

SYSTEMATIC REVIEW

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# Leadership strategies to foster innovation in healthcare organizations of the UK: a systematic review

Alisha Thapa<sup>1</sup>, Pratikshya Gyawali<sup>2\*</sup> and Dharendra Kalauni<sup>3</sup>

## Abstract

**Background** UK healthcare organizations face increasing pressure to innovate in response to technological advancements, resource constraints, and evolving patient expectations. Leadership plays a crucial role in driving such innovation by influencing organizational culture, employee engagement, and the adoption of new practices.

**Objectives** The main objective of this systematic review was to assess the most effective leadership strategies for fostering innovation within the UK healthcare sector.

**Methodology** A systematic search was conducted using databases such as Scopus, EBSCO, PubMed, and Google Scholar, with search terms focused on leadership, innovation, and healthcare. The PICO framework guided study selection, and inclusion criteria limited studies to those published between 2015 and 2024 in English and within the UK context. Ten studies met the criteria and were critically appraised using the CASP checklist.

**Results** This review found that transformational leadership was the most effective strategy for promoting innovation, followed by servant and transactional leadership. Transformational leadership enabled vision-sharing, employee empowerment, and cultural change, while servant leadership fostered autonomy and motivation. Transactional leadership supported operational efficiency and accountability. Organizational culture emerged as a key mediating factor, and leadership theories such as Contingency Theory and the Great Man Theory provided additional explanatory value.

**Conclusion** The review concludes that transformational leadership is best suited for encouraging innovation in UK healthcare, and recommends expanding future research to include larger sample sizes and cross-country comparisons to enhance generalizability.

**Keywords** Leadership strategies, Innovation, UK healthcare sector, Transformational leadership, Systematic literature review, Organizational culture

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## Introduction

Healthcare organizations in the UK are increasingly being called upon to innovate in order to cope with complex issues such as resource limitations, new technology, and shifting patient expectations. Innovation is crucial in enhancing overall healthcare delivery, boosting efficiency, and improving patient care. Leadership plays a key role in fostering such innovation, as leadership style influences company culture, employee engagement, and the adoption of new practices. However, the question of which leadership strategies are most effective in promoting innovation remains significant, particularly within the unique context of UK healthcare organizations, which operate under distinct funding models, governance structures, and healthcare systems [1–3].

Various leadership strategies, such as transformational, transactional, and servant leadership styles are employed within healthcare settings to promote innovation [3]. Transformational leadership supports staff empowerment and innovation by aligning changes with emerging trends [4]. Transactional leadership emphasizes performance management and reward mechanisms to implement new ideas, while servant leadership focuses on employee development and well-being to foster a caring and sustainable innovative environment [5, 6]. Although these strategies are actively used, it remains unclear which approach is the most effective in terms of promoting innovation and enhancing performance within UK healthcare organizations [7, 8].

To address this gap, the present systematic review aims to assess the most suitable leadership strategy that promotes and fosters innovation within healthcare organizations in the UK. The specific objectives are to: (1) identify key leadership strategies that promote innovation in UK healthcare settings, (2) assess the impact of organizational culture on leadership and innovation, (3) evaluate the role of regional and cultural contexts in leadership effectiveness, and (4) integrate leadership theories with practical applications in healthcare innovation.

The focus on the United Kingdom is deliberate, as its healthcare system operates under a unique structure that distinguishes it from many international counterparts. The National Health Service (NHS) is primarily publicly funded and centrally managed, which shapes how leadership and innovation are implemented within its organizations [9]. While the UK National Health Service (NHS) shares key characteristics with other publicly funded healthcare systems, such as those in Canada, Australia, and parts of Europe, the UK context remains analytically valuable due to its scale, centralized governance, and strong policy-driven approach to innovation. Unlike more privatized or insurance-based healthcare models, innovation in the UK must align with national policy directives, budgetary constraints, and equitable access

goals [10]. Consequently, leadership strategies that foster innovation in the UK may differ from those in systems driven by market incentives or decentralized governance. By focusing on the UK context, this study provides a context-specific understanding of how leadership can effectively drive innovation within publicly funded healthcare frameworks, offering insights that may also inform similar health systems internationally [11].

This study is particularly relevant because healthcare organizations often face challenges in implementing innovation due to resource constraints, rapid technological developments, and evolving patient expectations [12]. Furthermore, the role of organizational culture in facilitating innovation through leadership remains insufficiently understood, highlighting the need for further exploration. The findings of this research are expected to provide valuable insights for both academic understanding and practical applications. Academically, it contributes to the literature on leadership and innovation by exploring how various leadership styles cultivate a culture of problem-solving and flexibility. Practically, it offers healthcare leaders and policymakers evidence-based guidance to support the development of more effective leadership strategies aimed at fostering innovation.

## Theoretical background

### Definition of innovation

Innovation in the context of healthcare is defined in this review as the introduction and practical implementation of new or significantly improved ideas, services, processes, or organizational methods that create measurable value for patients, staff, or the wider health system.

This definition follows the OECD's *Oslo Manual* (2018) [13]. From an organizational perspective, Damanpour [14] highlighted that innovation must go beyond idea generation to include adoption, implementation, and measurable impact. In UK healthcare settings, innovation may manifest as new clinical practices, digital technologies, management approaches, or service delivery models that improve patient safety, care quality, efficiency, or satisfaction. By using this precise definition, the review focuses on empirical evidence of implemented innovations rather than aspirational or theoretical discussions.

### Theoretical links between leadership and innovation

Leadership is a critical driver of innovation, as it shapes the organizational environment, resource allocation, and employee behavior necessary for innovation adoption [15]. Research indicates that leadership behaviors influence the generation, diffusion, and sustainability of innovative practices [16]. In healthcare organizations, especially in the UK where funding structures, regulatory requirements, and patient expectations are unique,

effective leadership ensures that innovative solutions align with both clinical and organizational goals.

Several leadership styles have been studied in relation to innovation: (1) Transformational Leadership: Encourages vision-setting, intellectual stimulation, and empowerment. Studies show transformational leaders create psychologically safe environments where healthcare staff feel motivated to experiment with new practices [17]. (2) Transactional leadership, in contrast, focuses on structure, performance monitoring, and reward mechanisms. While it is less strongly associated with creativity, it supports innovation by ensuring accountability and the systematic implementation of new processes [18]. (3) Servant and inclusive leadership prioritize empathy, professional development, and participatory decision-making. These approaches enhance intrinsic motivation and foster sustainable innovation in interdependent healthcare teams [19].

In addition, contingency and situational leadership theories propose that the effectiveness of any leadership style depends on contextual factors, such as task complexity, team maturity, and organizational environment [20]. This perspective is particularly relevant in healthcare, where situational demands, regulatory pressures, and ethical constraints vary across settings.

Taken together, the literature suggests that leadership influences innovation through several mechanisms: (1) shaping a vision that legitimizes change, (2) creating a psychologically safe culture, (3) ensuring access to resources and knowledge networks, and (4) reinforcing learning through feedback and recognition. These mechanisms form the basis of the conceptual model developed for this review, which illustrates how leadership strategies contribute to innovation outcomes in UK healthcare organizations.

#### **Evidence from UK healthcare literature**

Empirical research within UK healthcare organizations highlights several important aspects of the leadership–innovation relationship:

#### **Contextual influences on leadership effectiveness**

The impact of leadership strategies on innovation is shaped by organizational context, including type (e.g., NHS trusts versus private providers), size, and team composition [21, 22]. For example, transformational leadership may be more effective in large, multi-disciplinary NHS trusts where complex team coordination is critical, whereas transactional or servant leadership may yield better outcomes in smaller or specialized private healthcare organizations.

#### **Mechanisms through which leadership drives innovation**

Studies indicate that leaders influence innovation by creating and communicating a clear vision that legitimizes change, fostering learning-oriented and psychologically safe cultures, providing access to resources and knowledge networks, and recognizing and rewarding innovative contributions [23, 24]. These mechanisms help ensure that novel ideas are not only generated but also implemented and sustained within healthcare settings.

#### **Gaps in existing UK-focused research**

Despite recognition of leadership as a key driver of innovation, few studies systematically compare the effectiveness of different leadership styles in achieving measurable innovation outcomes. Much of the existing literature focuses on descriptive case studies or general leadership practices without linking them explicitly to innovation adoption, implementation, or patient outcomes [25].

#### **Conceptual model**

Based on these insights, a conceptual model for understanding leadership-driven innovation in UK healthcare can be proposed as per Fig. 1.

This model highlights that leadership does not act in isolation but interacts with organizational culture and contextual factors to facilitate innovation. It also identifies potential areas for future research, particularly regarding which leadership styles produce the most substantial innovation gains in UK healthcare organizations.

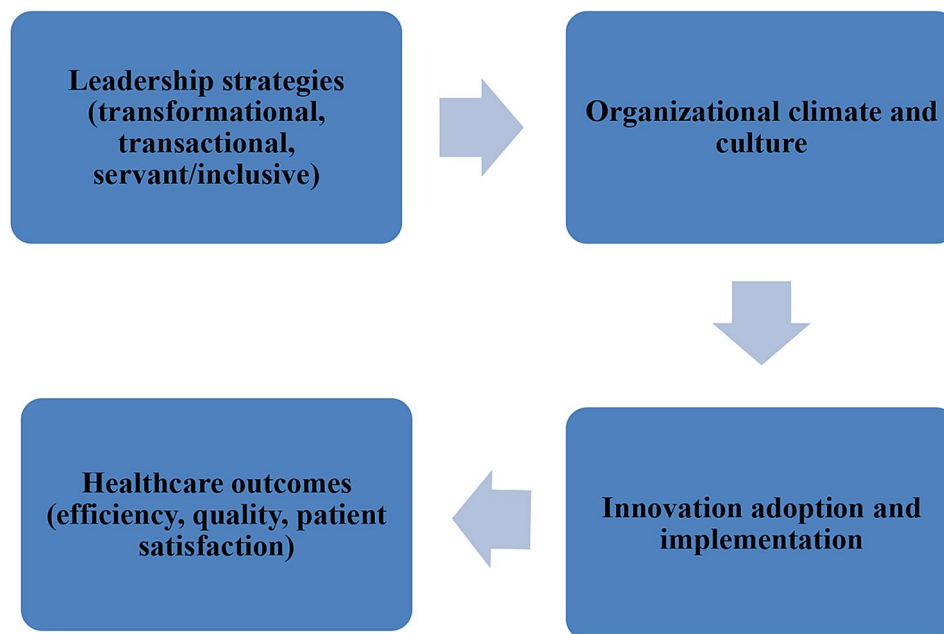
## **Methodology**

### **Study design**

The main aim of this systematic literature review was to identify and evaluate leadership strategies that foster innovation in healthcare organizations in the UK, addressing the current gap in understanding which leadership approaches most effectively promote innovation in this context. A **systematic literature review (SLR)** was chosen as it provides a structured and rigorous approach to critically synthesize existing evidence, enabling an in-depth understanding of how different leadership strategies influence innovation within UK healthcare organizations, and addressing the lack of consolidated empirical findings in this area [26].

The research question was structured using the PICO framework to guide a focused and systematic review of leadership strategies fostering innovation in UK healthcare organizations:

- **Population:** Professionals in leadership positions within healthcare organizations in the UK.
- **Intervention:** Leadership strategies that support innovation.



**Fig. 1** Conceptual model for understanding leadership-driven innovation in healthcare

- **Comparison:** Among different healthcare organizations in the UK.
- **Outcome:** Assessment of the most suitable leadership strategy that supports innovation in healthcare.

This PICO framework ensures a clear and structured approach to evaluating how various leadership strategies influence innovation outcomes across different UK healthcare settings.

#### Search strategy

To comprehensively address the research aim, a systematic search of relevant literature was conducted using major databases, including Scopus, PubMed, and EBSCO, complemented by Google Scholar to ensure additional coverage. The search terms and Boolean combinations were specifically designed to capture studies that explore the relationship between leadership strategies and innovation within UK healthcare settings, ensuring that only contextually relevant and evidence-based studies were included.

Key search terms included:

- Leadership strategies in healthcare
- Leadership supporting innovation
- Innovative leadership
- Transformational leadership

Boolean operator combinations used were:

- Transformational AND Transactional leadership in healthcare
- Innovation OR creativity in healthcare
- Impact of leadership strategies AND management on innovation
- Leadership OR Management strategies fostering innovation in healthcare

This strategy enabled the identification of both broad and targeted studies that provide empirical insights into leadership practices, innovation adoption, and their outcomes. By focusing on literature specific to UK healthcare organizations, the search directly addressed the research gap identified in previous studies, ensuring that the evidence synthesized is both relevant and applicable to the UK healthcare context [11, 27].

#### Inclusion and exclusion criteria

To ensure the review focused on high-quality and relevant studies, clear inclusion and exclusion criteria were established. The selection was based on publication date, language, geographic origin, sector relevance, and article accessibility [12] as clearly mentioned in Table 1.

These criteria ensured that only studies directly relevant to UK healthcare leadership and innovation were included, supporting a focused and rigorous systematic review.

Although the review primarily focused on studies published within the last decade (2015–2024), seminal works published earlier were also included when they provided essential theoretical foundations. Classic contributions

**Table 1** Inclusion and exclusion criteria

Inclusion	Exclusion
– Articles published within the time frame of the last 10 years (2015–2024)	– Duplicates, low-quality, or non-peer-reviewed studies
– Studies written in English	– Studies in other languages that cannot be reliably translated
– Research conducted in the UK, specifically within healthcare organizations	– Research outside the UK or not focused on healthcare
– Studies directly relevant to leadership strategies and innovation in healthcare	– Studies not addressing leadership or innovation directly, or only tangentially related
– Fully accessible articles	– Articles only accessible via abstract or incomplete data

such as those by Burns [28], Bass and Avolio [17], and Greenleaf [19] were integrated to ground the analysis in well-established leadership theories, namely transformational, transactional, and servant leadership. Including these foundational studies ensured that the review maintained a balanced perspective, combining historical theoretical insights with contemporary empirical evidence. This approach strengthened the conceptual framework by linking core leadership theories to their modern applications in fostering innovation within healthcare organizations.

#### Data extraction

Data extraction was conducted systematically to ensure that only studies directly relevant to the research aim were included. Using the predefined search strategy, articles were screened for relevance based on title, abstract, and full text. Key information was extracted from each study, including:

- Study design and methodology.
- Type of leadership strategies examined.
- Innovation outcomes measured.
- Organizational context (e.g., NHS trust, private healthcare).
- Key findings related to the relationship between leadership and innovation.

After applying the inclusion and exclusion criteria, **10 final articles** were selected for synthesis. The extracted data provided a basis for comparing leadership strategies and assessing their impact on innovation adoption and implementation in UK healthcare organizations [29, 30].

#### PRISMA flow diagram

The **PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses)** flowchart was used to document the literature selection process, ensuring transparency and reproducibility. The diagram (Fig. 2) illustrates the step-by-step screening, eligibility

assessment, and final selection of studies included in this review [31, 32].

#### Quality assessment

To ensure methodological rigor and reliability of findings, the Critical Appraisal Skills Programme (CASP) checklist was employed to assess the quality of the selected studies [33]. Each article was evaluated for:

- Credibility of study design and methodology.
- Relevance to the research aim of leadership and innovation in UK healthcare.
- Clarity and transparency of results.
- Strength of evidence supporting conclusions.

Only studies that met high-quality criteria were included in the final synthesis. This approach ensured that the review's conclusions are based on reliable and robust evidence, strengthening the trustworthiness of the findings.

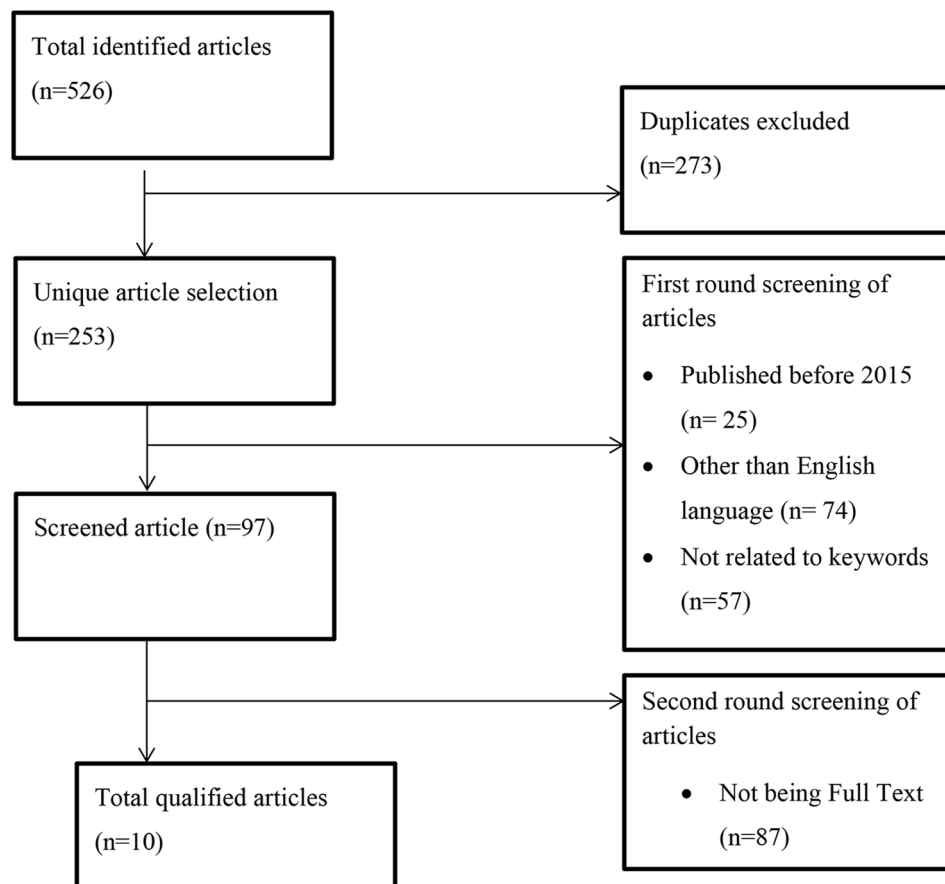
#### Ethical considerations

Ethical considerations were observed throughout the study. Key ethical measures included the protection of data and privacy, adherence to academic integrity standards, and use of reliable, credible sources [34]. The researcher complied with data protection laws, including General Data Protection Regulation (GDPR), and followed university ethical guidelines to uphold research integrity.

## Results

#### Study selection

To address the research aim of identifying leadership strategies that foster innovation in UK healthcare organizations, a systematic literature review was conducted. The following section summarizes the selection process, characteristics, and synthesized findings of the included studies. A total of 526 articles were initially identified through database searches using defined keywords and Boolean operators. After removing 273 duplicates, 253 unique articles remained. Of these, 25 were excluded for being published prior to 2015, 74 were excluded for not being in English, and 57 were not aligned with the research keywords. This led to 97 articles being screened for full-text review, after which 87 were excluded due to insufficient relevance. Ultimately, 10 articles were included in the final review for analysis, as illustrated in the PRISMA flow diagram (Fig. 2). These studies directly addressed the research questions on leadership strategies and their impact on innovation in UK healthcare organizations.



**Fig. 2** PRISMA diagram detailing the steps taken in literature search

### Characteristics of included studies

The 10 included studies employed qualitative, quantitative, and mixed-method designs, published between 2020 and 2023. They examined various leadership strategies, including transformational, transactional, servant, and adaptive leadership, and their influence on organizational culture, decision-making, patient outcomes, and innovation adoption. Each study was carefully selected to ensure direct relevance to the research objectives, including:

1. Identification of leadership strategies that promote innovation (RO1).
2. Assessment of the role of organizational culture in facilitating innovation (RO2).
3. Evaluation of contextual and regional factors affecting leadership effectiveness (RO3).
4. Integration of leadership theories with practical applications in healthcare innovation (RO4).

Table 2 provides a summary of the included studies, highlighting methodology, key findings, and their link to the research objectives. One included study was a previously published systematic review focusing on transformational leadership in nursing environments. This

review was retained because it provided synthesized theoretical and contextual insights relevant to leadership mechanisms and innovation-related outcomes in UK healthcare. Findings from this review were used to support conceptual interpretation rather than to duplicate primary empirical evidence.

### Synthesis of findings

#### 1. Leadership strategies and innovation (RO1)

Analysis of the selected studies consistently highlighted the critical role of effective leadership in fostering innovation within UK healthcare organizations. Transformational leadership emerged as the most suitable strategy, promoting a secure, engaging, and innovation-driven environment. It empowers employees, encourages idea generation, and supports organizational change aligned with modern healthcare needs [44].

Servant leadership was associated with motivational and supportive environments, fostering autonomy and shared decision-making, which are key drivers of innovation [42, 45]. Transactional leadership contributed by providing structure, clear expectations, and systematic performance management through goal-setting

**Table 2** Summary of key studies included in the review

In-text citations	Wed link/ Title of article/ Book	Research method used	Key findings	Relation to research objectives (RO)
[4]	Roles of innovation leadership on using big data analytics to establish resilient healthcare supply chains to combat the COVID-19 pandemic.	Data was collected from 190 experienced workers from the healthcare sector. Hypothesis testing was undertaken.	Leaders play a pivotal role in attaining sustainability through innovative practices.	The importance of leadership in promoting sustainable and creative healthcare practices is illustrated.
[35]	Leadership of integrated health and social care services.	A qualitative survey was conducted by the front-line managers in the HSC sector.	Any new position on the leadership level will become both challenging and overwhelming for the scope of tasks within the company.	Draws attention to the difficulties and complications that leaders have when overseeing cutting-edge medical practices.
[36]	Leadership style, organizational culture and innovative behavior on public health center performance during Pandemic Covid-19.	A simple random technique was used to identify 1199 samples for data collection.	It was found that with the use of innovative work behavior, a positive environment is created within the culture through transformational leadership.	Investigates the ways in which transformational leadership fosters an innovative organizational culture.
[37]	Changing hospital organizational culture for improved patient outcomes: developing and implementing the leadership saves lives intervention.	Mixed methods were used across 10 hospitals.	It was identified that Leadership Saves Lives can be used by practitioners to seek and promote change in culture.	Highlights how important leadership is in promoting cultural change that will increase corporate efficacy and innovation.
[38]	Organizational culture and performance: research on SMEs at tele-healthcare industry, United Kingdom	Qualitative research was conducted on the topic.	There is no direct relationship found between job satisfaction and innovation in fostering a positive organizational culture.	Examines the gap between innovation and job satisfaction, emphasizing the necessity for change driven by leadership.
[39]	Impact of organizational culture and capabilities on employee commitment to ethical behavior in the healthcare sector.	Structural equation modeling was tested using 228 care team members of hospitals.	The role of organizational capabilities for care service was identified for improving competitiveness.	Examines how organizational capabilities are improved by leadership to increase healthcare's competitiveness.
[40]	Health information technology and digital innovation for national learning health and care systems.	Policy paper	For improving the healthcare information in the UK, there is a need to achieve the optimal balance between the data handling process within healthcare organizations.	Discusses how crucial leadership is to streamlining data management procedures and enhancing healthcare operations.
[41]	How can leadership influence the quality of care in a healthcare organization?	Use of qualitative methods	Leadership can affect the quality of care and culture of healthcare organizations.	Links changes in company culture and care quality to leadership behaviors.
[42]	Public leadership during the COVID-19 pandemic: can leadership theories explain it?	The use of 18 articles published after 2020 was done.	Adaptive leadership theory is very effective in providing flexibility in operations in the healthcare sector.	Examines how operational flexibility is increased by adaptive leadership to meet changing healthcare concerns.
[43]	The impact of transformational leadership in the nursing work environment and patients' outcomes: a systematic review	Twenty-three studies were included in the article from which SLR was conducted.	Transformational leadership theory highlights that it is necessary to provide a safe working culture in the workplace.	Exemplifies how transformational leadership encourages innovation by creating a secure and encouraging work environment.

and reward mechanisms. While this style primarily supports operational efficiency and adherence to established standards, it can indirectly facilitate innovation by creating a stable and organized environment in which new practices and creative solutions can be implemented [46–48].

## 2. Organizational Culture as a Mediator (RO2)

Organizational culture repeatedly appeared as a critical factor influencing the success of leadership strategies. Positive, flexible, and collaborative cultures were found to enhance innovation adoption, ethical decision-making, and resource optimization [35, 37, 38].

Transformational and servant leadership styles were particularly effective in cultivating cultures that enable creativity, problem-solving, and innovation.

## 3. Contextual Factors (RO3)

Contextual and regional factors influenced leadership effectiveness. Leaders who were sensitive to cultural diversity, regional healthcare needs, and team dynamics demonstrated greater adaptability, transparency, and trustworthiness. This resulted in cohesive teams and more aligned healthcare objectives, indicating that context-specific leadership approaches enhance innovation outcomes [49, 50].

#### 4. Leadership Theories in Practice (RO4)

Several leadership theories were explored in the reviewed studies. Contingency theory was highlighted for its flexibility, allowing leaders to adapt strategies according to situational demands, particularly during emergencies [40, 47]. The Great Man Theory underscored the impact of innate leadership traits on team motivation, vision, and decision-making [51, 52]. Transformational leadership, supported by these theoretical frameworks, was consistently linked to enhanced innovation outcomes [41].

#### Summary of findings

The findings directly address the research aim by identifying transformational leadership as the most effective strategy for promoting innovation in UK healthcare organizations. This leadership style facilitates idea generation, cultivates supportive organizational cultures, empowers employees, and aligns leadership practices with organizational objectives. Servant and transactional leadership styles also contribute to innovation, particularly by fostering supportive environments and ensuring operational efficiency. Organizational culture and contextual factors were found to significantly mediate these relationships, emphasizing the importance of adaptable and context-sensitive leadership approaches.

#### Discussion

This systematic review confirms that transformational, transactional, and servant leadership strategies are actively applied to promote innovation in UK healthcare settings [4]. It is important to note that transformational and servant leadership share significant conceptual overlap, particularly in emphasizing employee empowerment, ethical behavior, and supportive organizational culture [53]. Acknowledging this overlap refines the interpretation of their individual contributions and highlights how these styles collectively foster innovation." In practice, leaders are required to support the implementation of emerging technologies, including artificial intelligence, machine learning, and digital tools, while also balancing work-life challenges [51]. Key soft skills for effective leadership include empathy, humility, self-awareness, and active listening, which enable idea generation and foster an innovation-driven environment [4, 6].

Transformational leadership was identified as the most effective strategy for embedding these skills into healthcare practice, creating innovative and engaging work environments [54]. This leadership style enables value sharing, idea generation, and the development of an organizational culture that encourages creativity and innovation, ultimately enhancing service quality [41]. These findings directly address the research aim by identifying

the leadership strategy most suitable to foster innovation in UK healthcare organizations.

Transactional leadership contributes by providing structured performance monitoring, goal-setting, and reward mechanisms that support operational efficiency and the systematic implementation of innovative practices [35, 51]. Servant leadership decentralizes power, creating a supportive and autonomous work environment. This style enhances motivation, employee engagement, and care delivery by reducing barriers to effective service provision [42, 45]. Among UK healthcare organizations, transformational leadership appears to be the most prevalent, followed by servant and transactional leadership [55].

These leadership strategies align closely with strategic innovation goals within UK healthcare. Effective leaders were found to directly influence organizational culture, innovation practices, and ethical behavior, all of which are critical for maintaining patient-centered care and achieving improved healthcare outcomes [56]. Additionally, while this review focused on transformational, transactional, and servant leadership, healthcare organizations may also benefit from leadership approaches that balance exploration of new ideas and exploitation of existing practices, supporting both incremental and disruptive innovation.

#### Theoretical integration

Transformational leadership emerged as the dominant leadership framework associated with innovation outcomes across the reviewed studies, particularly in relation to employee empowerment, psychological safety, and the facilitation of organizational change within UK healthcare settings.

Contingency Theory and the Great Man Theory did not function as competing explanatory models but rather as complementary or contextual lenses referenced in a limited number of studies. Contingency Theory was primarily employed to explain how leadership effectiveness varied according to situational demands, such as organizational complexity, crisis conditions, or high levels of uncertainty in healthcare environments [40, 47, 48]. References to the Great Man Theory were largely historical or conceptual, highlighting leadership traits and individual influence rather than empirically demonstrating a direct relationship between this theory and innovation outcomes.

Taken together, these theories provide contextual support for transformational leadership rather than replacing it, reinforcing the view that leadership effectiveness in healthcare innovation depends not only on visionary and empowering behaviors but also on adaptability to context and individual credibility within teams.

Overall, the discussion highlights that transformational leadership is the most effective strategy for promoting innovation in UK healthcare organizations, supported by servant and transactional leadership styles depending on context. Organizational culture plays a critical mediating role in the effectiveness of leadership strategies within UK healthcare organizations. While leaders can actively shape cultures that promote creativity, innovation, and ethical practices, it is also important to recognize that first-level leaders are often selected because they embody the existing values and identity of their teams. This dual perspective is supported by social identity theory, which suggests that leaders who are perceived as prototypical members of their group can more effectively influence team behavior and innovation outcomes [57]. In healthcare settings, this implies that leadership impact on innovation is both a product of deliberate cultural shaping and alignment with pre-existing group norms, highlighting the need for leaders to balance cultural embodiment with transformational initiatives.

### Strengths and limitations

A key strength of this systematic review lies in its explicit focus on UK-based healthcare organizations, enabling a context-sensitive synthesis of leadership strategies and innovation outcomes. The integration of empirical findings with leadership theory further strengthens the interpretive depth of the review, linking practical leadership behaviors with established theoretical frameworks. The review followed a rigorous methodology, including systematic search, predefined inclusion/exclusion criteria, quality assessment, and transparent reporting.

A limitation is that, as with any literature review, the findings are dependent on the availability of published studies, which may influence the generalizability of the conclusions to all UK healthcare contexts.

### Conclusion

This systematic review investigated the effectiveness of various leadership strategies in fostering innovation within healthcare organizations in the UK. The findings demonstrated that transformational leadership emerged as the most influential approach, enabling leaders to develop and promote innovative practices, delegate authority, and establish clear communication. This leadership style fosters a vision-driven culture that motivates healthcare professionals and aligns with modern healthcare needs. Servant leadership was found to complement this by providing motivational support and ensuring autonomy and collaborative decision-making among team members, ultimately contributing to a patient-centered innovation culture. Meanwhile, transactional leadership was associated with improved operational efficiency, regulation compliance, and goal attainment.

The review also highlighted that organizational culture acts as a mediating factor for successful leadership implementation. Positive, flexible, and data-driven cultures were shown to support innovation by improving decision-making and resource allocation. The study further concluded that transformational leadership directly contributes to fostering such a culture, which is crucial in achieving innovation goals and enhancing service quality within the healthcare sector.

Theoretical frameworks, particularly Contingency Theory and the Great Man Theory, were identified as relevant in explaining leadership effectiveness under different situational demands and inherent traits. Their practical integration into healthcare leadership highlighted how situational adaptability and intrinsic qualities help promote continuous improvement and innovation.

### Recommendation

Given the limitations identified in this review, it is recommended that future research broadens the scope by including a larger number of articles, preferably 30 or more, to enhance the depth, diversity, and generalizability of findings related to leadership and innovation in healthcare. Expanding the sample size would provide a more comprehensive understanding of the patterns and impact of different leadership strategies across diverse healthcare contexts. Additionally, researchers are encouraged to apply a similar systematic review methodology in other national settings, such as Japan, China, or Germany. Comparative studies across countries can help determine the applicability and effectiveness of leadership strategies in different healthcare systems, offering valuable cross-cultural insights that contribute to more globally adaptable leadership practices.

### Supplementary Information

The online version contains supplementary material available at <https://doi.org/10.1186/s12913-026-14017-z>.

Supplementary Material 1

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Not applicable.

### Author contributions

A.T. conceptualized the study, designed the systematic review methodology, conducted the database searches, performed the initial screening, and contributed to data extraction and critical appraisal. P.G. contributed to data extraction, critical appraisal, wrote the main manuscript text and corrected the comments received. D.K. contributed to data synthesis, interpretation, and analysis of the theoretical framework. A.T. and D.K. reviewed and revised the manuscript critically for important intellectual content. All authors reviewed and approved the final version of the manuscript.

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**Data availability**

Not applicable.

**Declarations****Ethics approval and consent to participate**

Not applicable. This study is a systematic review of previously published literature and does not involve human participants or primary data collection.

**Consent for publication**

Not applicable.

**Competing interests**

The authors declare no competing interests.

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**References**

1. Nilsen P, Seeing I, Ericsson C, Birken SA, Schildmerijer K. Characteristics of successful changes in health care organizations: an interview study with physicians, registered nurses and assistant nurses. *BMC Health Serv Res.* 2020;20:1–8. <https://doi.org/10.1186/s12913-020-4999-8>.
2. Jung DI, Chow C, Wu A. The role of transformational leadership in enhancing organizational innovation: hypotheses and some preliminary findings. *Leadersh Q.* 2010;21(5):742–57.
3. Gibb S, Mashkooor A, Hendry A, Webb A, Rainey H. Culture, leadership, and integration (CLI) in the development of the National care service. 2024.
4. Bag S, Gupta S, Choi TM, Kumar A. Roles of innovation leadership on using big data analytics to establish resilient healthcare supply chains to combat the COVID-19 pandemic: a multimethodological study. *IEEE Trans Eng Manag.* 2021.
5. Kuknor SC, Bhattacharya S. Inclusive leadership: new age leadership to foster organizational inclusion. *Eur J Train Dev.* 2020;46(9):771–97.
6. Soleas EK. Leader strategies for motivating innovation in individuals: a systematic review. *J Innov Entrep.* 2020;9:1–28.
7. Shanafelt T, Stolz S, Springer J, Murphy D, Bohman B, Trockel M. A blueprint for organizational strategies to promote the well-being of health care professionals. *NEJM Catal Innov Care Deliv* 2020;1(6).
8. Santarsiero F, Schioma G, Carlucci D, Helander N. Digital transformation in healthcare organisations: the role of innovation labs. *Technovation.* 2023;122:102640.
9. Department of Health and Social Care. The NHS long term plan. London: UK Government; 2019.
10. Bate P, Robert G, Fulop N, Øvretveit J, Dixon-Woods M. Perspectives on context: A selection of essays considering the role of context in successful quality improvement. London: The Health Foundation; 2014.
11. Turnbull D, Chugh R, Luck J. Systematic-narrative hybrid literature review: A strategy for integrating a concise methodology into a manuscript. *Social Sci Humanit Open.* 2023;7(1):100381.
12. Schang L, Blotenberg I, Boywitt D. What makes a good quality indicator set? A systematic review of criteria. *Int J Qual Health Care.* 2021;33(3):mzab107.
13. Organisation for Economic Co-operation and Development (OECD), Eurostat. Oslo manual 2018: guidelines for Collecting, reporting and using data on innovation. 4th ed. Paris: OECD Publishing; 2018.
14. Damanpour F. Organizational innovation: a meta-analysis of effects of determinants and moderators. *Acad Manag J.* 1991;34(3):555–90.
15. Schein EH. *Organizational culture and leadership.* 5th ed. Hoboken (NJ): Wiley; 2010.
16. Anderson N, Potočník K, Zhou J. Innovation and creativity in organizations: a state-of-the-science review, prospective commentary, and guiding framework. *J Manage.* 2014;40(5):1297–333.
17. Bass BM, Avolio BJ. Transformational leadership: A response to critiques. In: Chermers MM, Ayman R, editors. *Leadership theory and research: perspectives and directions.* San Diego (CA): Academic; 1993. pp. 49–80.
18. Richards A. Exploring the benefits and limitations of transactional leadership in healthcare. *Nurs Stand.* 2020;35(12):46–50.
19. Greenleaf RK. *Servant leadership: A journey into the nature of legitimate power and greatness.* New York (NY): Paulist; 1977.
20. Fiedler FE. *A theory of leadership effectiveness.* New York (NY): McGraw-Hill; 1967. p. 20.
21. The King's Fund. *Transformational change in health and care: reports from the field.* London: The King's Fund; 2018.
22. Jarvis C, Kars S, Sheffield R. *Healthy returns: leadership, learning and innovation climate in the UK health sector.* London: Health Policy Research; 2017.
23. Weintraub P. Leadership for innovation in healthcare: an exploration. *Int J Health Policy Manag.* 2018;7(8):671–9.
24. NHS CEP Review. *Fostering leadership and innovation in UK healthcare.* London: NHS; 2024.
25. Smith J, Brown L, Taylor M, et al. Diffusion of community heart failure service innovation in Northamptonshire, England: a qualitative study. *BMC Health Serv Res.* 2025;25:102.
26. Mohamed Shaffril HA, Samsuddin SF, Abu Samah A. The ABC of systematic literature review: the basic methodological guidance for beginners. *Qual Quant.* 2021;55:1319–46.
27. Schröder C, Kruse F, Gómez JM. A systematic literature review on applying CRISP-DM process model. *Procedia Compu Sci.* Alderwick C. H. Place-based systems of care: A way forward for the NHS in England. London: The King's Fund; 2015.
28. Burns JM. *Leadership.* New York: Harper & Row; 1978.
29. Pandey P, Pandey MM. *Research methodology tools and techniques.* Bridge Cent. 2021;25.
30. Paul J, Barari M. Meta-analysis and traditional systematic literature reviews—What, why, when, where, and how? *Psychol Mark.* 2022;39(6):1099–115. 26.
31. Sarkis-Onofre R, Catalá-López F, Aromataris E, Lockwood C. How to properly use the PRISMA statement. *Syst Rev.* 2021;10:1–3.
32. Al-Ababneh MM. Linking ontology, epistemology and research methodology. *Sci Philos.* 2020;8(1):75–91.
33. Long HA, French DP, Brooks JM. Optimising the value of the critical appraisal skills programme (CASP) tool for quality appraisal in qualitative evidence synthesis. *Res Methods Med Health Sci.* 2020;1(1):31–42.
34. Armond ACV, Gordijn B, Lewis J, Hosseini M, Bodnár JK, Holm S, Kakuk P. A scoping review of the literature featuring research ethics and research integrity cases. *BMC Med Ethics.* 2021;22(1):50.
35. Elliott IC, Sinclair C, Hesselgreaves H. Leadership of integrated health and social care services. *Scott Affairs.* 2020;29(2):198–222.
36. Suprapti S, Asbari M, Cahyono Y, Mufid A, Khasanah NE. Leadership style, organisational culture and innovative behavior on public health center performance during pandemic Covid-19. *J Ind Eng Manag Res.* 2020;1(2):76–88.
37. Linnander E, McNatt Z, Boehmer K, Cherlin E, Bradley E, Curry L. Changing hospital organisational culture for improved patient outcomes: developing and implementing the leadership saves lives intervention. *BMJ Qual Saf.* 2021;30(6):475–83.
38. Sadighi S. *Organisational culture and performance: research on SMEs at telehealthcare industry, United Kingdom [dissertation].* Anglia Ruskin Research Online (ARRO); 2023.
39. Lee D. Impact of organisational culture and capabilities on employee commitment to ethical behavior in the healthcare sector. *Service Bus.* 2020;14(1):47–72.
40. Sheikh A, Anderson M, Albala S, Casadei B, Franklin BD, Richards M, et al. Health information technology and digital innovation for National learning health and care systems. *Lancet Digit Health.* 2021;3(6):e383–96.
41. Xing LY, Song JH, Yan F. How can leadership influence the quality of care in a healthcare organisation? *Front Nurs.* 2020;7(1):19–22.
42. Suar D, Jha AK, Gochhayat J, Samanta SR. Public leadership during the COVID-19 pandemic: can leadership theories explain it? *Glob Bus Rev.* 2023;09721509221149604.
43. Ystaas LMK, Nikitara M, Ghobrial S, Latzourakis E, Polychronis G, Constantinou CS. The impact of transformational leadership in the nursing work environment and patients' outcomes: a systematic review. *Nurs Rep.* 2023;13(3):1271–90.
44. Zajac S, Woods A, Tannenbaum S, Salas E, Holladay CL. Overcoming challenges to teamwork in healthcare: a team effectiveness framework and evidence-based guidance. *Front Commun.* 2021;6:606445.
45. Kirkpatrick I, Altanlar A, Veronesi G. Doctors in leadership roles: consequences for quality and safety. *Public Money Manag.* 2024;44(6):515–22.
46. Bosak J, Kilroy S, Chênevert D, Flood PC. Examining the role of transformational leadership and mission Valence on burnout among hospital staff. *J Organ Eff People Perform.* 2021;8(2):208–27.
47. Mousa M, Boyle J, Skouteris H, Mullins AK, Currie G, Riach K, Teede HJ. Advancing women in healthcare leadership: a systematic review and

- meta-synthesis of multi-sector evidence on organisational interventions. *EClinicalMedicine*. 2021;39.
48. Alderwick H, Hutchings A, Briggs A, Mays N. The impacts of collaboration between local health care and non-health care organizations and factors shaping how they work: a systematic review of reviews. *BMC Public Health*. 2021;21:1–16.
  49. Mehralian G, Ghaleh HH, Wang P, Moradi M. Expanding capacity for learning and transformation: A new look from human resource configurations towards product innovation in the healthcare industry. *Br J Manag*. 2024;35(3):1247–61.
  50. Firth-Cozens J. Leadership and the quality of healthcare. Understanding doctors' performance. CRC; 2023. pp. 123–33.
  51. James AH, Bennett CL, Blanchard D, Stanley D. Nursing and values-based leadership: A literature review. *J Nurs Manag*. 2021;29(5):916–30.
  52. Van Dorssen-Boog P, De Jong J, Veld M, Van Vuuren T. Self-leadership among healthcare workers: a mediator for the effects of job autonomy on work engagement and health. *Front Psychol*. 2020;11:1420.
  53. Anderson MA, Sun P. Reviewing leadership styles: overlaps and the need for a new full-range theory. *Int J Manage Reviews*. 2017;19(1):76–96.
  54. Sudibjo N, Prameswari RK. The effects of knowledge sharing and person–organization fit on the relationship between transformational leadership on innovative work behavior. *Heliyon*. 2021;7(6):e07248.
  55. Wu Y, Awang S, Ahmad T, You C. A systematic review of leadership styles in healthcare sector: Insights and future directions. [Internet]. 2024. Available from: <https://www.sciencedirect.com/science/article/abs/pii/S0197457224001794>.
  56. Davda N. UK Connected healthcare market analysis [Internet]. 2024 [cited 2024 Nov 23]. Available from: <https://www.insights10.com/report/uk-connected-healthcare-market-analysis/>.
  57. Haslam SA, Reicher S, Platow MJ. The new psychology of leadership: Identity, Influence, and power. 2nd ed. Hove, UK: Psychology; 2011.

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