
| RESEARCH ARTICLE

The Impact of Transformational Leadership on Nurse Burnout: A Systematic Literature Review

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| ABSTRACT

The impact of transformational leadership is a methodological literature review on nurse burnout in the healthcare environment at the global level, i.e., in the Gulf Cooperation Council (GCC) area. Nurse burnout, which is potentially characterised as emotional exhaustion, depersonalisation, and the absence of personal accomplishment, can become one of the gravest foretellers of the risks to safety, manpower shortages, and poor healthcare. Peer-reviewed articles published in 2020-25 in PubMed, CINAHL, Scopus, Web of Science, and Google Scholar were searched. The review of the evidence is what synthesises the results and suggests the correlation between transformational leadership and nurse burnout by including the mediating variables of job satisfaction, empowerment, and working environment and moderating variables of the healthcare setting, according to the PRISMA principles of systematic reviews and meta-analyses. The results show the existence of a stable negative association between transformational leaders and three dimensions of burnout as measured by the Maslach Burnout Inventory. Transformational leaders can alleviate the effects of emotional exhaustion with inspirational motivation and identifying the employee personally and depersonalisation with professional development, encouragement and shared decision-making (Boamah, 2022; Montenegro Mendez et al., 2025). The writers of this association found that job satisfaction, structural power, and favorable working environments (Alruwaili, 2025; Al Sabei et al., 2023). The suggested solutions to prevent nurse burnout presented by the review are the investment in transformational leadership development programs, an empowerment-based management strategy, and the solving of structural workload problems. Future studies ought to use the longitudinal design to investigate the existence of cultural moderators in the GCC healthcare systems.

| KEYWORDS

Transformational leadership, nurse burnout, emotional exhaustion, depersonalization, systematic review, Maslach Burnout Inventory, job satisfaction, empowerment, work environment, healthcare leadership, GCC, nurse retention, PRISMA

| ARTICLE INFORMATION

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Introduction

The health professional sector is facing escalating pressure of workforce/staff shortage, patient acuity, and escalating quality/safety requirements. With this kind of setting, nurses will be the most crucial professional group because they are directly involved in offering direct care to patients. Occupational burnout of the nursing doctors, however, is rather unevenly distributed in the world, with a syndrome that is described by the World Health Organisation in 2019 as an occupational phenomenon and placed in the International Classification of Diseases. According to a meta-analysis study by Woo et al. (2020), it has been found that burnout symptoms in nurses globally are widespread and that a considerable portion of workers in countries and various clinical settings show the levels of emotional exhaustion and depersonalisation.

Leadership has been established as one of the most applicable organisational variables that identify the well-being and burnout of nurses. Transformational leadership is considered among the leadership styles that received the most significant scholarly

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focus in the studies on nursing (Montenegro Mendez et al., 2025). Transformational leadership, as a theory formulated by Bass (1985), is considered to have four behaviors, which are idealised influence, inspirational motivation, intellectual stimulation, and individualised consideration. All these actions help motivate the followers to stick with the organisation instead of doing what helps them achieve better than what is expected. Transformational leaders have been seen to assist in establishing favourable work environments, reduce emotional exhaustion, and enhance interest and retention of nurses in the nursing environment (Ystaas et al., 2023; Wei et al., 2020).

Although there is now substantial evidence that transformational leadership is associated with positive nurse outcomes, the precise mechanisms by which this leadership style mitigates burnout remain poorly understood. A number of mediating variables have been put forward as channels through which transformational leadership exerts its protective influence, such as job satisfaction, structural empowerment, and work environment quality (Boamah, 2022; Al Sabei et al., 2023). Additionally, the practicability of transformational leadership can vary across health organisations, especially within the general population and private institutions, and in areas with distinct organisational cultures, including the Gulf Cooperation Council states (Alkhateeb et al., 2025).

Background to the Study

The Maslach Burnout Inventory theorises nurse burnout. It is a three-dimensional construct that comprises unprofessional accomplishment, cynical and detached attitude towards patients, and low personal competence (Woo et al., 2020). It has been reported that the adverse outcomes of burnout in nurses comprise more medication errors, nosocomial infections, falls, lower quality of care, and turnover intentions (Gensimore et al., 2020). Specifically, nurses burnout and absenteeism were described as terrifying in the GCC region, and the structural causes of understaffing, enormous ratios of patients to nurses, and absence of professional Development opportunities also played their role in the issue (Al Menji et al., 2024; Al Sabei et al., 2023).

Transformational leadership is one organisational resource that was observed to reduce the impact of job demands on burnout among nurses. Transformational leadership, as a factor of the Job Demands-Resources theory, can be a component of this theory, with a positive impact on motivation and engagement rates, as well as a mitigating effect on the negative health outcomes of problem tasks (Montenegro Mendez et al., 2025; Seljemo et al., 2020). The literature claims that a transformational leader can assist in building an environment where nurses would be able to use their professional autonomy, participate in shared decision-making, and turn to a worthwhile process of professional development, which would lead to decreased burnout and improved well-being (Specchia et al., 2021; Notarnicola et al., 2024).

Research Gap

Though several systematic reviews have examined the general relationship between leadership style and nurse outcomes, none have examined the specific mechanisms by which transformational leadership influences nurse burnout. The literature has predominantly focused on cohesive leadership styles (Wei et al., 2020; Niinihuhta and Haggman-Laitila, 2022) rather than the personal effects of transformational leadership on the three dimensions of burnout. Furthermore, the intervening effects of job satisfaction, empowerment, and the work environment have not been incorporated into the overall framework to aid in explaining the complex association between transformational leadership and burnout. This can be observed especially in GCC healthcare systems, where cultural and organisational conditions can be global factors that specifically shape how transformational leadership is practiced and accompanied (Alkhateeb et al., 2025; Valdez et al., 2025).

Statement of the Problem

Nurse burnout is also among the challenges affecting the sustainability of the health system in the global arena, in addition to workforce turnover, patient safety issues, and the astronomical healthcare bill. High rates of healthcare system growth, nationalisation of workforce policies, and management of a multinational workforce of nurses are contributing to the difficulties in the GCC countries (Al Menji et al., 2024). Although the concept of transformational leadership is theoretically placed in the protective category against burnout, the results are significant and warrant systematic synthesis to determine the strength, consistency, and conditionality of the present relationship. The current research will fulfill this requirement by conducting an extensive systematic literature review of the direct and indirect impacts of transformational leadership on nurse burnout.

Purpose of the Study

The systematic literature review will review, assess, and synthesize existing available empirical studies on the role of transformational leadership in burnout prevention among nurses. The current review records the effect of transformational leadership on the three dimensions of burnout as per Maslach Burnout Inventory and the mediation of job satisfaction, empowerment and work environment in healthcare and regional settings. This is a broader and more current (2020-25) review of

the post-pandemic implications of nursing leadership and workforce well-being through the synthesis of the evidence presented in the published literature.

Study Objectives

This systematic review has three objectives.

- First, to determine and integrate data on the relationship between transformational leadership and the three dimensions of nurse burnout, that is, emotional exhaustion, depersonalisation, and reduced personal accomplishment.
- Second, to understand the mediating effects of job satisfaction, empowerment and work environment on the relationship between transformational leadership and burnout.
- Third, to investigate whether the effect of transformational leadership on nurse burnout differs by healthcare setting, such as those in public and private institutions, as well as regional setting, such as GCC and non-GCC countries.

Research Questions

This review is guided by three research questions.

- First, how does transformational leadership relate to nurse burnout based on empirical studies published since 2020-2025?
- Second, what is the mediating or moderating role of job satisfaction, empowerment, and work environment in transformational leadership and nurse burnout?
- Third, do transformational leadership and its effects on nurse burnout significantly vary between public and private healthcare facilities or by GCC and non-GCC countries?

Significance of the Study

Such a review is important to healthcare administrators, nursing leaders, and policymakers. The results can be used to design leadership development initiatives by establishing an evidence base for transformational leadership as a burnout-reduction tool and by identifying behavioral best practices for counteracting nurse burnout. In the case of GCC healthcare systems undergoing critical change, the review will provide situation-specific data on the leadership approach that could help achieve nurse well-being and retention (Al Sawafi et al., 2025). Furthermore, because the review assists in developing the mediating mechanisms through which transformational leadership operates, it also enables organisations to strengthen these pathways by providing a set of complementary interventions focused on increasing empowerment, job satisfaction, and working environment quality (Hult et al., 2023).

Conceptual Clarification

Transformational leadership is a kind of idealised, inspirational, intellectually appealing, and individually oriented leadership as evaluated by the Multifactor Leadership Questionnaire and other sources of equal validity (Ystaas et al., 2023). Nurse Burnout can be described as an employment-related phenomenon that is characterised by fatigue, depersonalisation and diminished self-accomplishment and measured by the Maslach Burnout Inventory or other comparable and verifiable tools (Woo et al., 2020). Empowerment is a structural and a psychological state: when nurses are given control over themselves, resources are provided, and they are involved in the decision-making process in an organisation, the empowerment of the nurses is enhanced (Valdez et al., 2025). Job Satisfaction refers to the level of satisfaction nurses have with their work arrangements, work-related relationships, and work performance (Specchia et al., 2021). Work Environment refers to the physical, psychological, and organisational factors in which nursing services are provided, including staffing, resource availability, and relationships with colleagues (Gensimore et al., 2020).

Literature Review

The chapter gives a thorough literature review of transformational leadership and nurse burnout. The review has a subjective design with the theoretical backgrounds of transformational leadership and burnout presented initially before the empirical data on the association between the two constructs. The mediating variable is then considered to be the job satisfaction, empowerment, and work environment, and finally, the chapter concludes by stating the theoretical framework and conceptual model that informed this systematic review.

Transformational Leadership in Nursing

Although this idea was developed by Burns (1978) and later expanded by Bass (1985), transformational leadership theory assumes that successful leaders can help followers overcome self-interest and achieve results they did not expect to materialise. The theory has four dimensions of transformational leadership behavior. The idealised influence is linked with the leaders, who are respected and trusted as role models and whose ethical conduct and character are exemplary. The inspirational motivation refers to the display of a desirable vision of hope that makes followers feel energised and assists in formulating a sense of purpose due to shared objectives. Intellectual stimulation allows the followers to think outside the box, be more creative and see problems differently. Individualised consideration is where the personal needs, strengths and the goals of developing different followers are considered (Ystaas et al., 2023; Notarnicola et al., 2024).

Transformational leadership has been widely researched and is largely linked to good organisational performance in nursing settings. A systematic review by Alanazi et al. (2023) found that transformational leadership by nurse managers is positively associated with the quality of patient care. Specchia et al. (2021) conducted a systematic review that found that the transformational leadership style is the most consistently associated with the aforementioned healthcare environments and is also associated with nurses' job satisfaction. Findings from multiple systematic reviews, synthesised in the review by Hult et al. (2023), confirmed a positive relationship between transformational leadership and staff outcomes, such as reduced burnout, greater engagement, and higher retention. These results indicate that transformational leadership is the most effective leadership style for improving nurses' well-being in modern health care systems.

Nurse Burnout: Theoretical Foundations and Prevalence

The Maslach Burnout Inventory, developed by the author in collaboration with Jackson (1981), is the most widely used tool for evaluating burnout in occupations and serves as the definition frame for this review. The three-dimensional model views emotional exhaustion as the core of burnout, a gradual depletion of emotional resources due to constant occupational stress. It is depersonalisation, a form of defensive distancing among patients and colleagues, and low personal accomplishment, which embodies the loss of professional self-efficacy (Woo et al., 2020).

Nurse burnout is apparent globally. Through the meta-analysis and systematic review of 45 countries, which were provided in the study by Woo et al. (2020), it has been found that nursing groups in any part of the world experience burnout, and the level of burnout varies in relation to clinical settings and the region of the world. Burnout was high in over 100 per cent of emergency nurses in the studies by Al Sabei et al. (2023), and the level of psychological distress was also found to have an excellent relationship in Omani nurses. The problem of nurse burnout was particularly intense under the impact of COVID-19 globally, and Maben et al. (2022) found that nurses in the United Kingdom reported a high rate of psychological stress during the pandemic.

Transformational Leadership and Nurse Burnout

Transformational leadership and its relationship with nurse burnout have been studied in several theoretical perspectives. According to the Job Demands-Resources model, transformational leadership is one of the job resources that help offset the health-harming effects of elevated job demands, thereby alleviating burnout and encouraging engagement (Montenegro Mendez et al., 2025; Seljemo et al., 2020). The systematic review of the articles by Montenegro Mendez et al. (2025) presented an evaluation of 38 studies within the theoretical framework of JD-R, and based on the results of the analysis, it was established that transformational leadership was the most commonly studied leadership type and academically unanimously related to a lower level of burnout and increased engagement among nurses.

The negative relationship between transformational leadership and nurse burnout has been empirically confirmed. In a multi-faceted study of 645 Canadian nursing faculty throughout the COVID-19 pandemic, Boamah (2022) found that transformational leadership directly influenced job satisfaction but indirectly influenced burnout, with workplace culture serving as an intermediary. The results of the study by Wu et al. (2020) suggested that transformational leadership reduced emotional exhaustion among Chinese nurse clinicians and that a favorable spiritual climate enhanced this protective effect. In a study involving 580 nurses in five Saudi hospitals, Alruwaili (2025) found that transformational leadership led to a significant reduction in emotional exhaustion and perceived stress, with a corresponding increase in job satisfaction, but organisational justice and quality of work life mediated the relationship between the two variables.

The literature also notes that the use of transformational leadership varies in healthcare settings. In a systematic review of leadership styles of nurse leaders and the work-related well-being of nurses, Niinihuhta and Haggman-Laitila (2022) found that relationally oriented leadership styles, such as transformational leadership models, had a positive impact on nurse well-being across culturally diverse countries. Kelly and Hearld (2020) applied these results to the behavioral health context and found that the most efficient leadership styles that reduced burnout focused on empowerment and emotional support. Ali Ibreekaw (2022)

found the same in the GCC context, showing that transformational leadership had a positive effect on Omani nurses' job satisfaction via the mediating roles of empowerment and organisational commitment.

Mediating Factors

The literature has identified three major mediating mechanisms by which transformational leadership can affect nurse burnout. To begin with, job satisfaction has been reported as a consistent mediator, and transformational leaders who provided their subordinates with emotional support, recognition, and professional opportunities contributed to job satisfaction (Specchia et al., 2021; Notarnicola et al., 2024). Second, empowerment, including structural and psychological empowerment, has also been found to mediate the leadership-burnout relationship (Valdez et al., 2025; Abd-EL Aliem and Abou Hashish, 2021). Third, the quality of the working environment, such as staffing sufficiency, professional relationships, and organisational support systems, has been mentioned as a mediator and a moderator of the transformational leadership-burnout interaction (Gensimore et al., 2020; Al Sabei et al., 2023).

These mediating factors interact to form a complex network of influence. Gen Z nurses, analysed by Labrague et al. (2025), had an effect of burnout on the work environment through the nurse work environment, meaning the work environment quality could be a channel to leadership and a buffer against burnout. In their systematic review of job satisfaction determinants in GCC healthcare contexts, Alkhateeb et al. (2025) found that empowerment, organisational commitment, and the work environment are interrelated and mediate the satisfaction-leadership-burnout chain.

Theoretical Framework

There are three complementary theoretical frameworks upon which this review is based. The Transformational Leadership Theory by Bass (1985) is used as a conceptual framework to examine how transformational leadership actions contribute to the level of attitudes that influence performance among followers. The definitional and measurement framework used in the dependent variable is the Maslach Burnout Model (1981). The integrative mechanism that can be used to explain the interplay of transformational leadership as a job resource with job demands and other resources in impacting nurse burnout is based on the Job Demands-Resources Model (Bakker and Demerouti, 2007). The conceptual model hypothesises that transformational leadership is directly connected to burnout, indirectly to job satisfaction, empowerment and the work environment, and moderating connections between workload, organisational culture and the healthcare setting exist.

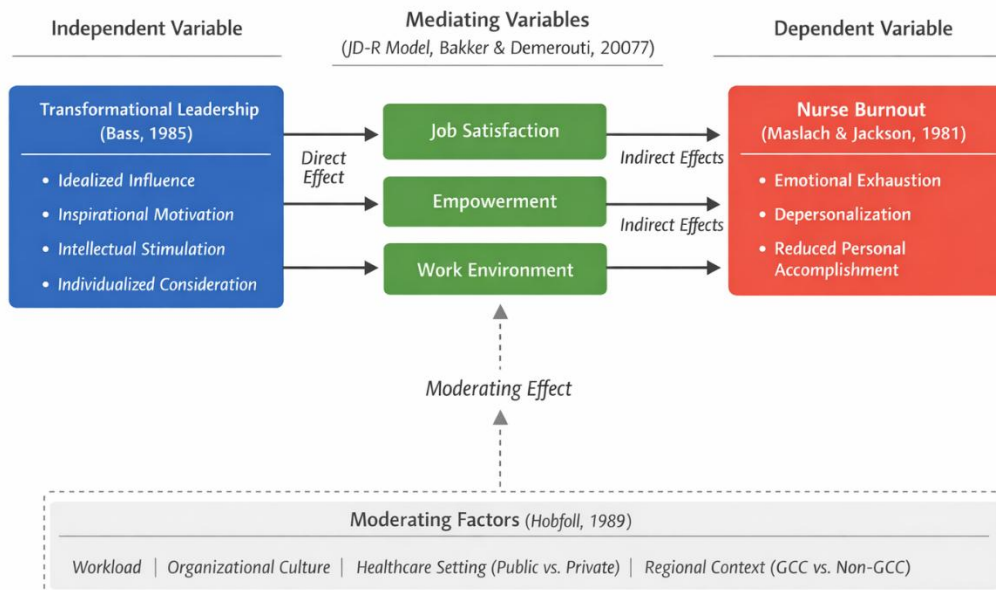


Figure 1: Conceptual Framework for the Impact of Transformational Leadership on Nurse Burnout

Table 1: Theoretical Framework for the Impact of Transformational Leadership on Nurse Burnout (Ystaas et al., 2023; Montenegro Mendez et al., 2025; Boamah, 2022).

Component	Description	Theoretical Basis
Transformational Leadership (Independent Variable)	Leadership style emphasizing idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration.	Bass's Transformational Leadership Theory (1985)
Nurse Burnout (Dependent Variable)	Occupational syndrome comprising emotional exhaustion, depersonalization, and reduced personal accomplishment.	Maslach's Burnout Model (Maslach and Jackson, 1981)
Mediating Variables	Job satisfaction, empowerment, and work environment serve as pathways through which leadership influences burnout.	Job Demands-Resources Model (Bakker and Demerouti, 2007)
Moderating Factors	Workload, organizational culture, healthcare setting type (public vs. private), and regional context (GCC vs. non-GCC).	Conservation of Resources Theory (Hobfoll, 1989)

The literature discusses a sound theoretical and empirical framework of the negative correlation between transformational leadership and burnout in the nursing field. Transformational leadership would enable the minimization of all three dimensions of burnout through multiple mediators, such as job satisfaction, empowerment, and work environment quality. However, that degree of relationships and the processes might be tempered by contextual factors such as the type of healthcare setting, resource availability, and unique cultural features of the region. The methodology for systematically combining this evidence is explained in the next chapter.

Methodology

This chapter describes the methodology of this systematic literature review. The review will be performed in compliance with the Preferred Reporting Items of Systematic Reviews and Meta-Analyses (PRISMA) to make it as transparent, rigorous, and reproducible as possible. The chapter includes details on the research design, search method, inclusion and exclusion criteria, data collection process, method of performing data synthesis and risk of bias.

Research Design

A literature review was conducted as the research design in this study. The SLR strategy helps identify, access, and analyze all available evidence on a well-structured research question, in an undertaking that is precise and reproducible. This research design is particularly well-suited to the present study, which is likely to contribute to aggregating existing information about the relationship between transformational leadership and nurse burnout among a large number of healthcare providers and nations. PRISMA 2020 statement was applied in reviewing the case study and offers a sophisticated structure for conducting and reporting systematic reviews (Page et al., 2021).

Search Strategy

Search Terms

A Population, Interest, and Context (PICO) framework was used to formulate the search strategy so that it could help to retrieve as much relevant studies as possible. The population terms were "nurs", "nurse", "nursing", "healthcare worker", and "hospital staff". Interest terms were comprised of two sets of concepts with Boolean AND; (a) transformational leadership terms: "transformational leadership", "leadership style*", "nurse leader*", "nursing leadership"; and (b) burnout terms: "burnout", "emotional exhaustion", "depersonal*", "reduced personal accomplishment", "Maslach Burnout Inventory", "professional burnout". Additional secondary terms were included to capture mediating variables: "job satisfaction", "empowerment", "work environment", "work engagement", and "turnover intention". Truncation symbols (*) and Boolean operators (AND, OR) were used to maximise sensitivity, and the search strategy was adapted for each database according to its specific controlled vocabulary and syntax requirements (Wei et al., 2020).

Databases and Sources

Five major academic databases were systematically searched to ensure comprehensive coverage of the literature. PubMed was searched using a combination of Medical Subject Headings (MeSH) and free-text terms: ("Transformational Leadership" OR "Leadership Style*" OR "Nurse Leader*") AND ("Burnout, Professional" [MeSH] OR "burnout" OR "emotional exhaustion" OR "depersonaliz*" OR "personal accomplishment") AND ("Nurses" [MeSH] OR "nurs*" OR "healthcare worker*"), yielding 78 records. CINAHL was searched using CINAHL Subject Headings and Boolean operators: (MH "Transformational Leadership" OR "transformational leadership") AND (MH "Burnout, Professional" OR "burnout" OR "emotional exhaustion") AND (MH "Nurses" OR "nurs*"), providing 62 records. Scopus was searched using the following query in the Title-Abstract-Keyword field: TITLE-ABS-KEY ("transformational leadership" AND (burnout OR "emotional exhaustion" OR depersonali*) AND (nurs* OR "healthcare worker*")), returning 54 records. Web of Science was searched using a Topic search: TS= ("transformational leadership" AND (burnout OR "emotional exhaustion" OR depersonali*) AND (nurs* OR "healthcare worker*")), adding 45 records. Google Scholar was used as a supplementary source to identify additional peer-reviewed articles, grey literature, and dissertations using the search string "transformational leadership" AND "nurse burnout", resulting in 31 records. Additionally, hand-searching of reference lists of included studies and relevant systematic reviews identified 8 further records. The search was limited to articles published between January 2020 and December 2025 to ensure inclusion of the most recent evidence, including studies conducted during and after the COVID-19 pandemic. All searches were conducted in March 2025, and the complete search strategy was documented and is available upon request.

Inclusion and Exclusion Criteria

Inclusion Criteria

The studies included in this review were restricted by the following criteria: published January 2020–December 25 in English language; explored transformational leadership as a predictor or independent variable; measured burnout among nurses or its dimensions (emotional burnout, depersonalization, reduced personal accomplishment) as an outcome variable; employed empirical research methodology, quantitative, qualitative, or mixed research methodology; and a clinical healthcare setting.

Exclusion Criteria

This review filtered out studies that were not based in nursing or healthcare settings; studied the leadership styles without explicitly comparing transformational leadership; were opinion articles, editorials, commentaries, or not based on a sufficient level of methodological rigor as evaluated by a quality appraisal; were published prior to January 2020.

Study Selection Process

The systematic, multi-stage search strategy adhered to PRISMA 2020 guidelines in order to select the studies and select the data as illustrated in the flow diagram presented in Figure 2. Most of the first search in the databases produced 278 search results in the five databases and hand-searched reference lists (PubMed: n=78; CINAHL: n=62; Scopus: n=54; Web of Science: n=45; reference list searching: n=8). 225 unique articles were left after the elimination of 53 duplicate records. Two reviewers screened the titles and abstracts of the records against the predetermined inclusion and exclusion criteria, and 185 records were excluded, which failed to satisfy the eligibility criteria. The rest of the 40 articles were also retrieved to have them assessed using the full-text. Out of them, 30 have been eliminated due to the following reasons: not specifically addressing transformational leadership (n=9), non-nursing or non-clinical population (n=7), no burnout or burnout-related outcome measure (n=6), non-empirical design, such as editors, commentaries, or opinion articles (n=4), and lack of rigorous methodology (n=2). The outcome of this process was 10 studies in the final qualitative synthesis.

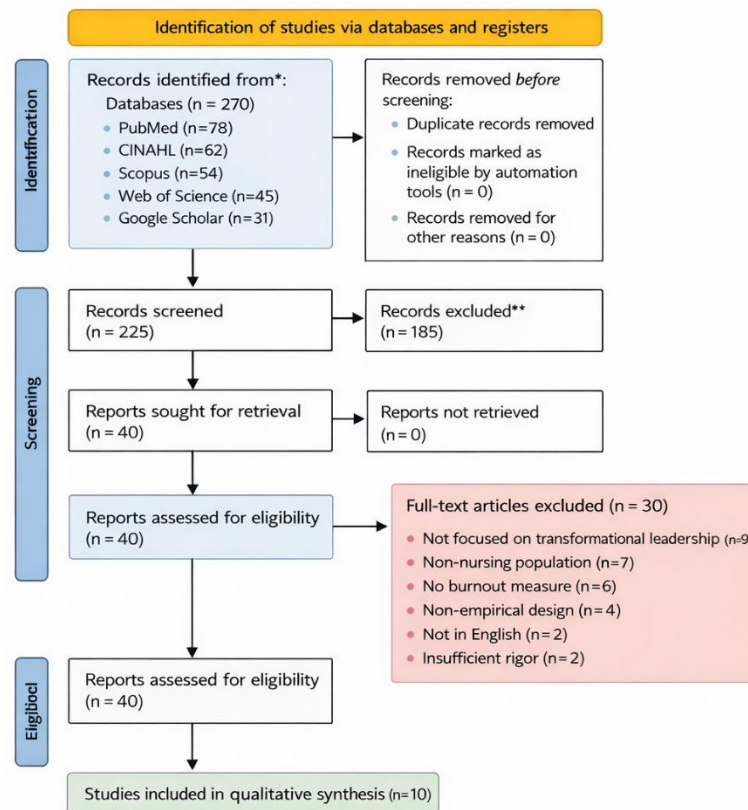


Figure 2: PRISMA Flow Diagram of the Study Selection Process (Adapted from Page et al., 2021).

Data Collection Procedure

A standardized data extraction form was used to extract data from every included study. Variables that were considered in all the studies include author(s) and publication year, country or region of the study, study design and methodology, sample size and its characteristics, the clinical setting and type of unit under study, the instruments to measure transformational leadership and burnout, key study findings of relationship between leadership and burnout, the mediating and moderating variables of interest studied as well as quality rating of the study. It was done through a systematic data extraction process, in which each study was thoroughly examined to capture all pertinent information effectively and exhaustively.

Method of Data Synthesis

A narrative synthesis approach was adopted given the heterogeneity in study designs, outcome measures, and analytical methods across the included studies. The applied thematic synthesis followed the strategy outlined by Thomas and Harden (2008) in three stages: line-by-line coding of the research findings, the development of descriptive themes, and the generation of analytical themes that extended beyond the individual studies. Results were organised thematically around the three main constructs of interest: transformational leadership and the three dimensions of burnout, mediating variables, and regional and setting differences.

Quality Assessment and Risk of Bias

The methodological quality of the selected articles was evaluated with the help of the Mixed Methods Appraisal Tool (MMAT), which allows including quantitative and qualitative as well as mixed-method studies determined with the same approach (Hong et al., 2018). The evaluation criteria used on the studies to be included were based on the clarity of the research questions, suitability of the research design, the appropriateness of the research sampling method, reliability and validity of measurement instruments, and quality of the analysis methods. The synthesis reported research with a high risk of bias due to major limitations in methodology and interpretation. Another application for evaluating qualitative studies was the Critical Appraisal Skills Programme (CASP) checklist.

Results

Introduction

This chapter offers the results of the systematic literature review on the influence of transformational leadership on nurse burnout. It indicates the results of the study selection process, outlines the characteristics of the included studies, and summarizes the evidence depending on the key review topics. The relationship between transformational leadership and three dimensions of burnout, in particular, emotional exhaustion, depersonalization, and reduced personal achievement, is specifically considered. The chapter also examines key mediating factors and differences across healthcare settings and regions. The purpose is to present the evidence in a clear, structured, and objective manner before interpretation in Chapter 5.

Study Selection Process

Identification of Studies:

The systematic search of PubMed, CINAHL, Scopus, Web of Science, and Google Scholar has found 278 records published in 2020-2025 on transformational leadership and nurse burnout.

Screening and Eligibility:

After removing 53 duplicates, 225 records remained for title and abstract screening. Records were evaluated against the predefined inclusion criteria, with priority given to empirical nursing research conducted in clinical healthcare environments that measured burnout or burnout-related outcomes. Title and abstract screening excluded 185 records. The remaining 40 full-text articles were assessed for eligibility, of which 30 were excluded for reasons including non-specific focus on transformational leadership, non-nursing populations, absence of burnout measures, non-empirical design, language, or insufficient methodological rigor.

Characteristics of Included Studies:

In the final synthesis, 10 studies were used. The majority were quantitative cross-sectional studies carried out in hospital settings, such as ICU, general hospital, private hospital, and academic nursing settings, and one study had a time-lagged design.

Characteristics of Included Studies

The 10 retrieved studies were mostly quantitative and survey-based, and most were cross-sectional. A time-lagged study was among those that gave better evidence of burnout over time. The experiments were conducted in settings such as China, the Philippines, Saudi Arabia, Egypt, Indonesia, Canada, and Finland, both GCC and non-GCC environments. Hospitals, intensive care units, inpatient wards, private hospitals, and academic nursing settings were considered as clinical settings. The majority of the samples consisted of registered nurses or nurse clinicians, though some studies analyzed hospital personnel and nursing faculty. The sample sizes were 97 nurses in a private hospital in Indonesia and 770 nurses in 15 hospitals in the Philippines. Transformational leadership was typically assessed using validated leadership questionnaires, whereas burnout was predominantly assessed using Maslach-based scales, specifically the factors of emotional exhaustion, depersonalization, and other burnout consequences. A number of studies employed either mediation or regression analyses to test pathways, such as the effects of the work environment.

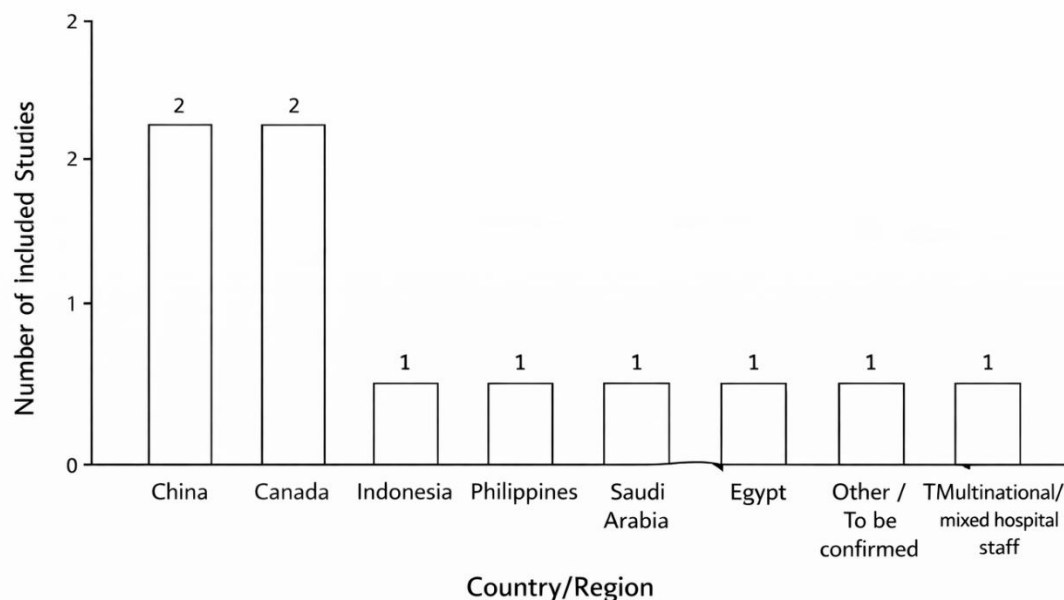


Figure 3: Distribution of Included Studies by Study Design.

Findings by Burnout Dimension

Emotional exhaustion as the most consistently reduced burnout outcome

Emotional exhaustion was the burnout outcome most directly and consistently linked to transformational leadership. In China, Wu et al. (2020) found that emotional exhaustion averaged **23.39**, indicating that nurses “*frequently felt burned out*”. Transformational leadership was negatively associated with emotional exhaustion (**estimate = -0.115, p < .05**), while spiritual climate also showed a negative association (**estimate = -0.499, p < .01**). The indirect effect through spiritual climate was significant (**-0.089, p < .01**) (Wu et al., 2020). In a Canadian hospital, Bosak et al. (2021) reported that transformational leadership had a total negative effect on emotional exhaustion (**$\beta = -0.17$**), with a significant indirect effect through mission valence (**$b = -0.10$, 95% CI [-0.21, -0.02]**). In Chinese ICU nurses, Guo et al. (2022) also found that burnout was negatively associated with transformational leadership (**$B = -0.639$, $\beta = -0.284$, p < 0.001**). In a sample of 398 employees working at a hospital, Chen et al. (2022) also confirmed that transformational leadership was significantly lessening burnout and that resilience and role clarity mediated this finding. Thus, it demonstrates a definite trend; transformational leadership is most reliable in reducing the emotional depletion aspect of burnout, particularly when leadership also enhances meaning, support, or role structure.

Depersonalization was reduced mainly through meaning and mission

Depersonalization was given a smaller focus compared to emotional exhaustion but the evidence present was still significant. Its best direct evidence was given by Bosak et al. (2021). Transformational leadership led to a decreased depersonalization over the time (total effect = -0.18), whereas mission valence was inversely correlated with depersonalization ($b = -0.33$, p = 0.001). The indirect effect through mission valence was also significant ($b = -0.14$, 95% CI [-0.27, -0.05]) (Bosak et al., 2021). The authors argued that leaders could reduce burnout by making the mission “*more attractive and engaging*” and by strengthening how staff perceive “*the salience of the organization’s goals*” (Bosak et al., 2021). Depersonalization was not tested specifically by Wu et al. (2020), yet the results of the study indicate that a more supporting and meaningful clinical climate can alleviate work withdrawal. Another study by Chen et al. (2022) also helped to support a wider model of burnout reduction where transformational leadership acted through role clarity, resilience, and intrinsic motivation. The phenomenon of burnout designed by Guo et al. (2022) incorporated the idea of cynicism and lower achievement, yet the practical examination involved only emotional fatigue.

In sum, the research indicates that depersonalization, indeed, reduces in the circumstances of transformational leadership, however, the empirical foundation is less solid and based on mediated processes rather than on repetitive direct evidence.

Reduced personal accomplishment remained the least directly evidenced dimension

Reduced personal accomplishment was the weakest burnout dimension in the evidence base because it was more often defined than directly analysed. Bosak et al. (2021) explicitly restricted the analysis to the two “core dimensions of burnout”, namely emotional exhaustion and depersonalization. Guo et al. (2022) defined burnout as including “emotional exhaustion, cynicism and reduced personal accomplishment”, but the study measured only the **emotional exhaustion subscale** in its analysis. Wu et al. (2020) implemented the emotional exhaustion scale as the primary burnout outcome, but the discussion associated transformational leadership with more significant work and reduced intention to leave with spiritual climate. Boamah (2022) also examined faculty burnout at an overall level and found that transformational leadership had an inverse direct effect on burnout, while supportive workplace culture had a direct negative effect on burnout ($\beta = -0.29, p < .001$) (Boamah, 2022). Indirect support also came from Nurmeksela et al. (2025), who found positive associations between transformational leadership and vigor ($B = 0.473$), dedication ($B = 0.435$), and absorption ($B = 0.348$), all $p < 0.001$. They did not indicate a personal achievement, but directed towards the opposite end reduced professional efficacy. The conclusion is that the third dimension of burnout is not well measured in the chosen studies. The conclusion made on diminished personal accomplishment must consequently be hesitant and speculative other than conclusive.

Table 1: Findings by Burnout Dimension

Burnout Dimension	Strength of Evidence	Main Supporting Studies	Summary of Findings	Main Mediating Pathways
Emotional exhaustion	Strong	Wu et al. (2020); Guo et al. (2022); Bosak et al. (2021); Boamah (2022); Chen et al. (2022)	This was the most consistently supported burnout outcome. Transformational leadership was linked to reduced emotional exhaustion or reduced overall burnout across clinical nurses, ICU nurses, hospital staff, and nursing faculty.	Spiritual climate; mission valence; workplace culture; resilience; role clarity
Depersonalization	Moderate	Bosak et al. (2021); Chen et al. (2022)	There is some evidence that transformational leadership may decrease depersonalization, but the support was less common and less often based on direct measurement across studies, and rather on indirect or mediated pathways.	Mission valence; meaning-related pathways; role clarity
Reduced personal accomplishment	Weak	Boamah (2022); Guo et al. (2022) (conceptual support only); related indirect support from engagement studies	This was the least directly evidenced dimension. Most studies defined burnout broadly but measured emotional exhaustion or general burnout rather than reduced personal accomplishment specifically.	Workplace culture; broader engagement and support pathways
Overall burnout / burnout risk	Moderate to strong	Chen et al. (2022); Boamah (2022); Guo et al. (2022)	Several studies showed a general inverse relationship between transformational leadership and burnout, even when not all three Maslach dimensions were measured separately.	Workplace culture; resilience; role clarity; leadership-supported work environment

Mediating Factors

The selected studies show that the relationship between transformational leadership and burnout was rarely simple or direct. Instead, it operated through several psychosocial and organizational pathways. In hospital staff, **mission valence** fully mediated the effect of transformational leadership on both emotional exhaustion and depersonalization; transformational leadership increased mission valence ($\beta = 0.43, p < 0.001$), while mission valence reduced emotional exhaustion ($\beta = -0.23, p = 0.016$) and depersonalization ($\beta = -0.33, p = 0.001$) (Bosak et al., 2021). In clinical nurses, **spiritual climate** also mediated the association, with an indirect effect of $-0.089 (p < 0.01)$, suggesting that leadership reduced emotional exhaustion by

strengthening a more meaningful and supportive environment (Wu et al., 2020). In nursing faculty, **workplace culture** served as a central mechanism; transformational leadership had a strong positive effect on workplace culture ($\beta = 0.631, p < 0.001$), and workplace culture reduced burnout ($\beta = -0.320, p < 0.001$) (Boamah, 2022). Chen et al. (2022) moved this trend further to determine resilience and role clarity to be important mediators and intrinsic motivation enhanced the indirect route. Guo et al. (2022) also indicated that transformational leadership mediated the perceived overqualification effect on burnout ($b = -0.6389, 95\% \text{ CI } -0.8706 \text{ to } -0.4072$). The evidence shows generally that leadership decreases burnout through the enhancement of meaning, clarity, support, and adaptation, and not by the virtue of style. Transformational leadership, as illustrated in Figure 3, seems to alleviate burnout in both direct and indirect ways. In the studies reviewed, the most uniform explanatory processes connecting leadership behaviour to reduced burnout outcomes were workplace culture, mission valence, spiritual climate, resilience, role clarity, and commitment-related mechanisms.

Figure 3. Mediating Pathways Linking Transformational Leadership to Burnout.

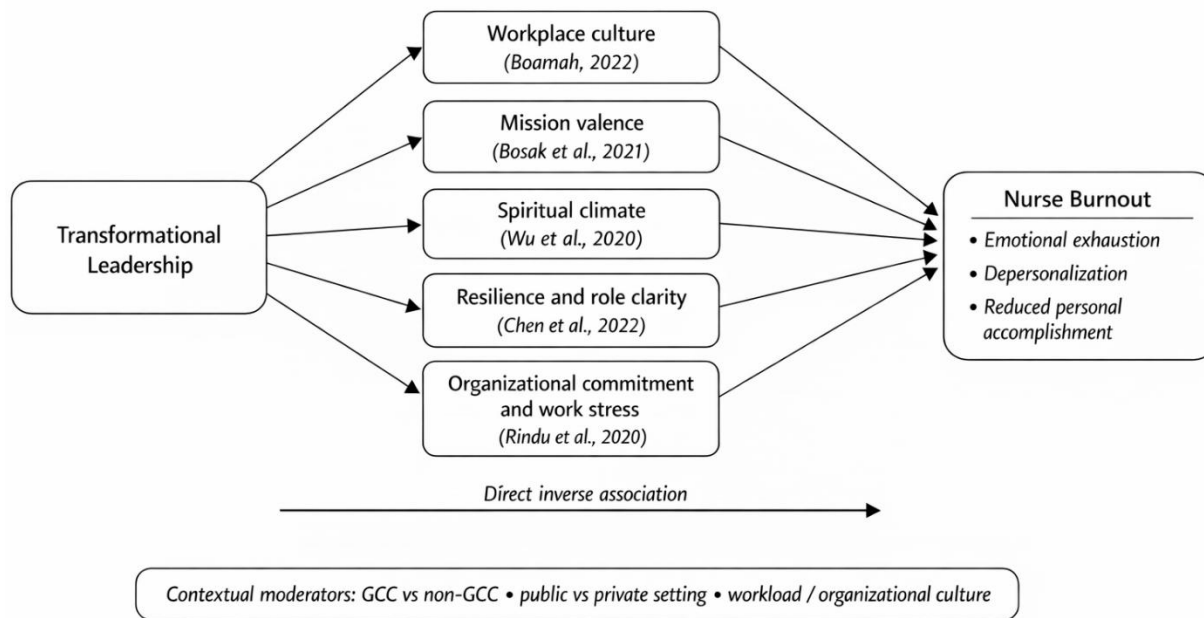


Figure 4: Mediating Pathways Linking Transformational Leadership to Burnout.

Differences Across Settings and Regions

The selected studies suggest that the effect of transformational leadership was broadly consistent across regions, but the outcomes varied by setting. In **Chinese hospital and ICU settings**, transformational leadership was directly associated with lower emotional exhaustion and burnout, with ICU evidence showing a significant negative association with burnout ($B = -0.639, \beta = -0.284, p < 0.001$) (Wu et al., 2020; Guo et al., 2022). In **Canadian settings**, the same leadership style remained protective, but the pathway differed by context: among hospital staff it worked through **mission valence**, while in **academic nursing** it operated through **workplace culture** to reduce burnout and improve satisfaction (Bosak et al., 2021; Boamah, 2022). In **Indonesia's private hospital sector**, transformational leadership was more strongly linked to lower work stress and stronger commitment than to turnover intention directly (Rindu et al., 2020). In the **GCC region**, the available Saudi study emphasized **intent to stay** rather than burnout, suggesting a stronger retention-focused effect in that context (Adalin et al., 2025).

Summary of Findings

In general, transformational leadership had a negative relationship with nurse burnout throughout the chosen research. The strongest evidence surrounding emotional exhaustion implied that it reduced in clinical nurses, ICU nurses, hospital staff and

nursing faculty in cases where leadership became more transformational (Wu et al., 2020; Guo et al., 2022; Bosak et al., 2021; Boamah, 2022). Depersonalization was a dimension that had fewer evidences, but in their study, Bosak et al. (2021) showed that the notion of transformational leadership reduced this dimension in the long run, mainly by enhancing mission valence. The least sound evidence was the least personal accomplishment since such a dimension was more commonly conceptualized, and rarely measured. It turned out that the transformational leadership also work under strong mediating environments, specifically, via spiritual climate, mission valence, and workplace culture (Wu et al., 2020; Bosak et al., 2021; Boamah, 2022). It was also noted that the flow of effect was quite similar in settings and regions with the highest benefits in an unfavorable organizational climate, consisting of meaning, clarity, and collegial support.

Conclusions and Recommendations

In a consistent manner, the identified literature showed negative correlations between leadership and nursing burnout and transformational leadership. The most significant and direct pieces of evidence were related to emotional exhaustion, which was lowered among clinical nurses, ICU nurses, hospital staff, and nursing faculty when the leadership was more transformational (Wu et al., 2020; Guo et al., 2022; Bosak et al., 2021; Boamah, 2022). The depersonalization support was less yet positive, unlike the Canadian time-lagged research, transformational leadership reduced depersonalization when mission valence was higher (Bosak et al., 2021). Comparatively, personal accomplishment levels were the least evident dimension of burnout of the lower levels, since most researchers were defining burnout as multiple yet measured emotional fatigue or overall burnout. It indicates the critical gap in the literature.

The second general finding is the conclusion that transformational leadership was not an individual operation. Again, its effect was mediated by intervening variables, such as the climate of spirituality, mission salience, culture at work, role ambiguity, and resiliency (Wu et al., 2020; Bosak et al., 2021; Chen et al., 2022; Boamah, 2022). It means that transformational leadership does not cause burnout because of its leadership behaviour only, but also the enabling conditions that it can create. In practice, the most effective leadership is the one that supports meaning, collegiality, psychological support and clarity in the work position.

Recommendations

The Leadership Development programmes undertaken by the healthcare organizations ought to be reinforced to foster the elements of transformational leadership behaviours, especially inspirational motivation, concern for the people and supportive communication. These were found to be linked to lower burnout, increased engagement, retention, and intent to stay in several settings (Nurmeksela et al., 2025; Adalin et al., 2025; AbdELhay et al., 2025; Labrague et al., 2020). It is thus suggested that leadership training must be joined with intervention programs that would enhance the work culture, role definition and staffing support systems.

Future Research

The future study should consider all three areas of burnout in a more balanced way, particularly less personal accomplishment, which did not feature in the references. Longitudinal and system-specific studies of research should also be improved, especially in GCC health care systems; the current evidence has been more oriented toward retention rather than actual burnout. This would give more sound information on the impact of transformational leadership on the long-term outcome of burnout among nurses in different organizational cultures.

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Appendix A. Data Extraction Table for Selected Studies

Author(s)	Year	Title	Research Focus / Aim	Methodology / Design	Key Findings	Limitations (as reported or evident in the study)	Relevance to Our Study
Rindu, Lukman, Hardisman, Hafizurrachman and Bachtiar	2020	<i>The Relationship between Transformational Leadership, Organizational Commitment, Work Stress, and Turnover Intentions of Nurse at Private Hospital in Indonesia</i>	To examine relationships among transformational leadership, organizational commitment, work stress, and turnover intentions in private-hospital nurses	Quantitative cross-sectional design; 97 nurses; PLS-SEM	Transformational leadership positively influenced organizational commitment and negatively influenced work stress; indirect effects through commitment and stress were stronger than direct effects on turnover intention	Small sample; private-hospital setting only; cross-sectional design limits causal inference (evident from design and setting)	Supports the review's argument that transformational leadership may reduce burnout indirectly through lower stress and stronger organizational attachment
Chen, Ghardallou, Comite, Ahmad, Ryu, Ariza-Montes and Han	2022	<i>Managing Hospital Employees' Burnout through Transformational Leadership: The Role of Resilience, Role Clarity, and Intrinsic Motivation</i>	To test whether transformational leadership reduces burnout and whether resilience, role clarity, and intrinsic motivation explain this relationship	Quantitative survey; SEM; 398 hospital employees	Transformational leadership significantly reduced burnout; resilience and role clarity mediated the relationship; intrinsic motivation strengthened the indirect pathway	Hospital employees were not limited to nurses; cross-sectional design; self-report data (evident from abstract and design)	Strongly supports the mediating-mechanism strand of the review and shows that transformational leadership works through psychosocial resources
Bosak, Kilroy, Chênevert and Flood	2021	<i>Examining the role of transformational leadership and mission valence on burnout among hospital staff</i>	To examine whether transformational leadership reduces burnout over time and whether mission valence mediates that effect	Time-lagged questionnaire study; Canadian general hospital; 185 staff	Transformational leadership was negatively related to emotional exhaustion and depersonalization; mission valence mediated both relationships	Single-hospital context; hospital staff rather than nurses only (evident from abstract and setting), though the time-lagged design is a strength	Highly relevant because it provides stronger temporal evidence and identifies meaning/mission as a pathway linking leadership to burnout reduction
Labrague, Nwafor	2020	<i>Influence</i>	To examine	Cross-sectional	Transformational	Cross-sectional	Supports the review

and Tsaras		<i>of toxic and transformational leadership practices on nurses' job satisfaction, job stress, absenteeism and turnover intention: A cross-sectional study</i>	how toxic and transformational leadership affect nurse job outcomes	survey; 770 registered nurses from 15 hospitals in Central Philippines	leadership predicted job satisfaction and intention to leave the profession; toxic leadership predicted lower satisfaction, more distress, more absenteeism, and stronger leave intentions	design; outcomes were adjacent to burnout rather than direct multidimensional burnout measures; self-report data (evident from abstract)	indirectly by showing that transformational leadership is linked to lower strain-related outcomes and better retention-related outcomes
Guo, Fan, Lam, Plummer, Cross, Ma, Wang and Jia	2022	<i>Associations between perceived overqualification, transformational leadership and burnout in nurses from intensive care units: A multicentre survey</i>	To test whether perceived overqualification increases burnout and whether transformational leadership protects ICU nurses	Multicentre cross-sectional survey; 321 ICU nurses from six tertiary hospitals	Burnout was positively associated with perceived overqualification and negatively associated with transformational leadership; transformational leadership significantly mediated the relationship with burnout	Reported limitations included cross-sectional design, restricted generalizability, leadership rated only by nurses, and need for cross-country comparison	One of the most directly relevant burnout studies because it focuses on ICU nurses and tests transformational leadership as a protective factor
Wu, Hayter, Lee, Yuan, Li, Bi, Zhang, Cao, Gong and Zhang	2020	<i>Positive spiritual climate supports transformational leadership as means to reduce nursing burnout and intent to leave</i>	To examine relationships among transformational leadership, spiritual climate, emotional exhaustion, and intention to quit	Cross-sectional questionnaire study; 391 nurses from two Chinese hospital sites	Transformational leadership reduced emotional exhaustion; spiritual climate mediated the relationship; lower spirituality was linked to burnout and intention to leave	Reported limitations included university-affiliated hospitals only, aggregation across units, and difficulty capturing leadership complexity with scales	Directly informs Chapter 4 because it links transformational leadership to emotional exhaustion and introduces spiritual climate as a mediator
Adalin, Guino-o, Al Hnaidi, Alshamlani, Adalin, Silang, Alanazi and Tumala	2025	<i>Influence of Transformational Leadership Competence on Nurses' Intent to Stay: Cross-Sectional Study</i>	To assess the relationship between nurse managers' transformational leadership and nurses' intent to stay in Riyadh	Cross-sectional online survey; 523 nurses; probabilistic cluster sampling	Overall transformational leadership was positively associated with intent to stay ($r = 0.22, p < 0.001$) and significantly predicted intent to stay ($\beta = 0.13, p < 0.001$)	Reported limitations included self-report bias, self-selection design, modest explained variance, and limited generalizability to other contexts	Relevant as GCC-region evidence showing that transformational leadership supports workforce stability, an outcome closely linked to burnout prevention
AbdELhay, Taha, El-Sayed, Helaly and AbdELhay	2025	<i>Nurses retention: the impact of transformational</i>	To test predictors of nurse retention, including transformati	Cross-sectional study; 297 nurses in inpatient wards	Work-life balance and transformational leadership significantly predicted retention; the model explained 23.4% of variance in retention	Cross-sectional design; single-hospital inpatient setting; retention rather than direct burnout was measured (evident	Indirectly supports the review by showing that transformational leadership contributes to retaining nurses in demanding hospital

		<i>leadership, career growth, work well-being, and work-life Balance</i>	onal leadership			from abstract and methods)	environments
Nurmeksela, Schavoronkof and Jokiniemi	2025	<i>The Impact of Nurse Managers' Transformational Leadership on Nurses' Work Engagement: A Cross-Sectional Study</i>	To describe nurses' work engagement, perceptions of nurse managers' transformational leadership, and the relationship between them	Cross-sectional descriptive study; 154 nurses; electronic survey in a Finnish central hospital	Transformational leadership correlated significantly with work engagement ($r = 0.367$, $p < 0.001$); regression coefficients were significant for vigor, dedication, and absorption	Convenience sample; single-hospital context; cross-sectional design; further research needed on underlying mechanisms and predictive power	Indirectly relevant because work engagement operates as a positive counterpart to burnout and helps interpret how transformational leadership may improve nurse well-being
Boamah	2022	<i>The impact of transformational leadership on nurse faculty satisfaction and burnout during the COVID-19 pandemic: A moderated mediated analysis</i>	To examine effects of transformational leadership on academic workplace culture, burnout, and job satisfaction among nursing faculty	Cross-sectional survey; 645 nursing faculty in Canadian academic settings; SEM	Transformational leadership had a strong direct effect on workplace culture and job satisfaction and an inverse direct effect on burnout; workplace culture mediated the relationship	Cross-sectional design; academic faculty rather than clinical nurses; COVID moderation not supported in the baseline model	Highly relevant because it extends the review beyond hospitals and shows that supportive workplace culture is a core mechanism through which transformational leadership reduces burnout

Appendix B. Coding Table for Chapter 4 Analysis

Study Code	Study	Country / Setting	Population	Direct Burnout Evidence	Burnout Dimension / Related Outcome Coded	Transformational Leadership Role	Mediator / Moderator Coded	Direction of Main Relationship	Chapter 4 Use
S1	Rindu et al. (2020)	Indonesia; private hospital	97 nurses	Indirect	Work stress; turnover intention	Predictor	Organizational commitment; work stress	Negative with stress; indirect reduction in turnover-related strain	Contextual support for stress pathway
S2	Chen et al. (2022)	Pakistan; hospital sector	398 hospital employees	Yes	Burnout (overall)	Predictor	Resilience; role clarity; intrinsic motivation	Negative association with burnout	Mediating factors section
S3	Bosak et al. (2021)	Canada; general hospital	185 hospital staff	Yes	Emotional exhaustion; depersonalization	Predictor	Mission valence	Negative over time; mediated effect	Burnout dimensions and mediator section
S4	Labrague et al. (2020)	Philippines; 15 hospitals	770 registered nurses	Indirect	Job stress; psychological distress;	Predictor	None tested	Better leadership linked to	Supportive evidence on strain and

					turnover intention			better job outcomes	retention
S5	Guo et al. (2022)	China; six tertiary hospital ICUs	321 ICU nurses	Yes	Burnout measured via emotional exhaustion subscale	Mediator / protective factor	Perceived overqualification	Negative association with burnout	Burnout dimensions and ICU context
S6	Wu et al. (2020)	China; two hospital sites	391 nurses	Yes	Emotional exhaustion; intention to leave	Predictor	Spiritual climate	Negative association with emotional exhaustion	Emotional exhaustion subsection
S7	Adalin et al. (2025)	Saudi Arabia; three hospitals in an academic medical city	523 bedside nurses	Indirect	Intent to stay	Predictor	None tested directly	Positive association with retention intention	GCC contextual evidence
S8	AbdELhay et al. (2025)	Egypt; inpatient wards	297 nurses	Indirect	Retention	Predictor	Career growth; work well-being; work-life balance	Positive effect on retention	Retention-related support
S9	Nurmeksela et al. (2025)	Finland; central hospital	154 nurses	Indirect	Work engagement (vigor, dedication, absorption)	Predictor	None tested directly	Positive association with work engagement	Positive well-being counterpart to burnout
S10	Boamah (2022)	Canada; academic nursing settings	645 nursing faculty	Yes	Burnout (overall)	Predictor	Workplace culture; COVID context	Negative direct effect on burnout; mediated by workplace culture	Burnout and workplace culture section