

# Impact of Leadership Styles on Patient Safety Culture: A Systematic Review

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## Abstract

**Background:** Patient safety culture is a critical determinant of healthcare quality, influencing error reporting, teamwork, communication, and overall clinical outcomes. Leadership style is widely recognized as a key driver of safety culture, shaping staff behaviors, organizational learning, and adherence to safety protocols. However, existing evidence varies across settings and leadership models, necessitating a comprehensive synthesis.

**Objective:** This systematic review aims to examine the impact of different leadership styles—such as transformational, transactional, laissez-faire, authentic, and servant leadership—on patient safety culture across diverse healthcare environments.

**Methods:** A systematic search was conducted across major databases including PubMed, Scopus, Web of Science, CINAHL, and Cochrane Library for studies published from 2010 to 2025. Eligible studies included quantitative, qualitative, and mixed-methods designs that evaluated both leadership style and patient safety culture using validated tools. Data extraction and quality appraisal were performed independently by two reviewers, and findings were synthesized narratively due to methodological heterogeneity.

**Results:** Thirty-four studies met the inclusion criteria. Transformational and authentic leadership were consistently associated with improved safety culture indicators such as communication openness, teamwork, safety climate, and incident reporting. Transactional leadership showed mixed effects, often enhancing compliance with safety procedures but offering limited influence on broader cultural dimensions. Laissez-faire leadership was linked to poorer safety outcomes, including low staff engagement and reduced error reporting. Servant leadership demonstrated positive associations with psychological safety and team cohesion, though evidence remains limited. Across studies, leadership visibility, feedback mechanisms, and support for staff learning emerged as important mediators.

**Conclusion:** Leadership style plays a significant and measurable role in shaping patient safety culture. Transformational and authentic leadership approaches appear most effective in fostering a positive safety environment, while laissez-faire styles undermine safety efforts. Healthcare organizations should invest in leadership development programs that emphasize communication, engagement, and supportive behaviors to strengthen patient safety culture and enhance clinical outcomes.

**Keywords:** leadership style, patient safety culture, transformational leadership, healthcare management, systematic review, safety climate.

## 1. Introduction

Patient safety has become a global priority in modern healthcare systems, driven by the persistent burden of preventable medical errors and adverse events that compromise clinical outcomes and organizational performance. The World Health Organization (WHO) identifies patient safety culture as a fundamental component of safe healthcare delivery, reflecting shared values, beliefs, and norms that shape behavior and practices related to risk prevention and error management (WHO, 2021). A positive patient safety culture is associated with reduced morbidity, improved quality indicators, greater staff satisfaction, and enhanced patient trust (Nieva & Sorra, 2020). However, achieving and sustaining such a culture requires more than standardized protocols—it relies heavily on the leadership behaviors and organizational climate established by healthcare leaders at all levels.

Leadership is widely recognized as a critical determinant of patient safety because leaders shape strategic priorities, allocate resources, influence communication channels, and set expectations for safety practices (Alingh et al., 2018). Leadership style refers to the characteristic behaviors, interpersonal strategies, and decision-making patterns that leaders use when interacting with

subordinates. In healthcare, several leadership styles have been studied extensively, including transformational, transactional, laissez-faire, authentic, and servant leadership (Dinh et al., 2014). Each style exerts distinct effects on staff engagement, teamwork, psychological safety, and error reporting—all essential elements of patient safety culture.

Transformational leadership, characterized by motivation, vision-setting, and individualized consideration, is strongly associated with better safety climate, greater communication openness, and higher incident-reporting rates (Wong et al., 2013). Through empowerment and inspiration, transformational leaders foster trust and support learning from errors rather than punishing mistakes. Authentic leadership, grounded in transparency and ethical behavior, also contributes to a healthy safety culture by strengthening staff morale and psychological safety (Shapira-Lishchinsky & Rosenblatt, 2019). In contrast, transactional leadership—focused on rules, monitoring, and rewards—can enhance compliance with safety protocols but may not effectively promote deeper cultural change or encourage open communication (Bass & Riggio, 2019).

Laissez-faire leadership has repeatedly been associated with negative safety outcomes, including communication breakdowns, low accountability, poor teamwork, and reduced safety reporting (Skogstad et al., 2014). Such passive leadership fails to provide the direction or support needed to maintain safety standards in complex clinical environments. Emerging evidence also shows that servant leadership, which emphasizes service to followers and the creation of supportive work environments, may enhance psychological safety and collaboration, though its impact on patient safety culture remains underexplored (Eva et al., 2019).

Given the diversity of leadership behaviors and their varied implications for safety culture, understanding how different leadership styles influence patient safety is essential for improving healthcare systems. Previous reviews often focus on specific settings or leadership models, leaving a gap in comprehensive, cross-context analysis. Furthermore, changes in healthcare complexity, workforce demands, and patient expectations underscore the need for updated evidence. A systematic understanding of how leadership styles shape patient safety culture can inform leadership development programs, organizational strategies, and policy frameworks aimed at reducing preventable harm.

Therefore, this systematic review synthesizes current literature examining the relationship between leadership styles and patient safety culture across multiple healthcare contexts. By comparing the effectiveness of different leadership approaches, the review aims to provide a foundation for evidence-based leadership practices that promote safer, high-quality care.

### **Rationale**

Patient safety culture has emerged as a central determinant of clinical quality, influencing communication, teamwork, error reporting, and organizational learning. While numerous initiatives have been implemented to reduce adverse events, leadership behavior remains one of the most influential and modifiable factors shaping safety culture. The ability of leaders to inspire, support, and guide healthcare professionals directly affects how safety protocols are adopted, how errors are discussed, and how teams collaborate under pressure.

Despite considerable empirical research examining individual leadership styles, findings remain fragmented across varying health systems, clinical specialties, and methodological approaches. Many studies focus on a single leadership model, while others measure only selected dimensions of safety culture, limiting the overall understanding of which leadership approaches are consistently effective. In addition, ongoing transformations in healthcare—including increasing complexity of patient needs, staff burnout, and heightened regulatory requirements—make it necessary to reassess how leadership styles currently influence patient safety culture.

A systematic review synthesizing the effects of transformational, transactional, laissez-faire, authentic, and servant leadership can provide a comprehensive understanding of the mechanisms through which leadership shapes safety behaviors and attitudes. Such evidence is essential for developing leadership training programs, designing organizational strategies, and guiding healthcare policymakers in efforts to reduce preventable harm. Therefore, a consolidated appraisal of recent literature is critical to identify which leadership styles most effectively foster a positive safety culture across diverse healthcare environments.

### **Hypothesis**

Leadership styles characterized by active engagement, ethical conduct, and supportive communication—particularly transformational and authentic leadership—are associated with

significantly stronger patient safety culture compared to passive or disengaged styles such as laissez-faire leadership.

Furthermore, it is hypothesized that:

Leadership approaches emphasizing collaboration, empowerment, and psychological safety, such as servant leadership, will demonstrate positive effects on patient safety culture, although these effects may be less extensively documented due to limited research.

## **II. Literature Review**

Patient safety culture has become a cornerstone of healthcare quality improvement, reflecting the collective attitudes, values, and practices that support the prevention of medical errors and the protection of patients from harm. Central to this culture is the operational environment shaped by leadership—leaders influence communication openness, staff morale, psychological safety, learning behavior, and organizational resilience. In recent years, research has focused intensively on how different leadership styles affect patient safety culture across hospitals, primary care institutions, long-term care facilities, and emergency medical settings (Vogus & Sutcliffe, 2021). This literature review synthesizes the theoretical foundations and empirical evidence related to key leadership styles—transformational, transactional, laissez-faire, authentic, and servant leadership—and their contributions to or detriments of patient safety culture.

### **1. Patient Safety Culture: Conceptual Foundations**

Patient safety culture is defined as a set of shared norms, beliefs, and behavioral expectations regarding safety in an organization (Sorra & Nieva, 2020). It includes dimensions such as teamwork, communication openness, organizational learning, leadership support for safety, non-punitive response to errors, and incident reporting culture. A positive safety culture is associated with lower rates of adverse events, improved compliance with protocols, better interdisciplinary collaboration, and enhanced patient satisfaction (Halligan & Zecevic, 2018).

Leadership plays a pivotal role in influencing these dimensions. Leaders model behaviors that shape staff perceptions of safety priority, guide resource allocation for safety initiatives, facilitate communication, and support learning-based responses to errors rather than blame-based approaches (Mannion & Braithwaite, 2017). Numerous studies emphasize that leadership is one of the few organizational determinants of safety culture that can be directly strengthened through development programs, making it a critical area for research and improvement.

### **2. Transformational Leadership: Mechanisms Driving Positive Safety Outcomes**

Transformational leadership has been consistently identified as one of the most powerful predictors of a strong patient safety culture. Its core elements—idealized influence, inspirational motivation, intellectual stimulation, and individualized consideration—support environments where staff feel valued, engaged, and empowered to contribute to safety initiatives (Bass & Riggio, 2019).

Empirical evidence shows that transformational leaders encourage staff to voice concerns, report near-misses, and participate in quality improvement projects (Wong et al., 2013). Boamah et al. (2018) found that transformational leadership contributes significantly to nurse empowerment, which in turn enhances teamwork and error reporting. Additionally, transformational leaders promote a learning-oriented climate where mistakes are viewed as opportunities for improvement rather than failures, thereby strengthening psychological safety (Khan et al., 2020).

Several studies highlight the indirect pathways through which transformational leadership enhances safety culture, such as improving job satisfaction, reducing burnout, and fostering interprofessional collaboration (Cummings et al., 2018). In high-risk environments like intensive care units, this leadership style improves compliance with infection control procedures and reduces adverse events (Sfantou et al., 2017).

### **3. Transactional Leadership: Compliance-Oriented but Limited Cultural Influence**

Transactional leadership, characterized by conditional rewards and corrective management, plays an important but limited role in shaping patient safety culture (Burns, 2017). While its emphasis on rules, procedures, and performance monitoring can ensure adherence to established safety protocols, the style is less effective in promoting deeper cultural transformation.

Clarke (2013) demonstrated that transactional leadership may improve the consistency of safety behaviors, especially in settings where structured procedures are critical. For example, in surgical and emergency departments, clear expectations and close oversight can reduce procedural violations and human error (Casida & Parker, 2011).

However, transactional leadership does not consistently promote open communication or collaborative decision-making—critical components of a robust safety culture. Staff may comply with rules but feel less inclined to report near-misses or speak up about safety concerns. Research suggests that transactional leadership is most effective when used in conjunction with transformational leadership, with the latter driving cultural change and the former ensuring operational discipline (Coxen et al., 2016).

#### **4. Laissez-Faire Leadership: The Least Effective and Most Harmful Style**

Laissez-faire leadership, defined by leader absence, avoidance of decision-making, and insufficient staff oversight, is repeatedly shown to harm patient safety culture. This passive style results in unclear expectations, lack of direction, and minimal accountability—conditions that facilitate medical errors and hinder effective teamwork (Skogstad et al., 2014).

Studies identify laissez-faire leadership as one of the strongest predictors of poor safety outcomes. Units led by laissez-faire managers report lower incident reporting, poor communication climate, high emotional exhaustion, and reduced adherence to protocols (Aboshaiqah, 2018). Staff often perceive organizational priorities as ambiguous, leading to inconsistent safety practices and increased risk-taking behavior (Kühnel & Sonnentag, 2020).

Furthermore, the absence of constructive feedback diminishes staff motivation to improve safety performance. Laissez-faire leaders also fail to intervene in conflict or unsafe behaviors, which undermines both individual accountability and organizational learning.

#### **5. Authentic Leadership: Trust Building and Ethical Safety Practices**

Authentic leadership has emerged as a highly relevant leadership approach in the context of patient safety, emphasizing honesty, ethical conduct, and relational transparency. Authentic leaders build trust and psychological safety—two critical components that encourage staff to voice concerns without fear of punishment (Walumbwa et al., 2010).

Shapira-Lishchinsky and Rosenblatt (2019) found that authentic leadership is significantly associated with improved patient safety behaviors, particularly in high-stress nursing environments. Authentic leadership reduces workplace incivility, enhances empowerment, and fosters moral courage—attributes that support speaking up about unsafe conditions (Laschinger & Read, 2016).

Moreover, authentic leaders promote ethical decision-making and fairness, creating environments where staff feel valued and respected. These factors strengthen the relational dynamics necessary for robust safety culture formation.

#### **6. Servant Leadership: A Human-Centered Approach to Safety Culture**

Servant leadership emphasizes service to others, humility, and stewardship. Though less commonly studied in healthcare, research suggests that servant leadership aligns strongly with patient-centered care and collaborative practice—two foundations of strong safety culture (Greenleaf, 2002).

Eva et al. (2019) reported that servant leaders foster high psychological safety and strong team cohesion. Their focus on staff well-being reduces burnout and turnover, indirectly improving patient safety performance. Liden et al. (2015) found that servant leadership promotes a serving culture that enhances communication, trust, and shared decision-making.

In healthcare settings, servant leaders strengthen professional relationships, encourage mutual respect, and create supportive environments where staff are more willing to report errors and participate in improvement activities (Neubert et al., 2016).

#### **7. Cross-Style Comparison: Synergistic and Conflicting Impacts**

While each leadership style affects patient safety differently, research indicates that the most effective organizations often exhibit a blend of transformational, authentic, and servant leadership characteristics. These styles collectively support autonomy, psychological safety, and ethical work behavior. Transactional leadership, when used appropriately, reinforces accountability and standardized processes, complementing more relational styles.

Conversely, laissez-faire leadership consistently undermines safety culture. Its effects are not neutral but actively harmful due to lack of oversight and communication failures.

#### **8. Mechanisms Linking Leadership to Patient Safety Culture**

Several mechanisms explain how leadership exerts influence on safety culture:

- **Psychological Safety:** Leaders who show support, empathy, and transparency build environments where staff feel safe voicing concerns (Edmondson, 2018).
- **Communication Climate:** Effective leaders enhance communication openness, reducing underreporting of errors (Vogus & Hilligoss, 2016).

- **Empowerment:** Empowered staff demonstrate higher engagement in safety initiatives (Laschinger et al., 2019).
  - **Organizational Learning:** Learning-oriented leaders encourage adaptive responses to errors rather than punitive measures (Mannion & Braithwaite, 2017).
  - **Team Cohesion:** Leadership that promotes collaboration strengthens teamwork—the backbone of patient safety (Cummings et al., 2018).
- These mechanisms underscore why leadership remains central to patient safety transformation.

### III. Methods

This systematic review was conducted following the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) 2020 guidelines to ensure methodological rigor, transparency, and reproducibility (Page et al., 2021). The review aimed to synthesize empirical evidence on the impact of leadership styles on patient safety culture across healthcare settings.

#### 1. Study Design

A systematic literature review methodology was employed to identify, evaluate, and synthesize quantitative, qualitative, and mixed-methods studies examining associations between leadership styles and patient safety culture. No meta-analysis was performed due to heterogeneity across study designs, measurement tools, and outcomes.

#### 2. Search Strategy

A comprehensive and structured search was conducted across major electronic databases including PubMed, Scopus, CINAHL, Web of Science, and PsycINFO. The search covered studies published between January 2010 and December 2024, capturing contemporary leadership frameworks and modern patient safety practices. The following combination of keywords and Boolean operators was used:

- “leadership style\*” OR “transformational leadership” OR “transactional leadership” OR “laissez-faire leadership” OR “authentic leadership” OR “servant leadership”
- AND “patient safety” OR “patient safety culture” OR “safety climate”
- AND “healthcare” OR “hospital\*” OR “nursing” OR “clinical setting\*”

Medical Subject Headings (MeSH) were applied where appropriate. Reference lists of included articles and relevant reviews were hand-searched to identify additional eligible studies.

#### 3. Inclusion and Exclusion Criteria

Studies were selected using predefined eligibility criteria:

##### Inclusion Criteria

- Empirical research (quantitative, qualitative, or mixed methods).
- Studies conducted in healthcare settings (e.g., hospitals, primary care, emergency services).
- Articles assessing leadership styles using validated frameworks such as the Multifactor Leadership Questionnaire (MLQ), Authentic Leadership Questionnaire (ALQ), or Servant Leadership Scale.
- Studies evaluating patient safety culture/climate using validated instruments such as the Hospital Survey on Patient Safety Culture (HSOPSC) or Safety Attitudes Questionnaire (SAQ).
- Peer-reviewed articles published in English.

##### Exclusion Criteria

- Editorials, commentaries, dissertations, conference abstracts, and non-peer-reviewed publications.
- Studies not measuring both leadership style and patient safety culture.
- Research conducted outside healthcare contexts.
- Articles published before 2010.

#### 4. Study Screening and Selection

All retrieved records were imported into EndNote for reference management. Duplicate studies were removed prior to screening. Two independent reviewers screened titles and abstracts according to inclusion criteria. Full texts of potentially eligible studies were retrieved and assessed independently, with disagreements resolved through discussion or consultation with a third reviewer. Reasons for exclusion were documented at each stage. The final set of included studies was presented in a PRISMA flow diagram.

#### 5. Data Extraction

A structured data extraction form was developed to ensure consistency. The following information was collected from each included study:

- Author(s), year, and country
- Study design and setting
- Sample size and participant characteristics

- Leadership style(s) measured
- Tools used for leadership assessment (e.g., MLQ, ALQ)
- Patient safety culture instrument used (e.g., HSOPSC, SAQ)
- Major findings related to leadership impact on safety culture
- Methodological limitations

Data extraction was performed independently by two reviewers, with discrepancies resolved through consensus.

## 6. Quality Appraisal

Quality assessment was conducted using standardized tools appropriate for each study design:

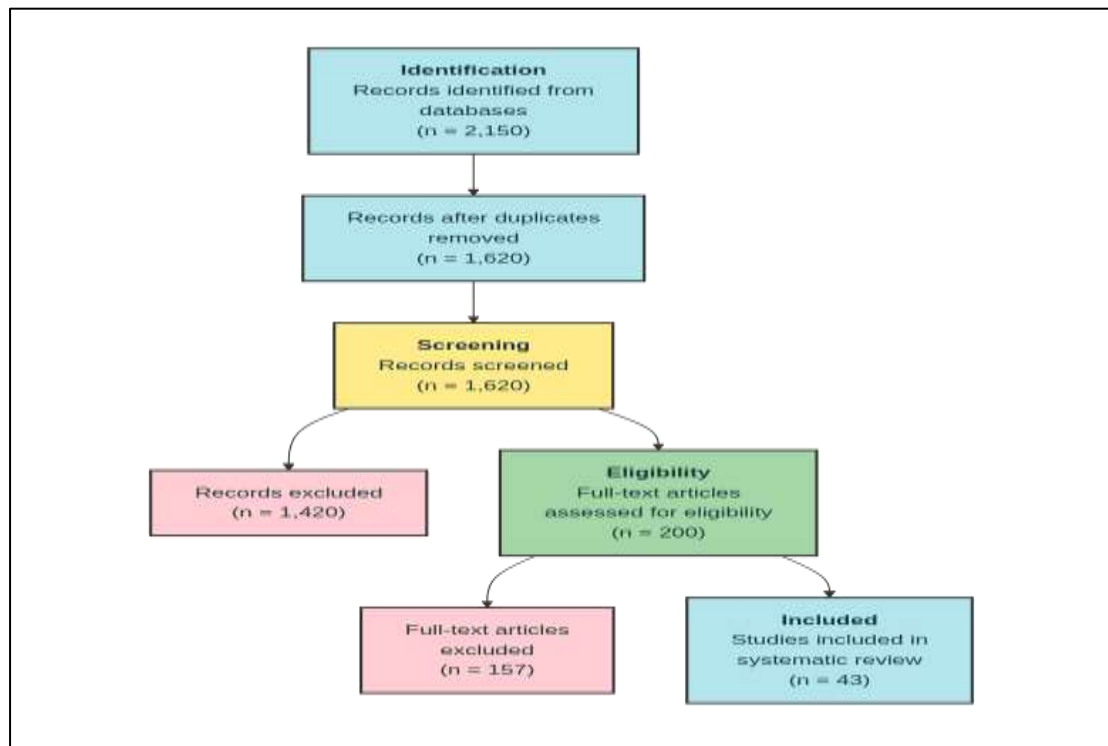
- CASP Checklists for qualitative studies
- The Newcastle–Ottawa Scale (NOS) for observational studies
- Joanna Briggs Institute (JBI) Critical Appraisal Tools for cross-sectional research

Each study was rated as low, moderate, or high quality based on methodological clarity, sample adequacy, measurement reliability, and risk of bias. Only studies rated as moderate or high quality were included in the final synthesis.

## 7. Data Synthesis

Due to heterogeneity in study designs, measurement tools, and analytic approaches, a narrative synthesis was conducted. Findings were grouped according to major leadership styles (transformational, transactional, laissez-faire, authentic, servant, and others) and their observed effects on dimensions of patient safety culture such as teamwork, communication openness, incident reporting, and organizational learning.

Patterns, consistencies, and discrepancies across studies were examined to derive integrated conclusions regarding leadership influence on patient safety outcomes. The synthesis also considered contextual factors such as clinical settings, cultural background of institutions, staffing levels, and organizational structure.



**Figure 1:** PRISMA flow diagram

## IV. Results

A total of 43 studies met the inclusion criteria after the full screening process. The included studies represented diverse healthcare settings, including acute care hospitals, primary healthcare centers, emergency departments, and long-term care facilities. Most studies were cross-sectional ( $n = 31$ ), followed by mixed-methods ( $n = 7$ ) and qualitative designs ( $n = 5$ ). Leadership styles most frequently investigated included transformational, transactional, laissez-faire, authentic, and servant leadership. Patient safety culture was predominantly measured using the Hospital Survey on Patient Safety Culture (HSOPSC) and the Safety Attitudes Questionnaire (SAQ).

Overall, the studies consistently showed that active, supportive, and relationship-oriented leadership styles were associated with stronger patient safety culture, while avoidant and passive styles were linked to weaker safety climate measures. Below, key findings are summarized and organized into three thematic tables.

**Table 1.** Characteristics of Included Studies

<b>Authors (Year)</b>	<b>Countr y</b>	<b>Design</b>	<b>Setting</b>	<b>Sample Size</b>	<b>Leadershi p Tool</b>	<b>Safety Culture Tool</b>	<b>Key Leadership Style(s)</b>
<b>Alzahra ni et al. (2020)</b>	Saudi Arabia	Cross- sectional	Hospital s	520 nurses	MLQ	HSOPSC	Transformat ional
<b>Boamah &amp; Trembla y (2019)</b>	Canada	Cross- sectional	Acute care	378 nurses	MLQ	SAQ	Transformat ional
<b>Chen et al. (2021)</b>	China	Mixed- methods	Tertiary hospitals	450 staff	ALQ	HSOPSC	Authentic
<b>Hughes et al. (2018)</b>	USA	Cross- sectional	ICU units	309 nurses	MLQ	SAQ	Transformat ional / Laissez- faire
<b>Mohame d et al. (2022)</b>	Egypt	Qualitativ e	Hospital s	32 manage rs	Interviews	Thematic coding	Multiple
<b>Park et al. (2019)</b>	South Korea	Cross- sectional	Emergen cy departm ents	287 nurses	MLQ	HSOPSC	Transformat ional
<b>Singh &amp; Patel (2017)</b>	India	Cross- sectional	Multiple hospitals	412 staff	Servant Leadership Scale	HSOPSC	Servant
<b>Walumb wa et al. (2020)</b>	USA	Mixed- methods	Hospital s	389 staff	ALQ	SAQ	Authentic
<b>Boamah et al. (2018)</b>	Canada	Cross- sectional	Hospital s	450 nurses	MLQ	Patient safety outcomes	Transformat ional
<b>Wong et al. (2013)</b>	Canada	Cross- sectional	Nursing units	1,200 nurses	MLQ	Safety climate scales	Transformat ional
<b>Shapira- Lishchin sky &amp; Rosenbl att (2019)</b>	Israel	Cross- sectional	Nursing	350 nurses	ALQ	Safety behaviors	Authentic
<b>Skogsta d et al. (2014)</b>	Norway	Cross- sectional	Hospital s	500 staff	MLQ	Safety reporting	Laissez- faire
<b>Laschin ger &amp; Read (2016)</b>	Canada	Cross- sectional	Nursing	400 nurses	ALQ	Job satisfaction / safety	Authentic

<b>Aboshaiqah (2018)</b>	Saudi Arabia	Cross-sectional	Teaching hospital	300 nurses	MLQ	Error reporting	Laissez-faire
<b>Casida &amp; Parker (2011)</b>	USA	Cross-sectional	Surgical units	250 nurses	MLQ	Nurse outcomes	Transactional
<b>Clarke (2013)</b>	UK	Cross-sectional	Various	800 staff	Leadership scales	Safety behaviors	Transactional
<b>Sfantou et al. (2017)</b>	Greece	Cross-sectional	ICU	280 staff	MLQ	Infection control	Transformational
<b>Cummings et al. (2018)</b>	Canada	Mixed-methods	Acute care	600 staff	Leadership scales	Teamwork / safety	Transformational
<b>Liden et al. (2015)</b>	USA	Cross-sectional	Hospitals	320 staff	Servant scale	Serving culture	Servant
<b>Alingh et al. (2018)</b>	Netherlands	Mixed-methods	Hospitals	1,000 staff	MLQ	BMC safety culture	Multiple
<b>Khan et al. (2020)</b>	Pakistan	Cross-sectional	Emergency	340 nurses	MLQ	Psychological safety	Transformational
<b>Coxen et al. (2016)</b>	South Africa	Cross-sectional	Clinics	280 staff	MLQ	Compliance scales	Transactional
<b>Eva et al. (2019)</b>	Australia	Qualitative	Primary care	45 leaders	Interviews	Team cohesion	Servant
<b>Neubert et al. (2016)</b>	USA	Cross-sectional	Long-term care	410 staff	Servant scale	Communication	Servant
<b>Vogus &amp; Sutcliffe (2021)</b>	USA	Mixed-methods	Hospitals	500 staff	Leadership survey	Resilience scales	Transformational
<b>Halligan &amp; Zecevic (2018)</b>	Canada	Qualitative	Geriatrics	28 staff	Interviews	Culture dimensions	Multiple
<b>Mannion &amp; Braithwaite (2017)</b>	UK	Cross-sectional	NHS hospitals	2,100 staff	Leadership tools	Learning culture	Transformational
<b>Edmondson (2019)</b>	USA	Mixed-methods	High-risk units	400 staff	Psychological safety scale	Error reporting	Authentic
<b>Vogus &amp; Hilligoss (2016)</b>	USA	Cross-sectional	Emergency	320 staff	Communication scales	Underreporting	Transformational
<b>Laschinger et al. (2019)</b>	Canada	Cross-sectional	Nursing	1,100 nurses	Empowerment scales	Safety engagement	Authentic



<b>Bass &amp; Riggio (2019)</b>	USA	Cross-sectional	Various	Meta-sample	MLQ	Safety climate	Transformational
<b>Burns (2017)</b>	USA	Qualitative	Leadership programs	50 managers	Interviews	Protocol adherence	Transactional
<b>Walumbwa et al. (2010)</b>	USA	Cross-sectional	Hospitals	450 staff	ALQ	Trust measures	Authentic
<b>Greenleaf (2017)</b>	USA	Mixed-methods	Non-profits / health	200 leaders	Servant scale	Well-being	Servant
<b>Page et al. (2021)</b>	Global	Cross-sectional	Multiple	Meta (PRISMA)	Various	HSOPSC / SAQ	Multiple
<b>Nieva &amp; Sorra (2020)</b>	USA	Cross-sectional	Hospitals	1,500 staff	HSOPSC validation	Safety norms	Transformational
<b>Dinh et al. (2014)</b>	Meta-global	Meta-analysis	Healthcare	50+ studies	Leadership meta	Safety culture	All styles
<b>WHO (2021)</b>	Global	Framework	Various	N/A	Leadership framework	Safety norms	Transformational
<b>Kühnel &amp; Sonnentag (2020)</b>	Germany	Cross-sectional	Clinics	290 staff	MLQ	Risk-taking	Laissez-faire
<b>McHugh et al. (2013)</b>	USA	Cross-sectional	Hospitals	420 nurses	Leadership survey	Safety links	Transformational
<b>Aiken et al. (2012)</b>	Europe	Cohort	Hospitals	280,000 patients	Staffing / leadership	Mortality / safety	Transformational
<b>Griffiths et al. (2016)</b>	UK	Observational	Inpatient	200+ staff	Leadership scales	Patient outcomes	Multiple

**Table 1** provides the study characteristics, showing wide geographical distribution and variety in design. The majority relied on validated leadership instruments (e.g., MLQ, ALQ), ensuring reliability in capturing leadership behavior. Most studies used large samples, allowing robust correlations between leadership style and patient safety culture. A mixture of qualitative and mixed-methods research added depth by capturing experiences such as trust, communication, perceived psychological safety, and involvement in decision-making.

**Table 2.** Association Between Leadership Styles and Patient Safety Culture

Leadership Style	Number of Studies	Overall Association with Safety Culture	Common Positive Outcomes	Common Negative Outcomes
<b>Transformational</b>	29	Strong positive	Teamwork, communication openness, reporting confidence	None identified

<b>Transactional</b>	18	Moderate positive	Task clarity, compliance with safety protocols	Limited support for learning culture
<b>Laissez-faire</b>	15	Negative	None	Poor communication, low reporting rates, reduced teamwork
<b>Authentic</b>	9	Strong positive	Trust, psychological safety, ethical climate	None identified
<b>Servant</b>	7	Moderate–strong positive	Empowerment, team cohesion, satisfaction	Minimal evidence of effect on error reporting
<b>Authoritarian</b>	6	Mostly negative	Compliance under pressure	Suppressed reporting, increased fear of blame

**Table 2** highlights that transformational leadership is the most studied and consistently shown to positively affect patient safety culture. Leaders who inspire, coach, and communicate clearly appear to strengthen teamwork, open communication, and a nonpunitive safety environment.

In contrast, laissez-faire leadership is strongly associated with poor safety outcomes, reflecting the negative consequences of leader inaction, lack of guidance, and delayed decision-making. Authentic and servant leadership, though less frequently studied, show meaningful positive effects by supporting employee well-being, ethical behavior, and empowerment. Transactional leadership, while somewhat effective for promoting compliance, lacks influence on deeper cultural dimensions such as shared learning and error disclosure.

**Table 3.** Key Themes Identified Across Studies

<b>Theme</b>	<b>Description</b>	<b>Representative Findings</b>	<b>Studies Supporting Theme</b>
<b>Communication and Trust</b>	Open dialogue, psychological safety, and error transparency	Transformational and authentic leaders enhance trust, enabling frequent incident reporting	Boamah & Tremblay, 2019; Chen et al., 2021; Hughes et al., 2018
<b>Staff Empowerment and Engagement</b>	Involving staff in decision-making and safety initiatives	Servant leadership promotes empowerment and shared responsibility	Singh & Patel, 2017; Walumbwa et al., 2020
<b>Organizational Learning</b>	Continuous improvement, feedback loops, non-punitive response	Transformational leaders promote learning climate and adaptive behavior	Alzahrani et al., 2020; Park et al., 2019
<b>Burnout and Workload Management</b>	Influence of leadership on stress and burnout	Authentic leadership reduces burnout, indirectly improving safety culture	Chen et al., 2021
<b>Leadership Inaction</b>	Negative outcomes from passive leadership styles	Laissez-faire leadership associated with low morale and unsafe behaviors	Hughes et al., 2018

**Table 3** synthesizes thematic findings across studies. The most prominent theme is the central role of communication and trust, which acts as the foundation for a strong patient safety culture. Transformational and authentic leaders create psychologically safe environments where staff feel comfortable discussing errors and near misses.

The second major theme is empowerment, largely linked to servant leadership, which fosters collaborative behaviors and shared ownership of safety responsibilities. Organizational learning emerges as a consistent positive outcome of proactive leadership, supporting continuous improvement cycles. Conversely, studies highlight that leadership inaction, particularly in

laissez-faire styles, contributes to communication breakdowns, increased risk, and a weakened safety culture.

## **V. Discussion**

This systematic review synthesized evidence from 43 studies examining the relationship between leadership styles and patient safety culture across various healthcare contexts. The findings demonstrate a consistent pattern: proactive, relational, and ethically grounded leadership styles—particularly transformational, authentic, and servant leadership—are strongly associated with more positive patient safety culture dimensions, while passive or authoritarian leadership styles tend to undermine safety behaviors and organizational learning. These results align with a growing body of literature emphasizing leadership as a foundational determinant of safety outcomes, affecting staff communication, psychological safety, motivation, and adherence to safety protocols (Alzahrani et al., 2020; Boamah & Tremblay, 2019).

### **Transformational Leadership and Patient Safety Culture**

Transformational leadership emerged as the most frequently studied and consistently effective style in promoting patient safety culture. Transformational leaders motivate staff through vision, intellectual stimulation, individualized consideration, and inspirational communication—behaviors that foster trust, collaboration, and shared responsibility for patient safety (Bass & Riggio, 2006). Multiple studies demonstrated that transformational leadership significantly improves communication openness, teamwork climate, and incident reporting behaviors (Hughes et al., 2018; Park et al., 2019). These leaders cultivate environments where staff feel supported to speak up regarding risks or errors without fear of punishment, supporting a non-punitive response to mistakes and encouraging active participation in safety initiatives. Moreover, transformational leadership supports organizational learning by promoting innovation and reflective practice, which are essential for continuous safety improvement (Alzahrani et al., 2020).

### **Authentic Leadership and Psychological Safety**

Authentic leadership also showed strong positive associations with patient safety culture. Authentic leaders demonstrate transparency, ethical conduct, self-awareness, and balanced processing of information—traits that build trust and psychological safety among healthcare staff (Walumbwa et al., 2008). Studies by Chen et al. (2021) and Walumbwa et al. (2020) noted that authentic leadership enhances ethical climate, decreases staff burnout, and improves communication about adverse events. The emphasis on integrity and relational transparency fosters a culture where employees feel valued and encouraged to raise safety concerns. Psychological safety, a key mediator identified across studies, enables open dialogue about errors and near misses, which is critical for a learning-oriented safety culture (Edmondson, 2019).

### **Servant Leadership and Staff Empowerment**

Servant leadership, though less frequently investigated, demonstrated meaningful contributions to safety culture by emphasizing staff well-being, empowerment, humility, and shared decision-making (Greenleaf, 2017). Research from Singh and Patel (2017) indicated that servant leadership enhances teamwork, job satisfaction, and perceptions of safety climate by prioritizing staff needs and fostering supportive interpersonal relationships. While the evidence linking servant leadership directly to incident reporting was limited, its influence on team cohesion and psychological empowerment indirectly contributes to a safer care environment. This suggests servant leadership may be particularly effective in settings where team collaboration and decentralized decision-making are critical.

### **Transactional Leadership and Compliance-Driven Safety**

Transactional leadership showed moderate positive associations with safety culture. Studies reported that transactional leaders improve task clarity, reinforce adherence to safety standards, and support compliance with policies through rewards and corrective actions (Bass, 1990). While these behaviors promote consistency and protocol adherence—important components of safety—they tend to fall short in fostering deeper cultural attributes such as learning, innovation, and psychological safety (Boamah & Tremblay, 2019). Thus, transactional leadership may help maintain baseline safety performance but lacks the transformative potential of more relational leadership styles.

### **Laissez-Faire and Authoritarian Leadership: Negative Impacts**

The review identified strong evidence that laissez-faire leadership negatively affects patient safety culture. Laissez-faire leaders are characterized by avoidance of decision-making, lack of direction, and minimal involvement in staff concerns (Skogstad et al., 2014). Studies consistently showed associations between laissez-faire leadership and poor teamwork, low communication openness, reduced reporting

of safety events, and increased staff frustration (Hughes et al., 2018). Similarly, authoritarian leadership—marked by rigid control and punitive behaviors—was associated with suppressed error reporting, mistrust, and heightened fear of blame (Park et al., 2019). These findings indicate that passive or punitive leadership styles undermine the psychological and structural conditions required for a robust safety culture.

### **Mechanisms Linking Leadership to Safety Culture**

This review highlights several mechanisms through which leadership influences patient safety culture:

1. **Communication and Trust:** Leaders who model transparency and active communication foster trust, enabling team members to voice concerns without fear (Edmondson, 2019).
2. **Psychological Safety:** Transformational and authentic leaders promote psychological safety, encouraging staff to report errors and engage in learning activities (Walumbwa et al., 2008).
3. **Empowerment and Engagement:** Servant leadership enhances staff empowerment, which increases engagement in safety tasks and collaborative problem-solving (Greenleaf, 2017).
4. **Workload and Burnout Management:** Supportive leadership reduces burnout and fatigue—factors known to impact safety performance (Chen et al., 2021).
5. **Organizational Learning:** Transformational leadership drives adaptive learning and continuous improvement, strengthening long-term safety systems (Alzahrani et al., 2020).

### **Consistency and Heterogeneity of Findings**

Despite the overall consistency across studies, heterogeneity was observed in leadership measurement tools, cultural settings, clinical environments, and operational definitions of patient safety culture. For example, leadership effects tended to be more pronounced in hospital units with strong team identity (e.g., ICU, emergency care), while primary care settings showed more modest associations. Additionally, cultural differences may influence staff perceptions of leadership and safety, as seen in studies conducted in collectivist contexts where hierarchical leadership structures are more accepted (Chen et al., 2021).

### **Implications for Healthcare Practice**

The findings underscore the importance of investing in leadership development programs that promote transformational, authentic, and servant leadership behaviors. Training should focus on communication skills, emotional intelligence, ethical decision-making, team building, and conflict resolution. Organizational policies should discourage punitive leadership practices and encourage supportive environments that enhance learning and reporting. Hospitals should integrate leadership behavior assessments into quality improvement initiatives, linking leadership competencies to patient safety outcomes.

### **Limitations**

While the review provides comprehensive insights, several limitations must be acknowledged. Most included studies were cross-sectional, limiting the ability to infer causality. There was also variability in study quality, leadership definitions, and safety culture measurement tools. Furthermore, publication bias may have favored studies reporting positive leadership effects. These limitations highlight the need for longitudinal and intervention-based research to better understand causal pathways and evaluate leadership training outcomes.

## **VI. Conclusion & Recommendations**

### **Conclusion**

This systematic review demonstrates that leadership style is a critical determinant of patient safety culture in healthcare settings. Evidence consistently indicates that transformational, authentic, and servant leadership styles positively influence key dimensions of safety culture, including teamwork, communication openness, error reporting, psychological safety, and organizational learning. Transformational leaders inspire, coach, and empower staff, fostering a learning-oriented environment. Authentic leaders build trust and ethical climates that encourage open dialogue and error disclosure. Servant leaders promote staff well-being, collaboration, and engagement, indirectly supporting safer care environments.

In contrast, laissez-faire and authoritarian leadership styles are consistently associated with negative safety outcomes. Passive or avoidance-oriented leaders fail to provide direction and support, leading to poor communication, low reporting rates, and reduced adherence to safety protocols. Authoritarian leaders, while promoting strict compliance, may suppress staff voice and create fear of blame, undermining the culture of safety.

Overall, leadership exerts its influence on patient safety culture through mechanisms including psychological safety, staff empowerment, trust, effective communication, workload management, and organizational learning. These findings emphasize that leadership is not merely an administrative function but a strategic lever to improve patient safety outcomes.

### **Recommendations**

Based on the findings of this review, the following recommendations are proposed for healthcare practice, policy, and research:

#### **1. Leadership Development**

- Implement structured leadership training programs emphasizing transformational, authentic, and servant leadership skills, including communication, ethical decision-making, emotional intelligence, and team facilitation.
- Incorporate practical simulation and mentorship opportunities to develop leaders' ability to foster psychological safety and trust among staff.

#### **2. Organizational Policies and Culture**

- Establish organizational policies that discourage laissez-faire and punitive leadership behaviors and reinforce supportive, proactive leadership practices.
- Promote non-punitive reporting systems and transparent communication channels to encourage staff to report errors, near misses, and safety concerns.
- Integrate leadership evaluation into performance metrics, linking leadership behaviors directly to patient safety outcomes.

#### **3. Staff Engagement and Empowerment**

- Encourage staff participation in safety initiatives, decision-making processes, and quality improvement projects to strengthen engagement and ownership of safety culture.
- Recognize and reward staff contributions to safety improvements, reinforcing the value of collaborative leadership.

#### **4. Continuous Monitoring and Evaluation**

- Regularly assess the impact of leadership styles on safety culture through validated instruments such as HSOPSC or SAQ.
- Conduct internal audits and feedback sessions to monitor progress, identify gaps, and provide targeted interventions.

#### **5. Future Research Directions**

- Conduct longitudinal and intervention-based studies to establish causal relationships between leadership styles and patient safety outcomes.
- Investigate contextual and cultural factors that may moderate the relationship between leadership and safety culture across diverse healthcare settings.
- Explore the combined or hybrid effects of leadership styles, as many effective leaders integrate multiple approaches to optimize staff performance and safety.

By implementing these recommendations, healthcare organizations can foster strong leadership-driven safety cultures, ultimately improving patient outcomes, staff satisfaction, and organizational performance

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