Nurse Media Journal of Nursing
e-ISSN: 2406-8799, p-ISSN: 2087-7811
https://medianers.undip.ac.id
16(1):69–81, April 2026
https://doi.org/10.14710/nmjn.v16i1.68024

REVIEW

Factors Influencing Nurses' Resistance to Change: A Systematic Review

Abdulaziz M. Alsufyani[1], Fahad M. Althobaiti[1], Sayer M. Aljuaid[2]

[1]*Nursing Leadership and Education Department, Nursing College, Taif University, Taif, Saudi Arabia*
[2]*Lincoln University College, Selangor, Malaysia*

Article Info

Article History:
Received: 8 November 2024
Revised: 3 January 2026
Accepted: 6 January 2026
Online: 30 April 2026

Keywords:
Change barriers; change management; nursing; resistance to change; systematic review

Corresponding Author:
Abdulaziz M. Alsufyani
Nursing Leadership and Education Department, Nursing College, Taif University, Taif, Saudi Arabia
Email: a.aziz987@hotmail.com

Abstract

Background: The effectiveness of change initiatives in healthcare systems is often undermined by nurses' resistance to change, resulting in unfavorable outcomes. Despite nurses' central role in hospital-based initiatives, multiple factors may contribute to this resistance. The existing literature remains insufficient in synthesizing comprehensive, integrative evidence on this issue. This gap highlights the need for a systematic review to inform tailored interventions that enhance the implementation and sustainability of change in healthcare.
Purpose: This review provides a comprehensive overview of the factors influencing resistance to change in the nursing profession.
Methods: Following the PRISMA guidelines, a systematic search was conducted in PubMed, CINAHL, Scopus, and Web of Science using terms related to "resistance to change" and "nursing." Studies examining resistance factors among nurses, published in English between 2010 and 2024, were included. Two independent reviewers conducted data extraction and quality assessment using the Mixed-Methods Appraisal Tool. Content and thematic analyses were performed to generate a comprehensive synthesis.
Results: Of the 646 records identified, 14 studies met the inclusion criteria and were included in the final review. The findings revealed significant individual, interpersonal, and organizational factors contributing to nurses' resistance to change. Individual-level factors included low readiness for change, limited empowerment, and personality characteristics. Interpersonal factors were associated with poor communication, limited stakeholder engagement, and weak leader–member relationships. At the organizational level, the factors included ineffective leadership styles, inadequate training, and dysfunctional organizational culture.
Conclusion: Resistance to change among nurses is multifaceted and context-dependent. These findings underscore the need for targeted interventions, particularly emphasizing the importance of effective communication, training, and nurse involvement in enhancing the sustainability of change initiatives in healthcare settings.

How to cite: Alsufyani, A. M., Althobaiti, F. M., & Aljuaid, S. (2026). Factors influencing nurses' resistance to change: A systematic review. *Nurse Media Journal of Nursing, 16*(1), 69–81. https://doi.org/10.14710/nmjn.v16i1.68024

1. Introduction

In the ever-changing healthcare market, organizational change is both necessary and inevitable to manage growth and competition. Organized change strategies can help manage the increasing demand for services within the organization by introducing innovations to alleviate prevailing conditions (Garrido-Moreno et al., 2024; Mızrak, 2023). Healthcare organizations are also not exempt from this requirement, as the need for appropriate change strategies within the organization is essential to meet the demands of public healthcare and wellness (Cutler, 2023; Nilsen et al., 2020), which has escalated following the recent global pandemic (Rosser, 2020). Recent evidence confirms the rapid changes occurring in healthcare systems globally in terms of structural, technological, and workforce transformation, which are a result of post-pandemic recovery requirements, increased technological adaptation, and workforce shortages, thus increasing the relevance of successful, sustainable strategies in managing these changes (Organisation for Economic Co-operation and Development [OECD], 2024; World Health Organization [WHO], 2020).

Despite the successful implementation of change programs remaining surprisingly difficult in both for-profit and not-for-profit environments, the empirical literature consistently finds that about 60–70% of change programs fail to meet their desired objectives (Cleary et al., 2019; Jones et al., 2019; Tappen et al., 2017). Organizational change scholars have frequently observed that change programs in healthcare environments often result in suboptimal performance (Harmon et al., 2023; Khraim, 2023). Estimates have found that only about a third of change programs in healthcare environments worldwide between 2015 and 2020 resulted in successful implementation (Braithwaite et al., 2021), with about 70% of the programs in the other category having resulted in suboptimal performance or outright failure (Baloh et al., 2019; Robert et al., 2019). Although many factors can be explored to determine the cause of these suboptimal performance trends, the primary reason for the outright failure of these programs has been employees' resistance to change (RTC) (Mareš, 2018). Importantly, no change in failure rates has been observed, and resistance among frontline healthcare workers is a major obstacle to implementation (Braithwaite et al., 2018).

Resistance to change (RTC) has been widely recognized as a critical factor hindering the effective implementation of organizational change across diverse contexts (Amarantou et al., 2018; Hubbart, 2023; Teerikangas et al., 2026), including healthcare settings (Cho et al., 2021). In healthcare settings, this is closely associated with organizational readiness for change, which reflects healthcare providers' preparedness and willingness to engage in change processes (Almuqati et al., 2023). RTC has been defined by Piderit (2000, p. 783) as "any employee behavior that discredits, delays, or prevents the implementation of a work change." According to this definition, RTC can be understood as a complex behavior driven by employees' mental processes and behavioral responses to organizational change initiatives (Mareš, 2018). Importantly, resistance is not necessarily destructive or negative; rather, it may be interpreted as a signal of underlying issues within an organization's structure or unmet needs, which, in turn, may contribute to improving change processes (Mareš, 2018).

RTC is particularly evident within the nursing profession. Previous studies suggest that nurses may exhibit resistance due to a combination of fear, uncertainty, doubt, frustration, distrust, confusion, and anger (Cleary et al., 2019; Oreg et al., 2011; Piderit, 2000). These reactions often stem from the demanding task of adapting to new practices, protocols, or technologies that disrupt established routines or appear incompatible with nurses' prior experiences and training (Cheraghi et al., 2023). Furthermore, the high-stress clinical environment and the continuous demand for high-quality patient care can intensify concerns about change, thereby increasing the complexity of accepting and sustaining new methods or practices. Consequently, targeted strategies are often required to address the emotional and cognitive barriers underlying nurses' RTC (Cleary et al., 2019; Nilsen et al., 2020). Recent studies continue to show that resistance among nurses to change is correlated with emotional distress, work intensity, and the incongruence or mismatch between change strategies and the values of nursing professionals in post-pandemic healthcare organizations (Labrague, 2021; Wei et al., 2018). These outcomes have continued to validate previous observations that RTC among nursing professionals is more than an attitudinal issue.

Although RTC among nurses is recognized as an important issue in nursing, existing review-level evidence remains limited in several key areas. Previous reviews tend to adopt general organizational or managerial frameworks rather than integrating evidence specific to nurses at the individual, interpersonal, and organizational levels (Greenhalgh et al., 2004; Wensing et al., 2020). This gap is significant given the critical role of nursing professionals in implementing change and delivering patient care. The limited synthesis focusing on nurses' resistance may hinder the development of targeted change strategies and potentially affect patient safety and quality of care (Moon et al., 2022).

Accordingly, this systematic review aimed to identify, synthesize, and critically evaluate international literature on nursing RTC. In particular, it examined the personal, social, and organizational factors contributing to nurses' RTC across different healthcare organizations. Furthermore, this review provides a comprehensive synthesis centered on nurses as a case, thereby contributing to an expanded understanding and supporting the development of organized strategies for successful change implementation and adaptability.

2. Methods

2.1. Research design

This systematic review aimed to synthesize existing findings from prior research on factors contributing to RTC in nursing. It was carried out and summarized in accordance with the PRISMA 2020 guidelines to ensure sound methodology and transparency (Page et al., 2021). This systematic review was not registered in PROSPERO because it was exploratory and descriptive, and focused on synthesizing qualitative and quantitative findings to provide an overview of RTC predictors among nurses. To address bias and improve transparency, the review included the development of clear eligibility criteria, a comprehensive methodology, and documentation of the review findings through the PRISMA flow chart. It also included systematic extraction of findings and quality assessment of the included studies.

2.2. Search methods

The literature search was conducted independently by two researchers between January and November 2024. Four electronic databases were searched: PubMed, CINAHL, Web of Science, and Scopus. Database-specific controlled vocabularies and field tags were applied, including Medical Subject Headings (MeSH), Major Headings (MH), Topic Search (TS), and TITLE–ABS–KEY. Boolean operators (AND/OR) were used to combine search terms. The detailed search strategies for each database are presented in Table 1.

Table 1. Search strategy across databases

Database	Search Fields	Keywords & Strategy
PubMed	MeSH	("Resistance, Psychological"[MeSH] OR "resistance to change" OR "organizational change") AND ("Nurses"[MeSH] OR nurse* OR "nursing staff") AND ("Organizational Culture"[MeSH] OR "Attitude of Health Personnel"[MeSH] OR leadership OR "workplace culture" OR "psychological factors")
CINAHL	MH	(MH "Resistance, Psychological" OR "resistance to change" OR "organizational change") AND (MH "Nurses" OR nurse* OR "nursing staff") AND (MH "Organizational Culture" OR MH "Attitude of Health Personnel" OR leadership OR "workplace culture" OR "psychological factors")
Web of Science	TS	TS = ("resistance to change" OR "psychological resistance" OR "organizational change") AND TS = (nurse* OR "nursing staff") AND TS = ("organizational culture" OR leadership OR "workplace culture" OR "psychological factors")
Scopus	TITLE-ABS-KEY	TITLE-ABS-KEY ("resistance to change" OR "organizational change") AND TITLE-ABS-KEY (nurse* OR "nursing staff") AND TITLE-ABS-KEY ("leadership" OR "organizational culture" OR "psychological factors")

2.3. Inclusion and exclusion criteria

The review included empirical studies published in English between 2010 and 2024 that aimed to identify determinants of RTC among nursing professionals. Included studies employed qualitative, quantitative, or mixed methods designs. Exclusion criteria included publications not written in English, duplicate publications, and studies that did not specifically focus on RTCs among nurses. Non-empirical works such as editorials, opinion pieces, and commentaries were also excluded. The quality of the included studies was assessed using the Mixed Methods Appraisal Tool (MMAT) (Hong et al., 2018).

2.4. Study screening

The search yielded 646 records from the following databases: Web of Science (n = 261), PubMed (n = 243), CINAHL (n = 102), and Scopus (n = 40). Abstract screening followed the guidelines proposed by Polanin et al. (2019) to enhance rigor and reliability. The inclusion and exclusion criteria were established and pilot-tested by the authors (YA, PS) to minimize bias. Discrepancies were resolved through discussion, and when consensus could not be reached, a third author (AM) was consulted. Decisions and justifications at the inclusion and exclusion stages were systematically documented using Covidence systematic review software (2024), an online platform for managing systematic reviews.

2.5. Data extraction

Prior to data extraction, a standardized extraction form was pilot tested by two authors (YA, PS) on a sample of the included studies. Extracted data included author(s), year of publication, country, study design, sample size, healthcare setting, measurement tools, and key findings related to resistance to change (RTC). Data extraction was conducted using Covidence systematic review software (2024). Extracted data were compared, and discrepancies were resolved through discussion until consensus was reached.

2.6. Quality appraisal

Two independent reviewers (PS and YA) applied the MMAT (Hong et al., 2018) to assess the methodological quality of all included studies (qualitative, quantitative, and mixed-methods designs). Each criterion was rated as "Yes," "No," or "Can't Tell." Studies meeting all criteria were considered high-quality, while those meeting fewer criteria were considered lower quality.

For qualitative studies, the appraisal examined the methodological appropriateness, adequacy of data collection, rigor of data analysis, and coherence of findings. For quantitative studies, it focused on the appropriateness of sampling strategy, sample representativeness, measurement validity and reliability, completeness of outcome data, and risk of bias or confounding. Meanwhile, for mixed-method studies, in addition to qualitative and quantitative criteria, the assessment considered the sufficiency of integration, appropriateness of the mixed-method design, and coherence of the overall interpretation.

Most of the included studies in this review met all or most of the MMAT criteria. However, some studies had methodological limitations, including reliance on cross-sectional designs, reliance on self-reported data, and insufficient reporting of sampling strategies and response rates. No studies were excluded based on quality appraisal; instead, the appraisal informed data synthesis and interpretation. The results are presented in Table 2.

Table 2. Summary of the quality appraisal of the included studies

Authors	Country	Design	Sample size	Quality Rating (MMAT)
Amarantou et al. (2018)	Greece	Quantitative Cross-sectional with structural equation modeling (SEM)	158	Moderate
Çakıroğlu & Seren (2019)	Turkey	Quantitative - Descriptive correlational	457	High
Cho et al. (2021)	China	Quantitative – Correlational with path analysis	223	Moderate
Cleary et al. (2019)	Australia	Quantitative -Descriptive cross-sectional	151	Moderate
El-Sayed et al. (2017)	Egypt	Quantitative - Descriptive exploratory	179	Moderate
Ericson-Lidman & Strandberg (2021)	Sweden	Qualitative - (content analysis).	15	High
Ghanavatinejad et al. (2018)	India	Quantitative - Cross-sectional SEM	510	High
Johansson et al. (2014)	United States	Quantitative -correlational	223	High
Kaya et al. (2019)	Turkey	Quantitative - Descriptive cross-sectional	178	High
Kiran et al. (2019)	Pakistan	Quantitative - Descriptive correlational	150	Moderate
Nilsen et al. (2020)	Sweden	Qualitative interviews (content analysis)	12	Moderate
Ozkalay & Karaca (2021)	Turkey	Quantitative - Descriptive cross-sectional	401	High
Portoghese et al. (2011)	Italy	Quantitative - Cross-sectional predictive design (SEM)	395	High
Tyler et al. (2013)	Sweden	Qualitative – descriptive	17	High

2.7. Data synthesis

A narrative synthesis of the included studies was conducted to systematically organize and integrate the findings of the RTCs in the nursing profession. Findings from the included studies

were extracted for tabling to facilitate systematic comparison across the studies. The studies have been compared based on factors that span from the individual to broader organizational levels. A narrative synthesis provides an effective way to systematically identify patterns in the findings from the included studies, aiming to build integrated insights into the determinants of RTC among nurses.

3. Results

3.1. Search outcomes

Using the predefined criteria, a total of 646 records were identified through database searching, including Web of Science (n = 261), PubMed (n = 243), CINAHL (n = 102), and Scopus (n = 40). After removing 203 duplicate records, 443 records remained for screening. Following title and abstract screening, 301 records were excluded. Subsequently, 142 reports were sought for retrieval, of which 76 reports were not retrieved. A total of 66 full-text articles were assessed for eligibility. Of these, 52 reports were excluded for reasons including inappropriate study design, irrelevance to the review question (population or outcomes), incomplete reporting, and publication-related criteria. Finally, 14 studies were included in the systematic review (Figure 1).

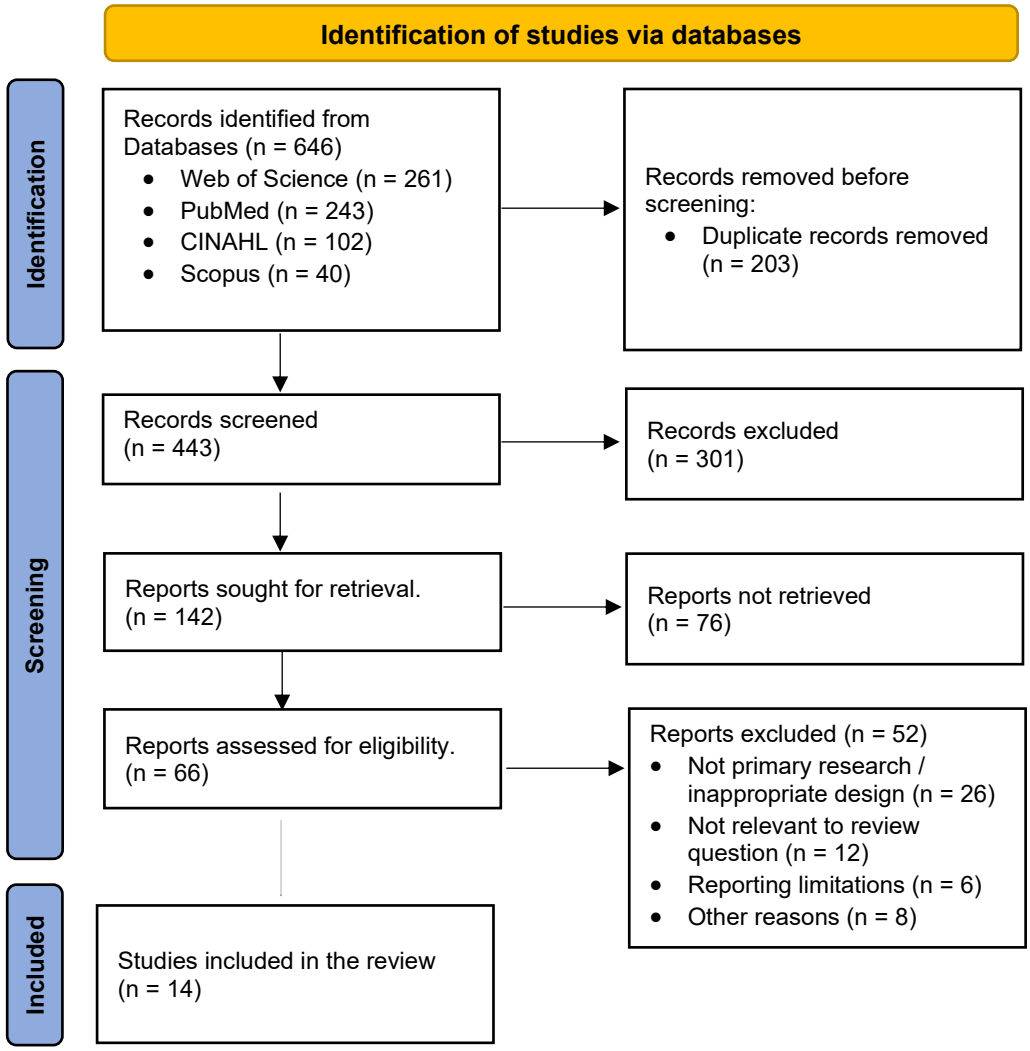

Figure 1. PRISMA flow diagram of study selection process

The included studies (n = 14) were conducted across diverse healthcare settings, including hospitals, nursing homes, elderly care facilities, mental health units, and broader healthcare systems. The majority of studies were conducted in hospital settings (n = 8), followed by nursing

homes/elderly care settings (n = 3), psychiatric or mental health units (n = 2), and healthcare system-level settings (n = 1).

Geographically, the studies were distributed across multiple countries, with the highest representation from Turkey (n = 3) and Sweden (n = 3), followed by China (n = 1), Greece (n = 1), Australia (n = 1), Egypt (n = 1), India (n = 1), the United States (n = 1), Pakistan (n = 1), and Italy (n = 1). All included studies examined factors influencing attitudes toward organizational change and those contributing to RTC. Among them, 10 studies employed quantitative methods, while 4 used qualitative methods to explore healthcare professionals' experiences and perspectives on organizational change. Table 3 summarizes the included studies.

3.2. Thematic categorization

A thorough review and evaluation of the eligible articles based on the recommendations of Popay et al. (2006) revealed findings that were categorized into three main themes: (1) individual factors, (2) interpersonal factors, and (3) organizational factors. These themes were further divided into 10 subcategories, as described in Table 4.

Table 3. Characteristics and key findings of included studies

Authors	Aims	Setting	Key Findings
Amarantou et al. (2018)	Identifies enablers of RTC in healthcare organizations	Hospitals in Greece	Participation in decision-making and the employee–management relationship indirectly reduced RTC through disposition toward change and anticipated impact of change; disposition toward change showed the strongest direct effect on RTC.
Çakıroğlu & Seren (2019)	Examines the nexus between nurses' traits and RTC	Hospitals in Turkey	All personality traits are significantly associated with the RTC subscale
Cho et al. (2021)	Examines nurses' RTC in adopting a new system.	Hospitals in China	RTC is the strongest direct predictor; self-efficacy and support indirectly reduce RTC
Cleary et al. (2019)	Examines change management in mental health nursing.	Mental Health Units in Australia	Leadership support and effective communication reduced resistance
El-Sayed et al. (2017)	Investigate the contributors to nurses' RTC	Hospitals in Egypt	Empowerment and supportive environment increased readiness; dispositional RTC reduced readiness.
Ericson-Lidman & Strandberg (2021)	Explores the experiences of acting as a change agent.	Elderly Homes in Sweden	Lack of preparation and organizational support increased resistance
Ghanavatinejad et al. (2018)	Explores the role of change participation in RTC.	Hospitals in India	Participation significantly reduced RTC; benefits acted indirectly
Johansson et al. (2014)	Examines the relationship between organizational culture and RTC	Nursing Homes in the US	Culture dimensions significantly predicted RTC; cognitive rigidity was the strongest predictor.
Kaya et al. (2019)	Investigates facilitators for nurses' change readiness	Hospitals in Turkey	Education level and experience increased readiness
Kiran et al., (2019)	Examine the nexus between empowerment and RTC	Hospitals in Pakistan	Empowerment negatively correlated with RTC
Nilsen et al. (2020)	Illuminates organizational changes in the healthcare system.	Swedish Health Care System	Involvement and perceived value reduced resistance
Ozkalay & Karaca (2021)	Explores nurses' attitudes toward change.	Hospitals in Turkey	Education and training participation improved attitudes
Portoghese et al. (2011)	Investigates the nexus between leader-member exchange and change (LMX)	Nursing Home in Italy	Leader Member Exchange (LMX) and communication increased affective commitment to change.
Tyler et al. (2013)	Investigates RTC among nurses	Psychiatric Units in Sweden	Fear, uncertainty, and distrust increased resistance

Table 4. Primary categories and subcategories derived from the review of selected articles

Main Categories	Sub-themes	Codes
Individual Factors	Attitudes and Readiness Toward Change	- Positive Attitudes of Change (Amarantou et al., 2018; Ozkalay & Karaca, 2021). - Misunderstanding of change (Cleary et al., 2019) - Expectations of Change (anticipated outcomes and implementation demands) (Portoghese et al., 2011) - Valuing the change (Nilsen et al., 2020) - Perceived Value (Cho et al., 2021) - Readiness for change (El-Sayed et al., 2017)
	Empowerment perception	- Structural Empowerment (El-Sayed et al., 2017) - Empowerment perception (Kiran et al., 2019) - Limited Awareness of Change Benefit (Cho et al., 2021; Ozkalay & Karaca, 2021). - Positive perception of change (Ericson-Lidman & Strandberg, 2021).
	Adaptability of Change	- Individual adaptability (Portoghese et al., 2011).
	Demographic & Trait Factors	- Five Personality Traits (Amarantou et al., 2018; Cakiroglu & Seren, 2019). - Sociodemographic Factors (Kaya et al., 2019; Kiran et al., 2019; Ozkalay & Karaca, 2021). - Previous habits (Johansson et al., 2014). - Conservatism (Johansson et al., 2014).
	Psychological Factor	- Perceived self-efficacy (Cho et al., 2021). - Emotional intelligence (Cakiroglu & Seren, 2019).
Interpersonal Factors	Engagement of Stakeholders	- Stakeholder Engagement (Ericson-Lidman & Strandberg, 2021; Tyler et al., 2013).
	Communication	- Communication ways (Nilsen et al., 2020). - Colleagues' viewpoints (Cho et al., 2021). - Human relations (Johansson et al., 2014). - Leader–member exchange (Amarantou et al., 2018; Ericson-Lidman & Strandberg, 2021). - Reciprocal Feedback (Tyler et al., 2013).
	Participation in Change Process	- Participation in Change making (Amarantou et al., 2018; Ghanavatinejad et al., 2018; Nilsen et al., 2020).
Organizational Factors	Leadership	- Leadership understanding (Tyler et al., 2013). - Management style (Kaya et al., 2019).
	Organizational Culture and Environment	- Organizational Support (Cho et al., 2021). - Culture of change (Ericson-Lidman & Strandberg, 2021). - Organizational characteristics (Cleary et al., 2019). - Flexibility, Cohesion, and Trust (Johansson et al., 2014). - Organizational Culture (Johansson et al., 2014). - Emotional climate (El-Sayed et al., 2017).
	Structural factors	- Job characteristics (Amarantou et al., 2018). - Technological Adoption (Cho et al., 2021). - Resources and budget (Ericson-Lidman & Strandberg, 2021; Ghanavatinejad et al., 2018). - Training and Education (Tyler et al., 2013). - Lack of education (Cho et al., 2021; Tyler et al., 2013)

4. Discussion

This systematic review examines the factors influencing RTC among the nursing workforce by integrating international literature. In modern healthcare settings, frequent improvements to enhance patient outcomes are both necessary and inevitable. While organizational change is

inherent to healthcare, its successful implementation is strongly facilitated by actively engaging nurses in the change process. The review identified three primary categories of RTC factors: individual, interpersonal, and organizational, comprising nine subcategories and thirty distinct codes.

Organizational factors emerged as the most frequently reported contributors to RTC, with leadership style, organizational culture, and professional development opportunities consistently highlighted across the majority of studies. At the individual level, unfavorable attitudes toward change, low change readiness, limited empowerment, and low self-efficacy were the most common determinants. Interpersonal factors included ineffective communication, weak leader–member relationships, and minimal involvement in decision-making. Collectively, these findings provide a clear mapping of the key determinants of RTC in nursing, addressing the first objective of this review.

4.1. Individual factors contributing to RTC

The findings of this review show that individual factors are considered immediate, psychologically based determinants of RTC. In particular, attitudes towards change and a sense of readiness emerged as prominent determinants. This finding aligns with the view that a positive attitude towards change is associated with a more favorable perception of change implementation (Amarantou et al., 2018; Ozkalay & Karaca, 2021). In contrast, understanding misperception of change as a contributor to RTC is consistent with Cleary et al. (2019), who found that resistance is commonly experienced when there is poor understanding of change. Moreover, expectations pertaining to change, such as anticipated outcomes of implementation, align with findings from Portoghese et al. (2011). The review reveals that valuing the change, perceiving its importance, and readiness for the change are major individual contributors. This finding is supported by previous research, showing that nurses are more willing to engage in change when they value it and feel prepared for its implementation (Cho et al., 2021; El-Sayed et al., 2017; Nilsen et al., 2020).

The results indicate that individual perceptions of empowerment are an important personal variable in the development of resistance to change. This supports El-Sayed et al. (2017), who identified structural empowerment as one of the variables influencing nurses' attitudes towards change. Individual perceptions of empowerment also play a significant role in influencing nurses' attitudes towards change, as shown by Kiran et al. (2019). In contrast, knowledge of the benefits of change, which influences RTC in the present review, corresponds with findings from Cho et al. (2021) and Ozkalay and Karaca (2021). Positive perceptions of change, associated with more adaptive responses, align with findings from Ericson-Lidman and Strandberg (2021). Individual adaptability was also found to be relevant in the present study, as proposed by Portoghese et al. (2011).

Finally, demographic and psychological factors were found to play a role in RTC. Several included studies reported links between RTC and demographic/psychological factors, suggesting that nurses' behavior toward changes varies according to these factors (Kaya et al., 2019; Kiran et al., 2019; Ozkalay & Karaca, 2021). The influence of experience and conservatism supports findings from Johansson et al. (2014).

4.2. Interpersonal factors contributing to RTC

At the interpersonal level, this review reveals that communication, stakeholder interactions, and involvement in the change process significantly affect nurses' RTC. The finding that communication practice influences RTC is consistent with Nilsen et al. (2020), who emphasize the significance of communicating change during implementation (Nilsen et al., 2020). In addition, this review aligns with Cho et al. (2021), who demonstrated that colleagues' viewpoints can influence an individual's resistance to change.

The review also indicates LMX as an important interpersonal factor influencing RTC. This is supported by Amarantou et al. (2018) and Ericson-Lidman & Strandberg (2021), who found that the nature of relationships between leaders and nurses affects nurses' engagement in change initiatives. Similarly, the role of two-way feedback also aligns with the views of Tyler et al. (2013), who suggested that two-way communication can help create a more constructive change response. Stakeholder engagement is also a critical interpersonal mechanism in change, as indicated by Ericson-Lidman & Strandberg (2021) and Tyler et al. (2013).

Participation in the change process was identified as another important interpersonal factor affecting nurses' responses to RTC. This is consistent with studies reporting that nurses participating in activities aimed at creating change had a more constructive reaction. Conversely, those with limited participation tended to display more resistant reactions to changes (Amarantou et al., 2018; Ghanavatinejad et al., 2018; Nilsen et al., 2020). The findings indicate a cumulative association among interpersonal aspects of change, including communication, relationship type, involvement, and participation. These factors were found to affect nurses' responses during changes associated with RTC in the organization.

4.3. Organizational factors contributing to RTC

This review indicated the significance of organizational factors, particularly leadership, culture, or structure, in nurses' RTC. The relationship between RTC and leadership aligns with research findings indicating that leadership comprehension and management style influence change (Kaya et al., 2019; Tyler et al., 2013). In particular, unconstructive and uncooperative management behaviors are strongly associated with increased RTC, whereas supportive and participatory management qualities are positively associated with decreased RTC. This finding is consistent with Cleary et al. (2019), which indicates that organizational characteristics, such as management practices, influence nurses' RTC.

Additionally, this finding illustrates that organizational culture and environment play an important role in the development of RTC. This supports previous studies on the role of organizational support (Cho et al., 2021), the role of culture in promoting change (Ericson-Lidman & Strandberg, 2021), and the wider organizational factors (Cleary et al., 2019; Johansson et al., 2014). In particular, the absence of flexibility, cohesion, and trust in the environment contributed to higher RTC, supporting Johansson et al. (2014). Moreover, the role of emotional climate in this study aligns with El-Sayed et al. (2017), who found that organizational emotional climate influences nurses' attitudes toward change events.

Structural factors emerged as significant organizational determinants associated with RTC. The finding regarding the relationship between RTC and job characteristics is supported by Amarantou et al. (2018), who demonstrate that the nature of work roles may be associated with flexibility towards change. Meanwhile, the finding regarding technological adoption as a significant factor supports Cho et al. (2021), suggesting that organizational readiness for technological change affects resistance. Furthermore, the importance of resource allocation is supported by Ericson-Lidman & Strandberg (2021), whose findings, along with those of Ghanavatinejad et al. (2018), highlight the negative consequences of limited organizational resources. Finally, findings regarding training and education variables, including the negative effect of lack of education, support Tyler et al. (2013) and Cho et al. (2021). Their results indicate that insufficient preparation and limited learning opportunities may be associated with high levels of resistance.

Overall, resistance to change does not occur in isolation but is influenced by interpersonal and organizational contexts. Individual fears, inflexibility, and diminished self-efficacy are more pronounced in environments with unsupportive leadership, poor communication, and limited access to training. Conversely, supportive leadership, participatory culture, and psychologically safe contexts are associated with greater motivation for change and reduced individual resistance. These findings highlight RTC in nursing as a dynamic, multifaceted process shaped by the interaction of personal, interpersonal, and organizational factors.

5. Implications and limitations

The implications of this review for nursing are substantial. First, nurse leaders should advocate participatory leadership that engages nurses at all levels of the change process, fostering ownership and reducing resistance. Second, healthcare institutions should implement open, continuous, and bidirectional communication throughout the change management process, including timely information sharing, clear expectation setting, and feedback, to reduce uncertainty and emotional resistance. Third, there is a need for targeted education and training in support of all change projects, including both hard skills and emotional preparedness, with protected learning time to maintain patient care. Fourth, organizational policies should prioritize psychological safety, empowerment, and professionalism. An organizational culture that fosters trust, recognition, and support allows nurses to raise their concerns openly and work

constructively with innovation. Finally, nurse education should incorporate change management skills into the curriculum to help nurses adapt to an ever-changing system. Core skills include leadership, communication, adaptability, and systems thinking.

Despite these implications, this review has some limitations that should be considered. The use of subjective measurement tools may have led to response or social desirability bias in some studies. This systematic review included only articles written in English and may have excluded relevant studies published in other languages. Moreover, restricting inclusion to empirical articles may have limited the conceptual framework regarding nurses' RTC.

6. Conclusion

Resistance to change is a major hurdle to effective implementation in health care organizations. This systematic review highlights that nurses' RTC is a multifaceted problem stemming from complex interactions among individual, social, and organizational determinants. Among these determinants, organizational factors such as leadership, culture, communication, and training stand out as particularly influential. Individual factors, including attitudes to change, change readiness, empowerment, and change-related self-efficacy, are often reported as mediators in the context of surrounding work. Overcoming RTC requires an integrated multi-level approach. Nurse leaders and healthcare organizations must focus on participative leadership, joint decision-making, transparent communication, and protected education and training. There is a critical need to foster psychological safety, empowerment, and autonomy to enable nurse participation in change processes. By emphasizing change management frameworks and building a change-ready culture, RTC can be mitigated, making the healthcare system more adaptable and supporting high-quality patient care.

Acknowledgment

The authors would like to thank all researchers whose work was included in this review. The authors also acknowledge the support provided by their affiliated institutions during the conduct of this study.

Author contributions

YA designed the study, developed a protocol for review, undertook searches of the literature, selected studies for inclusion, extracted data, appraised quality, and drafted an initial manuscript for this article. PS independently screened studies for inclusion, extracted data, appraised the quality of included studies, and contributed to the synthesis and drafts of this manuscript. FA contributed to searches of the literature, extraction and synthesis of data, and drafts of this manuscript for revision and editing. AM appraised studies for quality and methodological rigor for this manuscript and critically appraised drafts of this manuscript from a methodological and intellectual perspective. All authors approved the final version of this manuscript.

Conflict of Interest

The authors declare that they have no known competing financial or personal interests that could have influenced the work reported in this paper.

Funding

This research received no external funding.

Declaration of Use of AI in Scientific Writing

The authors confirm that they did not use any artificial intelligence tools in drafting, editing, analyzing, and processing this manuscript.

References

Almuqati, J., Alfaki, M., & Alkarani, A. (2023). Health care providers' perceptions of the ministry of health's organizational readiness for change. *Nurse Media Journal of Nursing, 13*(1), 132–140. https://doi.org/10.14710/nmjn.v13i1.47311

Amarantou, V., Kazakopoulou, S., Chatzoudes, D., & Chatzoglou, P. (2018). Resistance to change: An empirical investigation of its antecedents. *Journal of Organizational Change Management*, *31*(2), 426–450. https://doi.org/10.1108/jocm-05-2017-0196

Baloh, J., Zhu, X., & Ward, M. M. (2019). What influences sustainment and nonsustainment of facilitation activities in implementation? Analysis of organizational factors in hospitals implementing Team STEPPS. *Medical Care Research and Review*, *78*(2), 146–156. https://doi.org/10.1177/1077558719848267

Braithwaite, J. (2018). Changing how we think about healthcare improvement. *BMJ, 361,* k2014. https://doi.org/10.1136/bmj.k2014

Braithwaite, J., Matsuyama, Y., Mannion, R., Johnson, J., & Bates, D. W. (2021). *How to do better health reform: A snapshot of change and improvement initiatives in the health systems of 30 countries (2015–2020). International Journal for Quality in Health Care, 33*(2), 843–856. https://doi.org/10.1093/intqhc/mzw113

Cakiroglu, O., & Seren, A. (2019). The relationship between attitudes towards change and five-factor personality traits in nurses. *Journal of Psychiatric Nursing*, *10*(3), 211–217. https://doi.org/10.14744/phd.2019.34713

Cheraghi, R., Ebrahimi, H., Kheibar, N., & Sahebihagh, M. H. (2023). Reasons for resistance to change in nursing: An integrative review. *BMC Nursing*, *22*, 310. https://doi.org/10.1186/s12912-023-01460-0

Cho, Y., Kim, M., & Choi, M. (2021). Factors associated with nurses' user resistance to change of electronic health record systems. *BMC Medical Informatics and Decision Making*, *21*, 218. https://doi.org/10.1186/s12911-021-01581-z

Cleary, M., West, S., Arthur, D., & Kornhaber, R. (2019). Change management in health care and mental health nursing. *Issues in Mental Health Nursing*, *40*(11), 966–972. https://doi.org/10.1080/01612840.2019.1609633

Covidence systematic review software. (2024). *Veritas health innovation*. https://www.covidence.org

Cutler, D. M. (2023). Health system change in the wake of COVID-19. *JAMA Health Forum*, *4*(10), e234355. https://doi.org/10.1001/jamahealthforum.2023.4355

El-Sayed, F., Seada, A., & El-Guindy, H. (2017). Factors associated with nurses' readiness for organizational change at Beni Sueif University Hospital. *Egyptian Nursing Journal*, *14*(2), 141. https://doi.org/10.4103/enj.enj_24_17

Ericson-Lidman, E., & Strandberg, G. (2021). Change agents' experiences of implementing a new organizational culture in residential care for older people: A qualitative study. *Nordic Journal of Nursing Research*, *41*(3), 149–157. https://doi.org/10.1177/2057158521995994

Garrido-Moreno, A., Martín-Rojas, R., & García-Morales, V. J. (2024). The key role of innovation and organizational resilience in improving business performance: A mixed-methods approach. *International Journal of Information Management*, *77*, 102777. https://doi.org/10.1016/j.ijinfomgt.2024.102777

Ghanavatinejad, Z., Askarian, M., Palenik, C. J., Hatam, N., Farhadi, P., & Ghaem, H. (2018). *Factors affecting resistance to change among hospital staff using a structural equation modeling technique. Health Management & Information Science, 5*(4), 125–136. https://jhmi.sums.ac.ir/article_42720_aca18bfbce95db198bf0ee61d4ac5ddd.pdf

Greenhalgh, T., Robert, G., Macfarlane, F., Bate, P., & Kyriakidou, O. (2004). Diffusion of innovations in service organizations: Systematic review and recommendations. *The Milbank Quarterly, 82*(4), 581–629. https://doi.org/10.1111/j.0887-378X.2004.00325.x

Harmon, C. S., Adams, S. A., Davis, J. E., Gephart, S. M., & Donevant, S. B. (2023). Unintended consequences of the electronic health record and cognitive load in emergency department nurses. *Applied Nursing Research, 73*, 151724. https://doi.org/10.1016/j.apnr.2023.151724

Hong, Q. N., Fàbregues, S., Bartlett, G., Boardman, F., Cargo, M., Dagenais, P., Gagnon, M.-P., Griffiths, F., Nicolau, B., O'Cathain, A., Rousseau, M.-C., Vedel, I., & Pluye, P. (2018). The Mixed Methods Appraisal Tool (MMAT) version 2018 for information professionals and researchers. *Education for Information, 34*(4), 285–291. https://doi.org/10.3233/EFI-180221

Hubbart, J. A. (2023). Organizational change: The challenge of change aversion. *Administrative Sciences*, *13*(7), 162. https://doi.org/10.3390/admsci13070162

Johansson, C., Åström, S., Kauffeldt, A., Helldin, L., & Carlström, E. (2014). Culture as a predictor of resistance to change: A study of competing values in a psychiatric nursing context. *Health Policy*, *114*(2–3), 156–162. https://doi.org/10.1016/j.healthpol.2013.07.014

Jones, J., Firth, J., & Hannibal, C. (2019). Factors contributing to organizational change success or failure: A qualitative meta-analysis of 200 reflective case studies. In *C. Hannibal (Ed.), Managing change in organizations* (pp. 112–134). IGI Global. https://doi.org/10.4018/978-1-5225-9273-0.ch007

Kaya, G., Koc, Z., Kiymaz, D., & Cinarli, T. (2019). Factors affecting the attitudes of nurses towards change. *New Trends and Issues Proceedings on Advances in Pure and Applied Sciences*, *11,* 18–29. https://doi.org/10.18844/gjpaas.v0i11.4309

Khraim, H. (2023). The impact of organizational change on employee turnover intentions at private hospitals: The moderating role of emotional intelligence. *Problems and Perspectives in Management*, *21*(4), 52–62. https://doi.org/10.21511/ppm.21(4).2023.05

Kiran, N., Afzal, M., Hussain, M., & Gilani, S. A. (2019). Initial impact of nursing manager perception of empowerment and years of experience on resistance to change in practice. *Journal of Health, Medicine and Nursing, 62,* 82–90. https://doi.org/10.7176/JHMN/62-11

Labrague, L. J. (2021). Psychological resilience, coping behaviours and social support among health care workers during the COVID-19 pandemic: A systematic review of quantitative studies. *Journal of Nursing Management, 29*(7), 1893–1905. https://doi.org/10.1111/jonm.13336

Mareš, J. (2018). Resistance of health personnel to changes in healthcare. *Kontakt*, *20*(3), e262–e272. https://doi.org/10.1016/j.kontakt.2018.04.002

Mızrak, F. (2023). Effective change management strategies: Exploring dynamic models for organizational transformation. In N. Geada & G. L. Jamil (Eds.), *Perspectives on artificial intelligence in times of turbulence: Theoretical background to applications* (pp. 135–162). IGI Global. https://doi.org/10.4018/978-1-6684-9814-9.ch009

Moon, S. E., Hogden, A., & Eljiz, K. (2022). Sustaining improvement of hospital-wide initiative for patient safety and quality: A systematic scoping review. *BMJ Open Quality*, *11*(4), e002057. https://doi.org/10.1136/bmjoq-2022-002057

Nilsen, P., Seing, I., Ericsson, C., Birken, S. A., & Schildmeijer, K. (2020). Characteristics of successful changes in health care organizations: An interview study with physicians, registered nurses, and assistant nurses. *BMC Health Services Research*, *20*(1), 147. https://doi.org/10.1186/s12913-020-4999-8

Oreg, S., Vakola, M., & Armenakis, A. A. (2011). Change recipients' reactions to organizational change: A 60-year review of quantitative studies. *The Journal of Applied Behavioral Science, 47*(4), 461–524. https://doi.org/10.1177/0021886310396550

Organisation for Economic Co-operation and Development. (2024). *Health at a glance 2024: OECD indicators*. OECD Publishing. https://www.oecd.org/en/publications/health-at-a-glance-europe-2024_b3704e14-en.html

Ozkalay, G., & Karaca, A. (2021). Nurses' attitudes toward change and the affecting factors. *International Journal of Caring Sciences*, *14*(1), 362–369. https://www.internationaljournalofcaringsciences.org/docs/39_karaca_original_14_1.pdf

Page, M. J., McKenzie, J. E., Bossuyt, P. M., Boutron, I., Hoffmann, T. C., Mulrow, C. D., Shamseer, L., Tetzlaff, J. M., Akl, E. A., Brennan, S. E., Chou, R., Glanville, J., Grimshaw, J. M., Hróbjartsson, A., Lalu, M. M., Li, T., Loder, E. W., Mayo-Wilson, E., McDonald, S., … Moher, D. (2021). The PRISMA 2020 statement: An updated guideline for reporting systematic reviews. *BMJ, 372*, n71. https://doi.org/10.1136/bmj.n71

Piderit, S. K. (2000). Rethinking resistance and recognizing ambivalence: A multidimensional view of attitudes toward an organizational change. *The Academy of Management Review*, *25*(4), 783. https://doi.org/10.2307/259206

Polanin, J. R., Pigott, T. D., Espelage, D. L., & Grotpeter, J. K. (2019). Best practice guidelines for abstract screening, large-evidence systematic reviews, and Meta-analyses. *Research Synthesis Methods*, *10*(3), 330–342. https://doi.org/10.1002/jrsm.1354

Popay, J., Roberts, H., Sowden, A., Petticrew, M., Arai, L., Rodgers, M., Britten, N., Roen, K., & Duffy, S. (2006). *Guidance on the conduct of narrative synthesis in systematic reviews: A product from the ESRC Methods Programme*. ESRC Methods Programme. https://doi.org/10.13140/2.1.1018.4643

Portoghese, I., Galletta, M., Battistelli, A., Saiani, L., Penna, M. P., & Allegrini, E. (2011). Change-related expectations and commitment to change of nurses: The role of leadership and

communication. *Journal of Nursing Management*, *20*(5), 582–591. https://doi.org/10.1111/j.1365-2834.2011.01322.x

Robert, G., Sarre, S., Maben, J., Griffiths, P., & Chable, R. (2019). Exploring the sustainability of quality improvement interventions in healthcare organisations: A multiple methods study of the 10-year impact of the 'Productive Ward: Releasing Time to Care' programme in English Acute Hospitals. *BMJ Quality & Safety*, *29*(1), 31–40. https://doi.org/10.1136/bmjqs-2019-009457

Rosser, J. (2020). The COVID-19 crisis and its impact on the future of healthcare. *JSLS: Journal of the Society of Laparoscopic & Robotic Surgeons*, *24*(3), e2020.00039. https://doi.org/10.4293/jsls.2020.00039

Tappen, R. M., Wolf, D. G., Rahemi, Z., Engstrom, G., Rojido, C., Shutes, J. M., & Ouslander, J. G. (2017). Barriers and facilitators to implementing a change initiative in long-term care using the INTERACT® quality improvement program. *The Health Care Manager*, *36*(3), 219–230. https://doi.org/10.1097/hcm.0000000000000168

Teerikangas, S., Gjerald, O., & Meglio, O. (2026). Resistant, ready or engaged – with what change? A review and transformative research agenda. *Journal of Change Management, 26*(1), 40–59. https://doi.org/10.1080/14697017.2026.2621657

Tyler, D. A., Lepore, M., Shield, R. R., Looze, J., & Miller, S. C. (2013). Overcoming resistance to culture change: Nursing home administrators' use of education, training, and communication. *Gerontology & Geriatrics Education*, *35*(4), 321–336. https://doi.org/10.1080/02701960.2013.837049

Wensing, M., Grol, R., & Grimshaw, J. (Eds.). (2020). *Improving patient care: The implementation of change in health care* (3rd ed.). Wiley. https://www.wiley.com/en-us/9781119488590

Wei, H., Sewell, K. A., Woody, G., & Rose, M. A. (2018). The state of the science of nurse work environments in the United States: A systematic review. *International Journal of Nursing Sciences, 5*(3), 287–300. https://doi.org/10.1016/j.ijnss.2018.04.010

World Health Organization. (2020). *Global strategy on human resources for health: Workforce 2030*. World Health Organization. https://iris.who.int/handle/10665/250368