors such as nursing setting, country, how burnout was measured, participant characteristics, and organizational conditions may matter more than the specific leadership label applied.

Breaking burnout down by dimension revealed that leadership's influence is not uniform. Positive leadership tracked with reductions across overall burnout, emotional exhaustion, and depersonalization alike, while negative leadership's strongest link was to emotional exhaustion specifically. That emphasis on emotional exhaustion fits with its standing as the core burnout component, reflecting the gradual depletion of emotional and physical reserves under sustained occupational strain (Maslach and Leiter, 2016; Maslach et al., 2001). Supportive leadership may ease this exhaustion by shoring up workplace support,

sharpening role clarity, fostering fairness, inviting participation, and widening access to organizational resources (Bakker and Demerouti, 2017; Boamah et al., 2017).

A link between positive leadership and lower depersonalization also emerged, though this result rests on just three studies and deserves a cautious reading. Depersonalization likely surfaces as an emotional-distancing coping strategy when nurses face prolonged stress, thin resources, or difficult workplace relationships (Maslach and Leiter, 2016; Maslach et al., 2001). As for reduced personal accomplishment, the studies reporting on it were too sparse and incomparable to support formal pooling against positive leadership.

It is worth situating these pooled effect sizes against the broader scale of the nurse burnout problem. Global systematic reviews have shown that burnout symptoms turn up across countries and clinical specialties alike, varying considerably by region, care setting, and how it was measured (Woo et al., 2020). It has also been reliably tied to weaker patient safety, lower care quality, reduced patient satisfaction, less organizational commitment, and diminished productivity (Jun et al., 2021). Longitudinal workforce data further show emotional exhaustion predicting staff turnover, which suggests burnout can drain a unit of its experienced nurses rather than simply causing passing distress (Kelly et al., 2021). And while burnout and depression correlate strongly, they are conceptually distinct, which is a reminder that leadership-focused interventions ought to complement, rather than substitute for, proper mental-health screening and support (Chen and Meier, 2021). Seen against that backdrop, even a modest burnout reduction attributable to constructive leadership could carry real weight for workforce stability and patient care.

Our pooled results also favour a resource-based explanation of leadership's effects over one anchored purely in leadership labels. Empowering behaviours, such as granting autonomy and inviting participation in decisions, have specifically been tied to lower emotional exhaustion and better burnout outcomes among nurses (Mudallal et al., 2017). Transformational leadership seems to work along comparable lines, shaping employee well-being indirectly through workplace characteristics, relationships, and organizational processes rather than via any single direct pathway (Arnold, 2017).

One plausible shared mechanism linking supportive leadership to nurse well-being is psychological safety. Constructive leader-employee relationships are known to be a key precursor of psychological safety, which in turn fosters learning, performance, and voluntary contribution at work (Frazier et al., 2017). Longitudinal work on the JD-R model similarly points to job demands, resources, burnout, and engagement as dynamically and reciprocally intertwined over time (Lesener et al., 2019). These dynamics may go some way toward explaining the marked heterogeneity in our meta-analysis: the same named leadership style could produce different results depending on whether it genuinely delivers more autonomy, support, fairness, voice, and workload relief.

Practically speaking, the lack of any meaningful gap between authentic, ethical, and transformational leadership implies healthcare organizations would do better to cultivate specific, observable leadership behaviours than to chase one "best" leadership framework. Prior evidence points to relational leadership approaches broadly (transformational, authentic, resonant, servant) as consistently tied to higher nurse job satisfaction, in contrast to passive-avoidant and laissez-faire styles, which tend to leave nurses worse off (Specchia et al., 2021). Training programs may well strengthen these relational leadership skills among nursing leaders, though how much they succeed likely hinges on organizational context and how the training is implemented (Cummings et al., 2021).

Beyond well-being, transformational leadership specifically has also been linked to stronger nurse retention, higher job satisfaction, and better care-quality outcomes in hospital settings (Conroy et al., 2023). On that basis, leadership development efforts would do well to prioritize open communication, ethical decision-making, staff involvement, empowerment, constructive feedback, recognition, conflict resolution, and psychological safety. That said, leadership improvements alone are unlikely to eradicate burnout, given that nurse well-being also hinges on staffing adequacy, workload, scheduling, organizational support, and broader working conditions (Dall'Ora et al., 2020; Li et al., 2024). The most promising path forward, then, likely pairs leadership development with structural changes that ease excessive job demands and actively discourage toxic, destructive, abusive, authoritarian, and passive leadership behaviours (Mackey et al., 2017; Schyns and Schilling, 2013).

Drawing on 47 studies spanning numerous countries and nursing contexts, this review applied random-effects meta-analysis alongside subgroup analyses, risk-of-bias appraisal, small-study effect checks, and sensitivity testing, a reasonably comprehensive toolkit. Even so, the predominantly cross-sectional design of the underlying evidence limits what can be said

about causality. Heterogeneity ran high throughout both the main and subgroup analyses, most plausibly reflecting differences in how leadership was conceptualized, which nursing populations were sampled, and variation in country, setting, and choice of burnout instrument (Higgins et al., 2003). With only eight studies feeding the negative-leadership analysis and three underpinning the depersonalization subgroup, precision was inevitably constrained in those areas. Funnel-plot and Egger's-test conclusions for negative leadership should likewise be read cautiously, since asymmetry tests lose reliability once fewer than ten studies are involved (Sterne et al., 2011). Going forward, the field would benefit from longitudinal, multi-wave, and intervention-based designs that report comparable zero-order correlations and adopt more standardized measures of both leadership and burnout dimensions (Boamah et al., 2017; Hult et al., 2023).

4. CONCLUSIONS

Taken together, the evidence assembled here points clearly in one direction: constructive leadership behaviour protects nurses against burnout, while destructive leadership drives it up. For healthcare organizations, this argues for actively cultivating supportive leadership practices, including communication, empowerment, and ethical decision-making, as a genuine lever for nurse well-being, while simultaneously working to identify and correct authoritarian or neglectful leadership before it takes hold. Because the underlying evidence remains largely correlational, longitudinal and intervention-based research is still needed to pin down causality and test what actually works. On balance, though, investing in healthier leadership looks like a workable, evidence-aligned strategy for chipping away at nurse burnout, with benefits that should extend to both the nursing workforce and the patients they care for.

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CONFLICT OF INTEREST STATEMENT

No relevant disclosures.

ETHICS STATEMENT

Ethical approval was not required for this study.

DATA AVAILABILITY STATEMENT

The data extraction spreadsheet, risk-of-bias assessments, search strategies, and supplementary figures and tables (Supplementary Tables S1–S3 and Supplementary Figures S1–S6) that support the findings of this review are available within the article's supplementary materials. Study-level data for the 47 included studies are cited in the reference list and supplementary appendix; readers may also consult the original publications directly.

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