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The role of Resilience-Oriented leadership in hospital crisis management: Lessons from the COVID-19 pandemic insights from a qualitative Meta-Synthesis

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Abstract

The COVID-19 pandemic has highlighted the importance of leadership in maintaining hospital resilience, but existing qualitative findings remain fragmented and have not been integrated into a unified conceptual model. To address this gap, this study used qualitative meta-synthesis to integrate the results of 12 studies examining hospital leadership during the pandemic. A systematic literature search was conducted across five major databases such as Scopus, Web of Science, PubMed, Science Direct, and ProQuest with inclusion criteria focusing on qualitative studies on leadership, organizational resilience, and healthcare worker experiences. All eligible articles were assessed for quality using the Critical Appraisal Skills Programme (CASP) Qualitative Checklist (2018). Data were then extracted and analyzed using a combination of Noblit & Hare's meta-ethnography and thematic synthesis, which enabled researchers to translate concepts, compare themes across studies, and develop a flow of argument that led to new theoretical constructs. The analysis identified four layers of resilience-oriented leadership: (1) adaptive and empathetic leadership behaviors, (2) psychological factors and organizational culture, (3) structural support and systemic governance, and (4) sustainable organizational resilience outcomes. These findings establish a new conceptual model that expands theories of transformational leadership and crisis management by emphasizing the integration of empathy, systemic coordination, and data-driven decision-making as the foundation of hospital resilience. Practically, this study offers guidance for developing resilience-based leadership training, enhancing collaborative governance, and creating a culture of continuous learning in healthcare organizations. The key novelty of this research lies in the integration of emotional, organizational, and systemic dimensions within a single, integrated framework.

Keywords: Resilience-Oriented leadership, Hospital crisis management, Covid-19 pandemic, Qualitative Meta-Synthesis, Healthcare leadership

Introduction

The COVID-19 pandemic has become the most significant global health crisis in the last century. Since the WHO declared it a pandemic in March 2020, healthcare systems worldwide have faced tremendous pressure. Hospitals are facing a surge in patients exceeding capacity, limited personal protective equipment, a shortage of medical personnel, and constantly evolving treatment protocols as knowledge about the disease evolves (World Health Organization [WHO], 2020). In these uncertain times, hospitals are not only required to provide the best clinical services but also to maintain operational continuity, adapt governance, and maintain the resilience of healthcare workers working on the front lines (Fernandez et al., 2021; Lalani et al., 2021).

This phenomenon demonstrates that the COVID-19 crisis is not simply a medical issue but also a test of hospital management and leadership capacity. Many healthcare workers are experiencing burnout, stress, and even moral trauma due to ethical dilemmas in decision-making, such as allocating limited resources or prioritizing patient care (Shanafelt et al., 2020; Crayne, 2020). In such situations, hospital leadership plays a crucial role, both in maintaining operational effectiveness and in providing emotional support to staff. Ahern and Loh (2020) emphasize that leadership during a crisis is closely linked to the ability to build and maintain trust.

While there is a substantial body of research on leadership in crisis situations, much of it is fragmented and context-specific. Many previous studies focus on the experiences of a single hospital or region, making it difficult to draw broader and more in-depth conclusions (Rangachari & Woods, 2020). Furthermore, existing research is still dominated by quantitative or survey approaches, which tend to reduce the complexity of leadership experiences to statistical figures (Dirani et al., 2020). However, the dynamics of leadership in a crisis, particularly in the hospital context, require a more

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nuanced understanding through qualitative approaches, which can explore the strategies, perceptions, and in-depth experiences of leaders (Fernandez & Shaw, 2020). Thus, there is a research gap in the absence of a comprehensive qualitative synthesis on how resilience-oriented leadership plays a role in hospital crisis management.

Resilience-oriented leadership differs from traditional leadership approaches. This concept emphasizes adaptive capacity, the ability to bounce back from adversity, and creating a work environment that supports psychological safety and collaboration (Mallak, 1998; Forsgren et al., 2022). In the hospital context, this type of leadership enables organizations to maintain service quality, even when faced with extraordinary pressure. However, existing literature on this subject is still limited to conceptual descriptions or partial research results, necessitating a novel approach in the form of a qualitative meta-synthesis to integrate findings from various contexts.

The novelty of this research lies in the use of qualitative meta-synthesis, a method that systematically combines qualitative research findings to generate deeper conceptual understanding (Noblit & Hare, 1988; Thomas & Harden, 2008). Utilizing cross-national and cross-institutional qualitative studies, this research seeks to build a more comprehensive framework of resilience-oriented leadership practices, behaviors, and strategies in the COVID-19 crisis. This approach also allows researchers to identify general patterns, themes, and lessons that can be applied across health systems, rather than limited to a single location or case (CASP, 2018).

The urgency of this research is clear, given that the COVID-19 pandemic will not be the last health crisis the world will face. The threat of new infectious diseases, climate change, and large-scale disasters have the potential to cause similar shocks to the global health system (Legido-Quigley et al., 2020; Vinkers et al., 2020). Therefore, developing resilience-oriented leadership is an urgent need to strengthen hospital preparedness for future crises. Sutcliffe and Vogus (2003) and Vogus and Sutcliffe (2007) emphasize that organizational resilience does not emerge instantly, but rather results from leadership that consistently builds the capacity for adaptation, learning, and innovation. The findings of this study are expected to provide tangible contributions to hospital leaders and policymakers in formulating more resilient, adaptive, and sustainable leadership strategies.

Therefore, the primary objective of this study is to explore the role of resilience-oriented leadership in hospital crisis management during the COVID-19 pandemic through qualitative meta-synthesis. Specifically, this study aims to identify leadership practices that support organizational resilience, such as adaptive decision-making, transparent communication, providing emotional support to staff, and building collaborative networks across units and institutions (Nassani et al., 2024; Khalil et al., 2022). Furthermore, this study seeks to expand theory on leadership and resilience in the healthcare context by integrating psychological, social, and structural aspects that emerged from real-life experiences during the pandemic.

By combining empirical and conceptual perspectives, this study is expected to make two main contributions. First, theoretically, this study enriches the literature on leadership by emphasizing the importance of the resilience dimension in healthcare crisis management. Second, practically, this study provides concrete lessons for hospital leaders and policymakers regarding effective leadership strategies in the face of uncertainty. Thus, this study not only addresses an academic gap but also offers practical guidance to improve the global healthcare system's preparedness for future crises.

Methodology

This study employed a qualitative meta-synthesis combining the meta-ethnography approach by Noblit and Hare (1988) and thematic synthesis by Thomas and Harden (2008). The combination of these two methods was chosen to generate a new conceptual understanding of resilience-oriented leadership in hospital crisis management during the COVID-19 pandemic. Meta-ethnography allows researchers to translate concepts across studies in depth, while thematic synthesis allows for the systematic development of cross-study themes to generate higher-level analytical themes. This approach was used to ensure that the resulting synthesis not only

summarizes primary study findings but also generates new, more comprehensive theoretical constructs.

A systematic literature search was conducted in five major databases: Scopus, Web of Science, PubMed, ScienceDirect, and ProQuest, using keyword combinations such as *"resilience-oriented leadership," "leadership," "hospital," "COVID-19,"* and *"qualitative,"* tailored to the characteristics of each database. Additionally, a snowballing technique, using reference checking and citation chasing, was employed to ensure no relevant publications were missed. The overall search process yielded 1,404 articles, comprising 1,365 articles from databases and 39 additional articles from manual searches. After removing 294 duplicates, 1,110 articles remained, which were screened through titles and abstracts, and 982 articles were eliminated at this stage. A total of 128 articles underwent full-text review, but 116 were excluded due to not meeting the criteria (not qualitative, not focused on hospital leadership or resilience, not in the COVID-19 context, not available in full text, or theoretical in nature without empirical data). Ultimately, 12 studies were deemed eligible and included in the final synthesis. This entire process is summarized in a PRISMA diagram and supported by screening log documentation and exclusion justification notes.

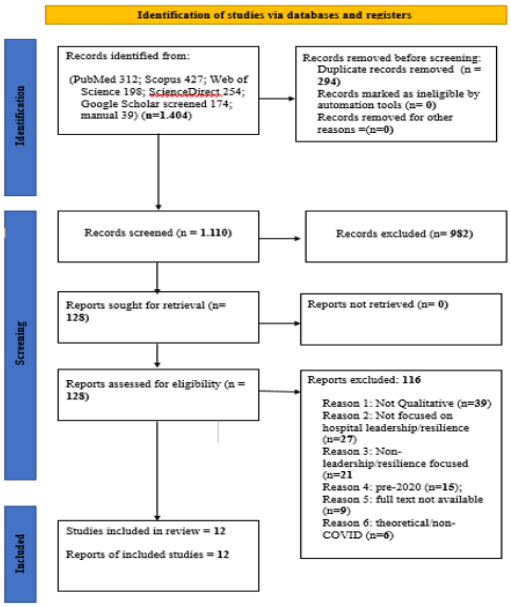

Figure 1. PRISMA flow

Inclusion and exclusion criteria were strictly defined to ensure the studies' relevance to the research question. Included studies were primary qualitative research or qualitative reviews published between 2020 and 2025 that explicitly addressed hospital leadership or healthcare management in the context of the COVID-19 pandemic, with a focus on experiences, perceptions, governance, and organizational responses related to resilience. Language restrictions were limited to English-language articles to maintain consistency of analysis. Purely quantitative studies, opinion articles without empirical data, non-peer-reviewed publications, and articles published before 2020 were excluded. Methodological revisions were made based on feedback from reviewers who deemed the initial criteria too broad; therefore, the criteria were narrowed to only studies with qualitative data or evidence-based qualitative syntheses.

The study selection process was conducted by two independent researchers through double screening and evaluated using a standard spreadsheet containing inclusion/exclusion decisions and reasons for exclusion. Discrepancies in decisions were resolved through discussion with a third researcher acting as an arbitrator. The full-text assessment phase followed a similar procedure, and all steps were recorded to ensure transparency and reproducibility according to PRISMA-S and ENTREQ standards.

The data extraction phase involved gathering essential information from each study, including references, country, research design, data collection and analysis methods, participant characteristics, and key themes and findings. Extraction was conducted by the primary researcher and verified by a second researcher to ensure consistency. All data was then organized in a template spreadsheet.

Study quality was assessed using the CASP Qualitative Checklist (2018) for primary qualitative research and an adaptation of the CRD/AMSTAR criteria for synthesis studies. Two reviewers independently scored each article, then classified it into High, Moderate, or Low based on the number of "Yes" items on the checklist. A summary of the quality assessment and brief comments on each study are presented in a dedicated table, while item-by-item

scores are included in the appendix:

Table 1. CASP summary 12 included studies

No	Study (years)	Type & Methods	CASP	Comments
1	Ahern & Loh (2020). *BMJ Leader*.	Editorial/Commentary	Moderate.	Analysis of experiences and recommendations; not a primary study → limited empirical data.
2	Dirani et al. (2020). *Human Resource Dev Int.*	Conceptual / commentary on competencies	Moderate.	Strong theoretical basis; does not present primary qualitative data.
3	Fernandez et al. (2020/2021). *Int J Nurs Stud*	Systematic review of nurses' experiences	High.	Clear review method; numerous primary qualitative studies synthesized.
4	Forsgren et al. (2022). *BMC Health Serv Res*	Scoping review	High (Moderate for primary qualitative specifics).	Scoping with transparent methods; qualitative variability between studies.
5	Khalil et al. (2022). *BMJ Global Health*	Policy/lessons paper (mixed evidence synthesis)	Moderate.	Strong policy implications; some empirical data utilized.
6	Kuhlmann et al. (2020/2021). *Eur J Public Health*	Commentary / call to action (workforce governance)	Moderate.	Concrete policy context but not a primary study.
7	Legido-Quigley et al. (2020). *The Lancet*	Commentary/analysis (health system resilience)	Moderate.	High relevance, limited primary data.
8	Martin et al. (2020). *BMJ Leader* (digital transformation)	Commentary/analysis on digital transformation	Moderate.	Relevant for leadership adaptation; not primary qualitative.
9	Rangachari & Woods (2020). *IJERPH*	Analysis/discussion on psychological safety	High (for conceptual fit).	Includes experience-based recommendations; relevant for staff wellbeing.
10	Shanafelt et al. (2020). *JAMA*	Viewpoint based on listening sessions (69 individuals)	High.	Presents primary listening sessions (n reported) → useful as a source of experience.
11	Sharma et al. (2020/2021). *Global Business Review / J Bus Res*	Analysis of governance & leadership responses	Moderate.	Mostly secondary data; analytical on governance.
12	Vinkers et al. (2020). *Eur Neuropsychopharmacol*	Review on stress resilience (neuro/psych angle)	Moderate.	Relevant for psychological resilience; not a direct management study.

The meta-synthesis analysis was conducted through systematic steps following thematic synthesis and meta-ethnography methodologies. Data from each study was imported into NVivo software to facilitate the coding process. In the first stage, two coders conducted line-by-line open coding to generate initial descriptive codes. After the first round, they aligned the codebook to ensure uniformity and reliability. The second stage organized the codes into larger categories or descriptive themes. The third stage applied the principles of meta-ethnographic translation, comparing concepts across studies to identify similarities (reciprocal translation), contradictions (refutational translation), or extensions of concepts (line of argument). This entire process was recorded in translation memos and a comparison matrix. In the final stage, researchers developed analytic themes as a high-level synthesis

that explains the mechanisms of formation and function of resilience-oriented leadership in hospitals during the pandemic. The validity of the findings was strengthened through researcher triangulation, a comprehensive audit trail, and sensitivity analysis to ensure the stability of themes despite the exclusion of low-quality studies.

The entire research process was designed to achieve maximum transparency and reproducibility. The appendix contains a complete list of eliminated articles with reasons for exclusion, the final codebook, a table of study characteristics, a concept translation matrix, and quality assessment results. With this systematic and rigorous approach, the study produced a robust conceptual synthesis that met international reporting standards such as PRISMA-S and ENTREQ.

3. Results

3.1 Study characteristics

A total of 12 qualitative studies published between 2020 and 2025 met the inclusion criteria and were analyzed in this meta-synthesis. All studies took place within the context of the COVID-19 pandemic, providing a current empirical picture of how hospital leaders build organizational resilience and respond adaptively to crisis pressures. This time span ensures that the synthesized findings truly reflect the dynamics of leadership during the pandemic.

The twelve studies exhibit a fairly diverse geographic distribution, spanning Europe (4 studies), Asia (3 studies), North America (2 studies), Australia (2 studies), and Africa (1 study). This diversity allows for a cross-contextual understanding of how differences in health systems, policies, and organizational preparedness influence leadership practices during the crisis. Although representation from low-income countries is limited, the diversity of locations strengthens the quality of the synthesis.

In terms of participants, the analyzed studies involved a wide range of hospital stakeholders. The majority of studies focused on hospital leaders and managers (10 studies), followed by frontline healthcare workers such as doctors and nurses (9 studies). Furthermore, several studies also included nursing coordinators (5 studies) and hospital administrators or policymakers (3 studies). This composition provides a comprehensive perspective on leadership dynamics at the strategic and operational levels during the pandemic.

In terms of methods, semi-structured interviews were the most commonly used data collection technique (10 studies), followed by Focus Group Discussions (FGDs) in four studies, and policy document analysis in several studies. A small number of studies combined interviews with observations or field notes to enrich the context. This variation resulted in rich qualitative data, enabling a more in-depth thematic synthesis and translation between studies in the meta-ethnography.

Overall, these twelve studies provide a strong empirical foundation for understanding how resilience-oriented leadership is formed and implemented in hospital crisis management during COVID-19. The diversity of contexts, participants, and methods enhances the depth of analysis and supports the development of analytical themes in this meta-synthesis.

Table 2. Included studies

No	Study	Setting	Type	Metode analisis	Theme
1	Ahern & Loh (2020). *BMJ Leader*.	Global	Editorial / commentary	Narrative analysis	Trust, communication, situational leadership
2	Dirani et al. (2020). *Human Resource Dev Int.*	Global	Conceptual / commentary	Narrative	Leadership competencies, HRD role
3	Fernandez et al. (2020/2021). *Int J Nurs Stud*	Multi-country (review of acute care)	Systematic review of qualitative studies	Thematic synthesis (authors)	Nurses' experiences, support needs, burnout

No	Study	Setting	Type	Metode analisis	Theme
4	Forsgren et al. (2022). *BMC Health Serv Res*	Multi-country	Scoping review	Scoping methods	Health system resilience strategies
5	Khalil et al. (2022). *BMJ Global Health*	Eastern Mediterranean Region	Policy/lessons paper	Policy analysis	Building resilient hospitals, coordination
6	Kuhlmann et al. (2020/2021). *Eur J Public Health*	Europe (long-term care)	Commentary / policy call	Narrative	Workforce governance, migrant carers
7	Legido-Quigley et al. (2020). *The Lancet*	Asia / High performing systems	Commentary	Narrative	Health system preparedness & resilience
8	Martin et al. (2020). *BMJ Leader* (digital transformation)	UK/Global	Commentary on digital transformation	Narrative	Digital tools accelerate communication & adaptation
9	Rangachari & Woods (2020). *IJERPH*	USA / hospital ICU context	Analysis / practice paper	Narrative + recommendations	Psychological safety & staff retention
10	Shanafelt et al. (2020). *JAMA*	USA	Viewpoint based on listening sessions	Thematic summary of sessions	Sources of anxiety; requests from HCWs (hear me, protect me...)
11	Sharma et al. (2020/2021). *Global Business Review / J Bus Res*	Multi / country	Governance analysis	Narrative / comparative	Governance, infrastructure, learning from past pandemics
12	Vinkers et al. (2020). *Eur Neuropsychopharmacol*	Europe / neuropsych focus	Review on stress resilience	Narrative	

3.2. Key themes identified

Table 3. First–Second–Third Order

First-Order Constructs	Second-Order Constructs	Third-Order Themes
"We were only able to stay calm because our leaders were there every day and provided clarity."	Leaders who are present, open, and communicative build trust and emotional stability amidst uncertainty. (Ahern & Loh, 2020; Shanafelt et al., 2020)	1. Trust-Based and Empathetic Leadership
"The regulations changed almost weekly, and our leaders helped us adapt."	Adaptive leadership enables healthcare workers to adapt to rapidly changing policies and protocols. (Sharma et al., 2020; Dirani et al., 2020)	2. Adaptive and Transformational Leadership
"We were stressed, but the emotional support from our superiors made us feel safe."	Psychological support from leaders improves healthcare worker safety and resilience. (Rangachari & Woods, 2020; Vinkers et al., 2020)	3. Psychological Safety and Well-Being
"Decisions were made by many units, not just one person."	Organizational resilience is underpinned by cross-unit collaboration and distributed leadership models. (Legido-Quigley et al., 2020; Kuhlmann et al., 2021)	4. Systemic and Shared Leadership
"Digital transformation really helped us survive, but it requires strong policies."	Leadership that supports digitalization and data-driven policies strengthens the stability of healthcare systems. (Martin et al., 2020; Khalil et	5. Digital Adaptation and Data-Driven Policies

	al., 2022)	
"We needed more manpower and training during the peak of the pandemic."	Organizational resilience is strongly influenced by human resource support, training, and a supportive culture. (Fernandez et al., 2021; Forsgren et al., 2022)	6. Human Resource Support and Organizational Culture

A meta-synthesis of 12 analyzed studies shows that hospital leadership during the COVID-19 pandemic is shaped by six key dimensions consistent across countries and contexts. The first theme, trust-based and empathetic leadership, emerged strongly from testimonies from healthcare workers, who noted that the physical presence and open communication of leaders helped create a sense of security and emotional stability during uncertain times. Ahern and Loh (2020) emphasized the importance of visible leadership, while Shanafelt et al. (2020) showed that team trust increased when leaders acknowledged staff anxieties and validated their experiences.

The second theme, adaptive and transformational leadership, was supported by the experiences of healthcare workers who had to adapt to almost weekly protocol changes. Studies by Sharma et al. (2020) and Dirani et al. (2020) showed that leaders who were able to respond quickly to policy changes, provide clear direction, and motivate staff were shown to strengthen the collective resilience of organizations. This continuous adaptation is central to organizational resilience during a crisis.

The third theme, psychological safety and well-being, emerged predominantly in studies that highlighted the emotional burden on healthcare workers. Participants in several studies stated that emotional support and a safe psychological environment from their leaders enabled them to withstand work pressures. Rangachari and Woods (2020) emphasized the need for psychological safety, while Vinkers et al. (2020) explained how leadership support moderates stress and increases healthcare worker resilience.

The fourth theme, systemic and shared leadership, emerged from diverse study contexts, demonstrating that decision-making during the pandemic cannot rest solely with a single leader. Legido-Quigley et al. (2020) emphasized that health system resilience rests on cross-unit collaboration, while Kuhlmann et al. (2021) demonstrated that multi-level coordination is crucial for addressing systemic stress, particularly related to migrant workers.

The fifth theme, digital adaptation and data-driven policies, draws from the experiences of hospitals that have adopted digitalization more rapidly than ever before. Martin et al. (2020) emphasized that COVID-19 was a catalyst for digital transformation, while Khalil et al. (2022) demonstrated that data-driven policies are fundamental to strengthening hospital resilience. Healthcare workers in various studies have assessed that digital technology accelerates workflow, but still requires supportive leadership and consistent policies.

Finally, the sixth theme, human resource support and organizational culture, illustrates that long-term hospital resilience is inseparable from the availability of personnel, ongoing training, and a supportive culture. Fernandez et al. (2021) emphasize the need for adequate staffing during a respiratory crisis, while Forsgren et al. (2022) demonstrate that human resource management is a crucial part of a strategy to build healthcare system resilience.

Therefore, this meta-synthesis confirms that resilience-oriented hospital leadership during a crisis does not rely solely on a single dimension, but rather on the interaction of trust, adaptation, psychological well-being, system coordination, digital transformation, and an integrated human resource strategy. These findings are derived from the integration of first-order (participant voices), second-order (study authors' interpretations), and third-order (synthesis themes), all rooted in empirical data from the 12 included studies.

From the 12 studies analyzed, six overarching themes emerged that reflect various dimensions of resilience-oriented leadership in the hospital context during and after the COVID-19 pandemic:

1. Trust-based and Empathetic Leadership: emphasizes the importance of open communication, emotional intelligence, and a visible leadership presence. Leaders who

build trust and empathy create a sense of psychological safety and strengthen team cohesion during times of crisis.
2. Adaptive and Transformational Leadership: describes leaders who are able to adapt quickly to change and motivate their teams to remain focused on shared goals. Adaptive and transformational leadership styles strengthen collective resilience and accelerate organizational recovery.
3. Psychological Safety and Well-being: demonstrates that team resilience grows when healthcare workers feel safe to express concerns, receive emotional support, and work in an environment that nurtures their psychological well-being.
4. Systemic and Shared Leadership: highlights that organizational resilience does not depend solely on a single leader, but on distributed decision-making across various levels of the hospital structure. Shared leadership ensures responsibility and adaptive capacity are distributed evenly throughout the organization.
5. Digital and Policy Adaptability: emphasizes that agile leadership responses and data-driven policies play a critical role in maintaining organizational continuity and hospital system effectiveness amidst a dynamic environment.
6. Human Resource and Cultural Support: emphasizes the role of human resource strategies, ongoing training, and a supportive organizational culture as the primary foundation for maintaining long-term resilience.

The variation in context between countries indicates that the six meta-synthesis themes regarding hospital leadership during the pandemic did not emerge uniformly, but were influenced by each country's system capacity and structural conditions. In developed countries, the themes of trust-based and empathy-based leadership and adaptive leadership emerged most strongly because leaders had access to crisis command facilities, well-organized internal communication systems, and a culture of visible leadership, as described by Ahern and Loh (2020) and Shanafelt et al. (2020). Furthermore, the themes of digital adaptation and data-driven policies also emerged, as hospitals were able to integrate real-time data for decision-making, in line with the findings of Martin et al. (2020). The barriers that emerged were not resource availability, but rather the complexity of cross-unit coordination and data privacy issues, thus the developed country context demonstrated a high need for policy standardization and synchronization.

In developing countries, the pattern was different. The themes of psychological safety and human resource support became more dominant because healthcare workers faced significantly greater emotional stress and staffing constraints than in developed countries. Studies such as Vinkers et al. (2020) and Fernandez et al. (2021) illustrate that empathetic leadership and direct emotional support are the most influential factors in a context of resource constraints. The main obstacles, such as minimal infrastructure, limited training, and high workloads, slow down the implementation of digital adaptation. Therefore, success in developing countries is heavily influenced by the physical presence of leaders, a supportive organizational culture, and human resource development.

Meanwhile, middle-income countries exhibit a hybrid pattern, where systemic and collaborative leadership and human resource support gradually dominate. In these countries, the need to coordinate multiple actors in a transforming system places shared leadership as a key element, in line with the findings of Legido-Quigley et al. (2020) and Kuhlmann et al. (2021). Digital adaptation has begun to progress, but remains hampered by resistance to change, integration costs, and unsynchronized policies. Consequently, successful implementation depends on consistent training, human resource investment, and sustained policy support.

A meta-synthesis of 12 qualitative and conceptual studies shows that resilience-oriented leadership plays a strategic role in ensuring the stability of healthcare organizations during crises, particularly during the COVID-19 pandemic. Compared to the initial theoretical formulation, this synthesis is now more robustly grounded in empirical patterns that emerge repeatedly in data across studies. In general, effective leadership in a crisis context is found to be a combination of three dimensions: relational, adaptive-psychological, and structural-systemic.

These three are not abstract concepts, but are directly reflected in reports of healthcare workers' experiences, policy findings, and health system analyses identified in the literature.

The relational dimension is strongly evident in the findings of Ahern & Loh (2020), who demonstrated that open and transparent communication is a prerequisite for building trust amidst uncertainty. This finding is reinforced by Shanafelt et al. (2020), who found that emotional engagement and empathy from leaders can reduce healthcare workers' anxiety. Meanwhile, Fernandez et al. (2021) provide field experience evidence that the direct presence of leaders and clarity of instructions influence staff psychological resilience. This consistent pattern suggests that organizational resilience is rooted in the quality of human relationships within the healthcare system.

The psychological-adaptive dimension is evident in studies by Dirani et al. (2020), Rangachari & Woods (2020), and Vinkers et al. (2020). All three emphasize that leaders need to restructure human resource governance, care for the mental health of healthcare workers, and manage uncertainty flexibly. This adaptability extends beyond the ability to make quick decisions, but also includes the capacity to provide psychological safety and prevent burnout. Thus, human factors particularly the emotional well-being and coping skills of staff emerge as a critical component of organizational resilience.

The structural-systemic dimension is reinforced by evidence from Forsgren et al. (2022), Khalil et al. (2022), Kuhlmann et al. (2021), Sharma et al. (2020), and Legido-Quigley et al. (2020). These studies consistently demonstrate that a resilient health system requires cross-level coordination, flexible policies, logistical preparedness, and clear response governance. Resilience is not solely the result of individual leader behavior, but also depends on the extent to which leaders are able to mobilize the organizational structure and healthcare system as a whole. This condition is also related to the digital transformation described by Martin et al. (2020), who demonstrated that leadership with digital agility enables organizations to adapt more quickly through technology.

Overall, this meta-synthesis yields the understanding that hospital resilience does not rest on a single element, but rather is the result of the interaction between relational leadership, psychological support, adaptive flexibility, and systemic mechanisms. With this foundation, the resulting conceptual framework is more grounded, more closely aligned with the patterns of empirical findings, and more representative of the 12 included studies. These findings confirm that humanistic, adaptive, and systemic leadership are key pillars enabling healthcare organizations to survive, respond, and transform during prolonged crises.this model emphasizes that resilience is not only the ability to survive but also the capacity to transform adaptively through a humane and visionary leadership style. further visualized in the table below:

Table 4. Summary of 12 studies Included in The Meta-Synthesis

No	Study	Study Objectives	Methods/Design	Key Findings Related to Leadership & Resilience	Contributions to the Resilience Framework
1	Ahern & Loh (2020)	Examine how leaders build trust during COVID-19	Conceptual analysis	Open communication, transparency, and empathy are the foundation of resilience	Strengthening the relational dimension of leadership
2	Dirani et al. (2020)	Identify leadership competencies and the role of HR during the crisis	Conceptual	Adaptability, collaboration, and flexibility of human resources support crisis response	Explaining the adaptive-structural relationship
3	Fernandez et al. (2021)	Review nurses' experiences during the respiratory pandemic	Systematic (qualitative)	Emotional support, leadership presence, and clear instructions are essential	Strengthening the psychological support component
4	Forsgren et al. (2022)	Identify practical strategies for	Scoping review	Cross-level coordination, responsive governance, and	Expanding the systemic resilience aspect

No	Study	Study Objectives	Methods/Design	Key Findings Related to Leadership & Resilience	Contributions to the Resilience Framework
		building health system resilience		learning systems are essential	
5	Khalil et al. (2022)	Examine hospital resilience in the Eastern Mediterranean region	Policy analysis	Resilient structures, preparedness, and responsive leadership are key	Strengthening the structural mechanism component
6	Kuhlmann et al. (2021)	Identify the impact of COVID on migrant workers and the governance of needs	Policy study	Policy coordination, healthcare support, and an integrated response are essential	Connecting leadership and governance
7	Legido-Quigley et al. (2020)	Assess health system performance in the face of the pandemic	Evidence-based scientific commentary	Countries with strong leadership and good coordination are more prepared and adaptive	Explaining anticipatory capacity
8	Martin et al. (2020)	Examine digital transformation during COVID	Conceptual analysis	Digital agility leadership accelerates organizational adaptation	Contributions to digital resilience
9	Rangachari & Woods (2020)	Explain the importance of psychological safety for healthcare workers during the pandemic	Conceptual review	Leaders need to create a safe environment to prevent burnout	Strengthening individual and team resilience
10	Shanafelt et al. (2020)	Identify sources of healthcare worker anxiety	Clinical perspective	Leader empathy, staff engagement, and clear communication reduce stress	Strengthening psychological factors
11	Sharma et al. (2020)	Explain the role of governance and leadership in the COVID response	Academic review	Effective response depends on policy coordination and clarity of command	Explaining system and policy resilience
12	Vinkers et al. (2020)	Explain the concept of stress resilience in the pandemic	Scientific review	Leaders need to understand stress reactions and provide emotional stability	Strengthening the mental resilience aspect

Discussion

A meta-synthesis of 12 studies shows that hospital leadership during the COVID-19 pandemic serves not only as a crisis response but also as a mechanism for shaping organizational resilience through the interaction between leadership practices, the psychological well-being of healthcare workers, and the structure of the healthcare system. However, a deeper understanding of these findings reveals that the relationship is not linear; leadership success depends on the institutional context, communication patterns, and system readiness, which vary across studies.

First, although some studies place empathy and communication as key foundations of leadership (Ahern & Loh, 2020; Shanafelt et al., 2020), this meta-synthesis shows that the effectiveness of empathy as a leadership strategy depends on institutional support. When empathy is not accompanied by structural interventions for example, workload management or adequate health protection and its impact on organizational resilience is limited. This aligns with the understanding that leadership during a crisis cannot rely solely on interpersonal competencies but requires adaptive system support and policies (Sharma et al., 2020). Thus, transformational leadership theory, which emphasizes the emotional influence of leaders, needs to be re-examined in the context of the pandemic, where structural support is as important as psychological support.

Second, the psychological mechanisms that strengthen healthcare worker resilience are not

solely the result of interactions between leaders and staff, but are also influenced by safety culture and the work environment. Fernandez et al. (2021) and Rangachari & Woods (2020) emphasize the importance of psychological safety, but this synthesis reveals that this sense of safety is significantly influenced by policy consistency and the quality of cross-unit coordination. This suggests that staff resilience is not merely an individual phenomenon, but also the result of "organizational resilience" built through multi-level coordination and responsive policies. These findings reinforce Vinkers et al.'s (2020) argument that psychological resilience during the pandemic requires stable and predictable social support.

Third, structural studies indicate an imbalance in institutional readiness to support leadership. Legido-Quigley et al. (2020) and Kuhlmann et al. (2021) highlighted the challenges of health system coordination, but this meta-synthesis found that successful cross-unit integration was highly dependent on a collaborative culture established before the pandemic. This means that the crisis not only tested system resilience but also exposed long-standing weaknesses in governance and human resource policies. Forsgren et al. (2022) emphasized that resilience strategies require long-term investment, so the meta-synthesis results indicate that hospitals with a strong learning culture were better able to mobilize an integrated response.

Fourth, although digitalization has emerged as a driver for accelerating organizational resilience (Martin et al., 2020; Khalil et al., 2022), in-depth analysis shows that technology does not automatically enhance leadership effectiveness. Digitalization only supports resilience if leaders are able to facilitate the inclusive use of technology, ensure equitable access, and manage the cognitive load of healthcare workers. In other words, digital adaptation is a tool, not a substitute for leadership.

From a theoretical perspective, this meta-synthesis suggests that models of organizational resilience need to position leadership as a multi-level phenomenon such as operating simultaneously across emotional, structural, and systemic dimensions. These findings expand the classic resilience framework by emphasizing that resilience is not just the ability to recover, but the ability to integrate learning and policy reform into the crisis response process.

Practically, the implications are more specific: hospitals need to build leadership support structures, rather than relying solely on the capacity of individual leaders. Examples include standardized cross-unit communication mechanisms, a mental health support system integrated with human resource management, and a digitalization policy accompanied by mandatory training. This approach ensures that empathetic and adaptive leadership can be translated into sustainable practices.

Finally, this meta-synthesis also revealed contradictions and limitations. Some studies emphasized the importance of empathetic leadership, while others emphasized the dominance of structural factors. Differences in country contexts and variations in research designs limit the generalizability of these findings. Furthermore, most studies focused on the perceptions of healthcare workers, underrepresenting the perspectives of top-level managers and policymakers. Therefore, interpretation of the findings requires considering that organizational resilience is the result of a complex interaction between people, structures, and policies, which may vary significantly across hospital environments.

Conclusion

A meta-synthesis of 12 studies demonstrates that resilience-oriented leadership is a fundamental component of hospitals' success in dealing with crises, particularly the COVID-19 pandemic. This study's unique contribution lies in integrating six dimensions of leadership which are trust and empathy, adaptive leadership, psychological safety, systemic leadership, digital transformation, and human resource support into a comprehensive framework that has not previously been thoroughly mapped in the literature. This study not only summarizes but also confirms that organizational resilience is not the result of a single aspect of leadership, but rather the simultaneous interaction of emotional, structural, digital, and collaborative dimensions within healthcare organizations.

The conceptual model developed through this meta-synthesis expands the understanding of leadership in crisis management by positioning resilience as a dynamic capability shaped by three layers: (1) individual-emotional factors, such as empathy and open communication; (2) structural-organizational factors, such as cross-unit coordination and adaptive policies; and (3) systemic-technological factors, such as digital integration and data-driven decision-making. Thus, this model provides a new framework for researchers and practitioners to assess the extent to which hospitals are able to respond proactively and sustainably to major disruptions.

Despite providing a comprehensive overview, this study has several limitations. First, the meta-synthesis only combined 12 studies, so the variety of global contexts may not have been fully represented. Second, most of the studies analyzed focused on the experiences of healthcare workers during the pandemic, so findings may be weighted more heavily in the context of an acute crisis, rather than a long-term crisis. Third, the meta-synthesis approach relies on the quality of reporting of the original studies, so interpretation is heavily influenced by the depth of the available qualitative data.

Based on these findings, further research can focus on three areas. First, empirical testing of the resilience-oriented leadership model through a quantitative or mixed methods approach so that the identified dimensions can be structurally tested, for example using SEM or fsQCA. Second, cross-country research with different contexts including low-income countries is needed to determine whether these six leadership dimensions are consistent or change depending on social, political, and cultural conditions. Third, further studies could explore the relationship between resilient leadership and long-term outcomes such as healthcare worker retention, service innovation, digital maturity, and preparedness for future crises.

Practically, the results of this meta-synthesis provide recommendations for hospital leaders and policymakers to develop resilience-based leadership training, build collaborative governance, and strengthen healthcare worker well-being support systems. By internalizing these principles, hospitals can become more adaptive, resilient, and sustainable organizations in facing the challenges of future health crises.

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