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Conceptualizing the learning organization in nursing homes: a scoping review

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Abstract

Background Maintaining high-quality care in nursing homes is challenging. An ageing population and labour market shortages have created an imbalance in the supply and demand of care, and the focus of care has transitioned from quality of care to quality of life. This study explores how the 'learning organization' (LO) concept could contribute to a new quality paradigm in nursing homes, by 1) examining its efficacy and operationalization for and 2) identifying the elements most relevant to the nursing home setting.

Methods We use Arksey and O'Malley's scoping framework to answer the research questions and address gaps in the literature, guided by theories on the learning organization from Senge (The fifth discipline: The art and practice of the learning organization, 1990) and Watkins and Marsick (Sculpting the learning organization: Lessons in the art and science of systemic change, 1993). Literature searches (in Scopus, Medline, Web of Science, Business Source Elite, and ERIC) were performed from inception through 19 August 2024, in collaboration with a medical information specialist. Eligibility was limited to studies on learning organizations or organizational learning (OL) in nursing homes. Study aims, definitions, descriptions, key terms, theories, and operationalizations were mapped descriptively.

Results From 2,292 abstracts, 14 articles were included. Ten studies reference Senge (The fifth discipline: The art and practice of the learning organization, 1990) and/or Watkins and Marsick (Sculpting the learning organization: Lessons in the art and science of systemic change, 1993) in defining and describing a learning organization and organizational learning. Together, the studies reveal six elements of learning organizations in nursing homes: individual and collective learning, individual and interpersonal abilities, an adaptive and responsive culture, transformational leadership, organizational knowledge development, and systems thinking. All studies highlight organizational performance improvement as the primary aim of a learning organization, with only a few operationalizations ($n = 3$) examining the concept's full scope; most examine only single aspects.

Conclusions To help nursing homes effectively adapt, the learning organization could offer a promising concept. However, current research is limited. The included studies provide insight into key elements of learning organizations and their benefits for organizational performance and job satisfaction. Future research should develop a consistent method of operationalization based on the six key elements most relevant for nursing homes transitioning to learning organizations. This approach should consider the interconnected nature of these elements, with systems thinking as the foundation.

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Keywords Learning organization, Organizational learning, Nursing homes, Long-term care, Quality improvement, Person-centred care

Background

Maintaining high-quality care has always been a central yet complex challenge for nursing homes. Today, healthcare services for older people are facing mounting pressure from evolving demographic and systemic changes, including the ageing population and rising demands for high-quality care [1]. To start, these changes are clearly disrupting the balance of supply and demand for care: while the population is ageing and demand for care is increasing, current labour market shortages are simultaneously decreasing the supply of available caregivers [2–7]. Second, this problem is being further exacerbated by a transition across nursing homes from a focus on quality of care to a focus on quality of life through person-centred care [8–12].

Currently, these developments challenge the ability of nursing homes to deliver high-quality care. The traditional quality paradigm relies on objective measures and standards with a primary focus on physical support and medical safety, such as the prevention of medical errors. This paradigm sometimes fails to capture the evolving and context-dependent nature of quality of care [13]. For example, COVID- 19 highlighted the importance of relationships between caregivers and recipients for well-being and underscored the need for a more flexible, adaptive care approach. This approach should prioritize relational aspects and ensure care is context-driven, person-centred, and responsive to the dynamic needs of individuals [14].

A new quality paradigm based on learning may help nursing homes develop organizational abilities, enabling them to effectively respond to the evolving and dynamic nature of care and better cope with both current and future challenges [9]. Indeed, WHO [15] emphasizes the crucial role of learning at the individual, team, and organizational levels in fostering better decision-making, innovation and self-reliance—identifying these as key elements in addressing the challenges within the constant changing environment of care. In the same vein, a 'learning organization' approach could potentially support nursing homes in navigating the dynamic care context through continuous learning and adaptability. Therefore, in this study we aim to explore whether this concept can contribute to addressing these challenges.

First, we will analyse a range of definitions and descriptions as presented in the nursing home literature, focusing on the theoretical conceptualizations provided by the authors of the included studies. Additionally, we will examine how these studies have operationalized the concept of the learning organization. Using our analysis, our second aim will be to identify the elements of a learning organization that seem most relevant to the nursing home context. Before delving into these aspects, we will start by outlining the two previously mentioned major developments in the landscape of nursing home care—the issues of supply and demand, and a shift in focus—aiming to explain how the concept of a learning organization may offer a promising perspective, contingent on how its principles can be effectively operationalized within nursing home care.

Ageing population and labour shortages

The first and most notable development in the care landscape is the growing population of older people combined with an increasing complexity of health problems and labour market shortages [2–5, 7]. Because older people are generally staying in their own homes for longer [4, 5, 16], nursing homes are increasingly populated by those with more complex care needs and multiple chronic conditions, such as neurodegenerative and somatic disorders [17]. This affects the type of care and services nursing homes are expected to provide while also intensifying the demands of care delivery [6]. To meet these complex care needs, care professionals in nursing homes must develop new competencies while continuing to strive for high-quality care that satisfies both residents and their families [18].

A shift from quality of care to quality of life and person-centred care

The second development concerns a change of perspective among various nursing home stakeholders, including care professionals, policymakers, administrators, and regulatory parties [8, 12]. This shift centres around a move from predominantly focusing on quality of care, which emphasizes physical support, nursing activities, and prevention of medical errors and complications, to prioritizing the quality of life of those receiving care [9–11]. Importantly, quality of care is often defined and assessed by objective measures and standards—which are only marginally affected by subjective experiences and perspectives [19, 20]—while quality of life is shaped by an individual's own point of view, values, and experiences—making it inherently subjective, pluralistic, and context-dependent [9, 21].

Within the concept of quality of life, person-centred care is recognized for prioritizing residents' choices, autonomy, dignity, and physical and emotional well-being, aiming to create a meaningful final stage of life rather than focusing on disease and impairments

[22–24]. Care professionals play a crucial role in enabling the activities and relationships that can foster such meaning [9–11, 25, 26].

However, balancing the enhancement of quality of life with the continued delivery of safe and high-quality care presents a sizable challenge for nursing home professionals, who must accomplish specific tasks and meet (safety) standards—often under time pressure—while simultaneously ensuring a calm and pleasant atmosphere, and paying enough attention to the residents' wishes and needs [10]. These layered expectations create tension between the need for procedural efficiency versus the delivery of personalized, compassionate care—a tension which is further intensified by the previously discussed challenge of increasing demand for long-term care, driven by an aging population and workforce shortages.

The COVID- 19 pandemic poignantly illustrated the complexity of these challenges. For instance, while safety measures like restricting nonessential visits effectively reduced infections, they also limited interactions both among residents, and between staff and residents, impacting social connections [27]. Such examples highlight the complex decision-making required of care professionals, who are tasked with balancing various stakeholder interests [28].

In summary, aligning care quality with nursing home residents' personal well-being is both essential and challenging due to the significant demands it places on care delivery and operational strategies [18]. To meet these demands while also maintaining high standards of care, nursing homes have little choice but to adopt innovative perspectives and work practices.

A new quality paradigm for nursing homes

We suggest that a new quality paradigm centred on learning may help nursing homes address today's care challenges by shifting the focus toward co-creation of care and support—emphasizing relationships and active participation from patients, professionals, and other stakeholders. This new paradigm seeks to balance quality and safety while ensuring adaptability to evolving demands, without compromising the delivery of high-quality care [10, 11, 27].

The WHO [15] state that, to address the challenges in care, the ability of learning is key to enable care organizations to anticipate and act on changing situations resulting in reorganizing or improving care. Learning could enable care organizations to improve decision-making by drawing on past experiences and diverse information, fosters adaptation and innovation in a constantly changing environment and helps organizations anticipate and respond to challenges [15]. This approach to learning highlights the importance of cultivating a strong learning culture in nursing homes, enabling them to anticipate and respond to changing care demands, improve care quality, and build flexibility in an evolving healthcare landscape.

The perspective of the WHO [15] aligns with the call of Koksma and Kremer [9] for a new 'learning era' that promotes both a learning culture and a flexible attitude within healthcare organizations. Arguing for the adoption of a broader perspective on quality, these scholars assert that high-quality care requires embracing uncertainty and fostering collaborative quality improvement through the integration of diverse sources of knowledge—such as patient narratives, local insights, and big data [9].

Van Kemenade and Hardjono [13] expand on this broader interpretation of quality care by emphasizing its evolving, context-dependent nature, and the need for its continual redefinition. In so doing, they identify four paradigms: two are rooted in traditional approaches to care and quality improvement, relying on measurements, objective data, and an emphasis on physical support, nursing activities, and safety; one is dubbed the 'reflective paradigm', viewing quality as centred on subjectivity, reflection, and shared experiences; and one is called the 'emergence paradigm', defining quality as an ongoing dialogue between stakeholders and emphasizing organizational adaptability in a changing environment. To address the challenges posed by rising care demands and a shrinking workforce in nursing homes, we propose that adoption of a dynamic, context-dependent approach to quality is essential—in alignment with the reflective and emergence paradigms.

A reflective and learning-oriented approach can help healthcare organizations and their employees adapt and thrive in a dynamic environment. This involves engaging in iterative learning cycles, which are known to generate new knowledge, foster organizational development, and deepen actors' understanding of problems and their potential solutions [29]. In addition to supporting quality improvements, a learning-centred quality paradigm, could also help nursing homes transform on an internal level, enabling them to more effectively address current and future challenges while promoting continuous improvement within the context of a dynamic and complex care landscape [9].

The learning organization

The concept of the learning organization could provide a compelling strategy for addressing the current challenges in nursing home care. To ground this review, we adopt the thorough and all-encompassing definitions provided by Senge [30] and Watkins and Marsick [31] as foundational principles. Fittingly, the concept of the learning organization was first introduced by Senge ([30] p3), who defined it as 'an organization where people continually

expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together'. Watkins and Marsick ([31] p10) elaborated on this concept by describing the learning organization 'as an organization that learns continuously and transforms itself, through total employee involvement in a process of collaboratively conducted, collectively accountable change directed towards shared values or principles'.

Both of these definitions highlight the importance of 'systems thinking' for achieving organizational change. Systems thinking views an organization as a system composed of elements—such as characteristics or factors (e.g., processes and resources) and actors (e.g., stakeholders)—all of which are interconnected by means of interactions and influences. To achieve a shared goal, these different elements must work together [32], meaning that developments within an organization or its separate teams will always require adjustments across all levels of the organization. Local success cannot be sustained if other factors or stakeholders elsewhere in the system act in conflicting ways. Senge [30] and Senge and Sterman [33] highlight systems thinking as a tool that can be used by individuals and organizations to manage complexity and uncertainty. Similarly, Bui and Galanou [34] demonstrate that adopting a systems approach to problems enhances understanding, and helps managers foster learning in organizations and address complex challenges more effectively.

To achieve meaningful outcomes and ensure the sustainability of changes over the long term, a learning organization must act strategically and be supported by conditions aligned with its broader goals [29, 35]. Engaged leadership, team development [29, 35], and a culture open to discussing mistakes [29, 36] have been identified as essential conditions for fostering learning and quality improvement in healthcare.

Alongside the concept of the learning organization is the related concept of organizational learning. While these two concepts overlap, they are not synonymous. Instead, organizational learning is viewed as *the process* through which a learning organization can achieve its ideal state [37]—a process defined by a change in knowledge that occurs as the organization acquires experience, which is then reflected in its (employees') thoughts or actions [38]. Organizational learning facilitates the transfer and integration of this knowledge across the organization as a whole, thereby enhancing organizational development, including employee competencies like responsiveness to challenges [37, 39]. Through organizational learning, this knowledge in turn creates organizational structures and strategies which further support a learning organization in achieving its desired outcomes, such as specific changes and improvements to organizational performance [30, 31, 37, 40, 41].

We explore whether the learning organization, with its emphasis on collective learning and systems thinking, can enable care professionals to navigate the ever-changing care landscape and deliver high-quality, person-centred care. In this context, fostering learning organizations may be a valuable strategy for helping nursing homes adapt and respond to ongoing challenges.

Despite this potential, the concept of the learning organization has faced significant criticism, perceived as being overly idealistic and difficult to implement in practice, with theories like those by Senge [30] and Watkins and Marsick [31] offering vision but lacking practical guidance. Additionally, the literature on learning organizations is largely theoretical, offering limited empirical research on its application or effects in real-world settings [42–44]. Likewise, the studied effects of a learning organization on performance have focused predominantly on the commercial sector (e.g., [38, 40]), largely overlooking its possible role in healthcare contexts.

We will explore, based on existing evidence, whether a clearer, more consistent conceptualization of the learning organization is feasible in order to develop a unified understanding of its meaning and implications. As such, our study aims to clarify this concept within the specific context of nursing home care—a setting with characteristics clearly distinct from those found in commercial environments, necessitating a focused exploration of its understanding within the field. To this end, we first explore how scholars define and describe the concept and its related theories within the field of nursing home care. Furthermore, we evaluate how studies have operationalized the concept in their efforts to determine whether the full scope of a learning organization has been realized. Second, we aim to identify the elements of a learning organization most relevant to nursing homes by examining these theoretical foundations.

Methods

For this study, we chose to conduct a scoping review due to the effectiveness of this approach [45, 46] in clarifying definitions and key terms, and in examining how the concept of a learning organization has traditionally been studied in the context of nursing home care. Specifically, this scoping review is based on the approach developed by Arksey and O'Malley [47], later refined by Levac et al. [48], and Peters et al. [49].

Identifying relevant studies

A comprehensive search strategy was devised by CB in collaboration with a medical information specialist (JK) from inception through 19 August 2024 in the databases Elsevier/Scopus, OVID/Medline, Clarivate Analytics/

Web of Science Core Collection, Ebsco/Business Source Elite, and Ebsco/ERIC. To prepare for our initial search, we conducted a preliminary exploration of Elsevier/Scopus (through 1 September 2021) to identify concepts and terms related to the 'learning organization'—the results of which appeared across a variety of scientific journals (e.g., health, nursing, management) and included, among others: organizational learning, collective learning, learning culture, and learning climate. This search included both controlled and free-text terms for synonyms of 'learning organization' and 'nursing homes' and was conducted without methodological restrictions. The complete set of search strategies and terms can be found in Additional file 1.

Duplicate articles were excluded (by JK) using Endnote X20.0.1 (Clarivate[tm]), following the Amsterdam Efficient Deduplication (AED) method [50] and the Bramer method [51]. As a final step, a Google Scholar search was conducted to identify additional publications that met the inclusion criteria by reviewing the first 200 hits.

Eligible criteria and study selection

The eligibility criteria used for the studies included in this scoping review align with conceptualizations of the learning organization as described by Senge [30] and Watkins and Marsick [31]. According to their definitions, a learning organization incorporates learning at all organizational levels: individual (micro), team (meso), and organizational (macro). Given the connection Senge [30] and Watkins and Marsick [31] make between the concepts of organizational learning and the learning organization—with the former being seen as a crucial process that occurs within the latter [37]—we chose to also include studies on organizational learning, as long as they met the other eligibility criteria, which we describe in the next paragraph. Consequently, papers that exclusively discussed individual or team learning, without addressing learning on all three organizational levels, were excluded.

Studies were included if they 1) referred to the learning organization or organizational learning in the context of nursing homes; 2) related to learning on all three organizational levels (micro, meso, and macro); 3) described original research; 4) were peer-reviewed; 5) were published in 2000 or later (as we reasoned, the systematic application and study of learning organization principles in nursing homes is unlikely to have started less than a decade after the concept's introduction); and 6) were written in either English or Dutch. Studies were excluded if their interpretation of learning concerned education, training, or internships—e.g., professional development skills or medical-task training. Moreover, since our aim was to investigate original, peer-reviewed, published research in which the authors reflected on the learning organization within the context of nursing homes, other knowledge sources—such as book reviews, commentaries, letters to the editor, PhD theses, and grey literature reports—were also excluded.

The selection process followed the PRISMA 2022 flow diagram (Fig. 1; www.prisma-statement.org), with the total process yielding 2,292 references, of which 1,537 studies remained after duplicates had been removed. The first and fourth authors (CB and PV) independently screened the 1,118 titles and abstracts obtained from the initial 2021 search to determine which articles would be retrieved in full for further review. The 2024 follow-up search identified an additional 419 articles, which were screened by the first author (CB) with the help of two student assistants. During this screening process, the retrieved studies were independently reviewed and categorized as 'include', 'uncertain', or 'exclude'. Reference lists of included studies were also checked to identify additional relevant studies.

In the initial search, the first and fourth authors (CB and PV) discussed their assessment decision using the review software Rayyan (www.rayyan.ai). During the follow-up search, the first author (CB) collaborated with the two student assistants for the assessment. In both search processes, discussions continued until full agreement was reached. The extracted data were also discussed within the research team, and any disagreements were resolved through closer inspection of the studies, collaborative discussion, and consensus, with specific input from two research team members (BvdB and KE) to facilitate resolution. Ultimately, 14 studies were included in our review, all derived from the initial 2021 search—i.e., the supplementary 2024 search did not yield any included articles.

Data extraction and collating, summarizing, and reporting the results

A data extraction table was developed to systematically organize information from the included studies, providing insights into the theoretical perspectives of these authors vis-à-vis the learning organization. Additionally, the first author (CB) catalogued and categorized key terms from the definitions and descriptions found in these studies, creating a concise overview of the most frequently mentioned terms. The included studies were then divided between the first (CB) and fourth author (PV), who extracted and noted the details of each study, including the author(s), publication year, country (or countries) of origin, study aims, definitions and/or descriptions, key terms, theories and operationalizations (see Table 1). These two authors then reviewed and verified each other's entries.

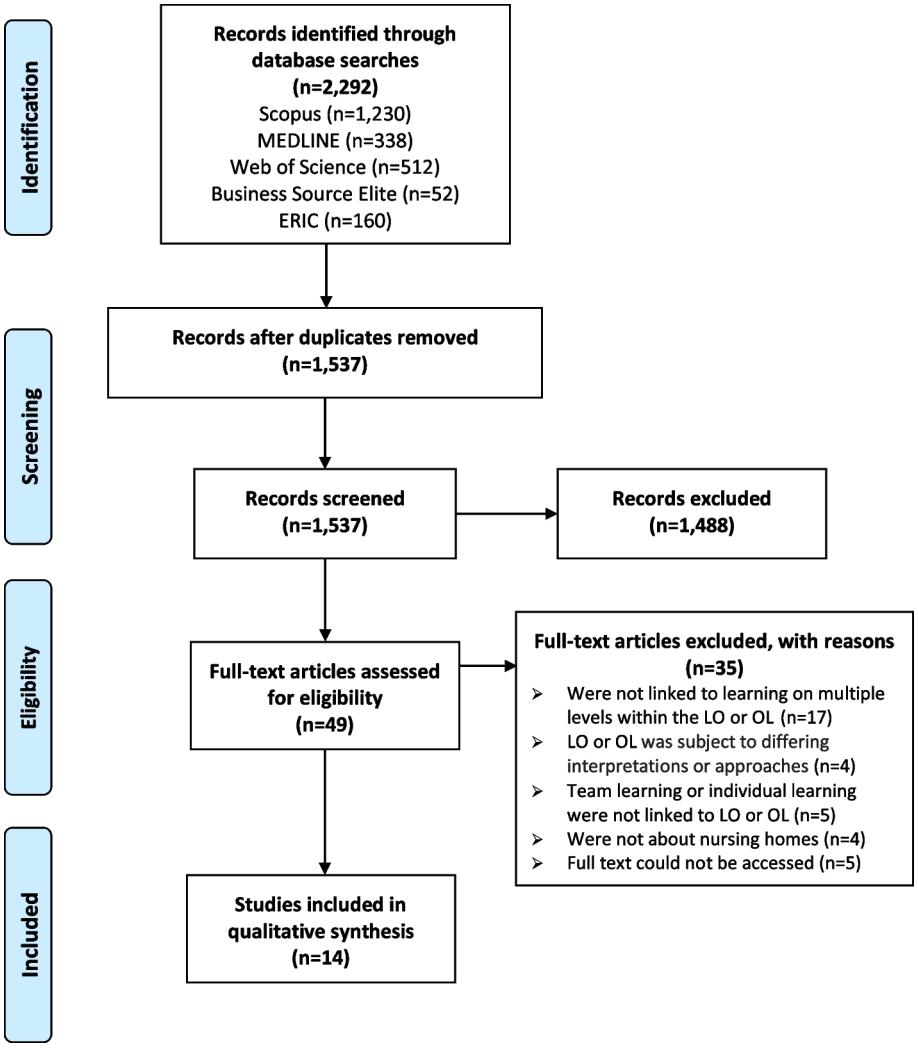

Fig. 1 Flow diagram of the review selection process, including identification through database searches, screening, eligibility, and inclusion

Results

Our first objective with this scoping review is to contribute to a broader understanding of the concept of the learning organization both by analysing the definitions and descriptions provided by the authors of the selected nursing home studies, and by examining how these studies operationalized this concept. Our second aim is to identify which elements of a learning organization, based on the studies' definitions and descriptions, appear most relevant to the nursing home context. These findings are all presented in Table 1.

General characteristics of the studies

All 14 selected studies were written in English, with research methods varying from qualitative ($n = 5$) and quantitative ($n = 4$) to mixed-method studies ($n = 5$). These included group and individual interviews, focus groups, observations, situation logs and journals, case studies, intervention studies, survey questionnaires, and statistical analyses. Publication years ranged from 2000 to 2021, with the majority being published after 2010 (over 90%). Studies were conducted in Europe ($n = 9$), North America ($n = 3$), and Oceania ($n = 2$), with half of the European studies originating from Scandinavian countries.

Definitions and descriptions to describe the learning organization

The studies' definitions and descriptions of a learning organization or organizational learning are presented in Table 1 (column 3), with column 4 listing the key terms found in each. Of the 14 studies, four provide definitions or descriptions of a learning organization [52, 56, 62, 67], eight provide definitions and descriptions of organizational learning [69, 72, 77, 79, 84, 86, 95, 97], and two present definitions or descriptions of both concepts [98, 108]. In addition, the studies by Hauer [86, 95] explore the concept of a 'learning climate' in relation to

Table 1 Overview of the 14 included studies on learning organizations and organizational learning in nursing homes, broken down per study aim, definition and/or description, key terms, theories, and operationalizations

Author(s) and country	Study aim	Definition and/or description of a learning organization (LO) and/or organizational learning (OL)	Key terms derived from the studies' definitions and descriptions of LO and/or OL	Theories	Operationalizations
Antonsson et al. [52], Sweden	To describe first-line managers' experiences with alternatives modes of funding elderly care	No definition of LO or OL is provided. LOs are described as requiring employees to constantly develop and learn from mistakes. For learning organization development, the importance of leaders and transformational leadership (requiring a proactive and innovative mindset) is emphasized	• Learning from mistakes • Transformational leadership • Proactive and innovative mindset	• Senge [53, 54] on learning organizations • Rosengren and Bondas [55] on a shared leadership model	• Type of study: qualitative • Measure: interviews about organizational questions, leadership, and alternative modes of care for older people (private and public funding)
Grealish et al. [56], Australia	To explore the impact of a six-month educational programme focused on staff learning behaviours and organizational learning culture	LO is defined as: an organization committed to continuous service improvement, including individual and collective learning efforts to support high-quality service delivery and high staff satisfaction. LO strives to continuously transform and improve, and displays an underlying value of trust within its teams; members display goodwill, a willingness to collaborate, and an openness to (discussing) opposing views. For LO development, staff must be able to learn from practice, and possess both social and interpersonal skills (e.g., the ability to provide feedback, an awareness and ability to communicate emotions associated with learning)	• Workplace learning • Facilitators to develop and empower individuals and teams • Continuous quality improvement	• DeSilets and Pinkerton [57] and Sheaff and Pilgrim [58] on learning organizations • Eraut [59] on workplace learning (individual and collective learning) • Billet [60] on sociocultural theory of work-based learning for staff development through collective learning at work	• Type of study: mixed methods • Measure: the Clinical Learning Organizational Culture Survey [61], conducted before and after an educational programme and consisting of five subscales: accomplishment, affiliation, recognition, influence, and dissatisfaction; logs documenting the experiences of clinical educators; observations of organizational learning, analysed and grouped into themes
Somerville and McConnell-Imbriotis [62], Australia	To gain insight into organizational learning by measuring the dimensions of a learning organization	LO is defined as: an organization that utilizes proactive interventions to generate, capture, store, share, and use learning at the systems level to create innovative products and services. LOs are further described as 1) aiming to embed learning at all levels of the organization by shifting the focus from education/training to workplace learning; and 2) characterized by a systems approach to learning, flexibility and adaptability, commitment to lifelong learning, and participation and cooperation, plus the presence of a shared vision, flat management structure, a wide view of learning, and managers who accept that learning and work are intertwined	• Innovation • Workplace learning • System approach • Flexibility and adaptability • Commitment to lifelong learning • Participation and cooperation • Shared vision • Wide view of learning • Leadership	• Marsick and Watkins [63, 64], and Burns [65] on learning organizations	• Type of study: mixed methods • Measure: 55-item survey, the Dimensions of the Learning Organization Questionnaire [66]

Table 1 (continued)

Author(s) and country	Study aim	Definition and/or description of a learning organization (LO) and/or organizational learning (OL)	Key terms derived from the studies' definitions and descriptions of LO and/or OL	Theories	Operationalizations
Vinther et al. [67], Denmark	To improve an adverse event reporting system (AER system) and its organizational learning process by gaining insight into its feedback mechanisms and identifying potential obstacles in its learning cycles and feedback loops	No definition of LO is provided, however its five disciplines and a learning-loop theory were described. The five disciplines are seen as a skill set required to foster an organization's learning capabilities. The learning-loop mechanism through an AER system enables learning at both individual and organizational levels, ultimately resulting in continuous improvement	Five disciplines of a learning organization: • Personal mastery • Team learning • Mental models • Shared vision • Systems thinking	• Senge [30] on the five disciplines of learning organizations • Argyris and Schön's [68] theory of learning loops	• Type of study: qualitative • Measure: interviews and observations of an adverse event reporting system (AER system), and a workshop
Amble [69], Norway	To gain insight into employee reflection as a condition for organizational learning	No definition of LO or OL is provided. Self-reflection and reflection, both immediate and retrospective, are described as prerequisites for sustainable OL. Collective reflection is identified as key to capitalizing on the knowledge of individual employees	• Reflection • Joint learning • Knowledge creation	• Senge [30] on organizational learning • Bandura [70] on the concept of 'mastery' and theory of 'self-efficacy' • Argyris and Schön's [71] model of 'detecting and correcting of error'	• Type of study: qualitative (action research) • Measure: situation logs, focus groups, and evaluation surveys on reflection
Augustsson et al. [72], Sweden	To identify factors that influence organizational learning	No definition of LO is provided. OL is defined as a work culture that supports questioning, feedback, experimentation, and collaboration. Workplace learning is emphasized, encompassing social and collective processes involving sharing of both information and experiences to develop work practices. A shared vision, collective problem solving with a strong link to practical work, and the role of leadership are identified as crucial to fostering a learning climate. To achieve organizational learning, individual knowledge must be transferred to the entire organization	• Individual learning • Workplace learning • Continuous learning • Learning from mistakes • Leadership • Shared vision • Collective, practice-oriented problem solving	• Argyris and Schön [71] on workplace learning • Senge [53], Senge et al. [73], and Marsick and Watkins [74, 75] on organizational learning • Wenger [76] on collective and social learning processes	• Type of study: mixed methods • Measure: evaluation of a workplace learning intervention (for collective learning and problem solving) through interviews and the Dimensions of the Learning Organization Questionnaire [74] divided into topics on 1) continuous learning, 2) inquiry and dialogue, and 3) team learning
Chalfont and Hafford-Letchfield [77], United Kingdom	To explore leadership styles that contribute to an organizational culture conducive to quality care delivery in nursing homes	No definition of LO is provided. OL is described as: dependent on individual learning and interpersonal experiences, with an emphasis on the role of transformational leadership for building a learning culture that promotes awareness, trust, and accountability—all three of which benefit employee efficiency, job satisfaction, decreased absenteeism, and the recruitment of motivated employees. Effective learning requires collective reflection and consideration of organizational development, informed by knowledge about effective care	• Individual learning • Collective learning • Learning climate • Reflection • Transformational leadership	• Wenger [76] and Hafford-Letchfield et al. [78] on collective learning • Senge [30] on organizational learning	• Type of study: qualitative • Measure: literature study and in-depth interviews

Table 1 (continued)

Author(s) and country	Study aim	Definition and/or description of a learning organization (LO) and/or organizational learning (OL)	Key terms derived from the studies' definitions and descriptions of LO and/or OL	Theories	Operationalizations
Desai [79], United States	To study organizational learning and improvement as achieved through the handling of complaints about products and services from known and anonymous stakeholders	No definition of LO is provided. OL is defined as occurring in organizations that use knowledge gained from employee experiences—such as procedural knowledge (routines, procedures, rules) and tacit knowledge (organizational culture, shared mental models)—to guide employee actions. OL thus leads to collective organizational knowledge and changes in organizational performances	• Organizational learning experiences • Procedural, tacit, and collective knowledge	• E.g., Argote et al. [80], Darr et al. [81], and Levitt and March [82] on organizational learning • Mitchell et al.'s [83] theoretical framework of power, legitimacy, and urgency, used to specify an organization's effort to learn from their experiences with stakeholders	• Type of study: quantitative • Measure: surveys based on a dataset derived from California national health data
Desai [84], United States	To gain insight into organizational learning and performance improvement by examining the influence of power, legitimacy, and urgency in stakeholder feedback interactions	No definition of LO is provided. OL is defined as occurring in organizations that use knowledge gained from employee experiences—such as procedural knowledge (routines, procedures, rules) and tacit knowledge (organizational culture, shared mental models)—to guide employee actions. OL thus leads to collective organizational knowledge and changes in organizational performances	• Organizational learning experiences • Procedural, tacit, and collective knowledge • Organizational memory system	• E.g., Argote et al. [80], Cyert and March [85], and Levitt and March [82] on organizational learning	• Type of study: quantitative • Measure: surveys based on a dataset derived from California national health data
Hauer et al. [86], Sweden	To utilize the Breakthrough Collaboratives model [96] for evaluating both the 'Steps for Skills' intervention and the usefulness of new knowledge as predictors for a learning climate	No definition of LO or OL is provided. A learning climate is described as the space for learning within an organization, which leads to both individual learning and OL in order to gain and use new knowledge in practice. The role of leaders in supporting a learning climate is emphasized	Five components of a learning climate: • Collaborative potential (facilitation of opportunities for teams to reflect, plan, and develop their work together) • Decision autonomy (empowerment of individuals to decide what to do and how to do it) • Manager support (support for employee learning) • Developmental potential (development of skills through on-the-job tasks) • Social support (engagement in social practices)	• Örtenblad [87] and Mikkelsen et al. [88] on organizational learning • Westerberg and Hauer [89] and Marsick and Watkins [74] on learning climates • Marsick and Watkins [90], Marsick [91], Ellström [92], and Clarke [93] on informal and workplace learning • Salas and Cannon-Bowers [94] on the transfer and application of new acquired knowledge • The Breakthrough Collaboratives model [96] on collaborative and informal learning	• Type of study: mixed methods • Measure: case study and survey using the Learning Climate Scale [89] consisting of five components: collaborative potential, decision autonomy, manager support, developmental potential, and social support

Table 1 (continued)

Author(s) and country	Study aim	Definition and/or description of a learning organization (LO) and/or organizational learning (OL)	Key terms derived from the studies' definitions and descriptions of LO and/or OL	Theories	Operationalizations
Hauer et al. [95], Sweden	To utilize the Breakthrough Collaboratives model [96] to investigate the influence of quality improvement efforts on the perceived learning climate following the 'Steps for Skills' intervention, including its effect on resource adequacy and employee workload. Quality improvement efforts were classified into three areas of focus: 1) individual solutions, 2) general milieu, and 3) scheduled activities	No definition of LO or OL is provided. A learning climate is described as the space for learning within an organization, which leads to both individual learning and OL in order to gain and use new knowledge in practice. The role of leaders in supporting a learning climate is emphasized	Five components of a learning climate (see [86]): • Collaborative potential • Decision autonomy • Manager support • Developmental potential • Social support	• Örtenblad [87] and Mikkelsen et al. [88] on organizational learning • Westerberg and Hauer [89] and Hauer et al. [86] on learning climates • Marsick and Watkins [74] on workplace learning • The Breakthrough Collaboratives model [96] on collaborative and informal learning	• Type of study: mixed methods • Measure: case study and survey using the Learning Climate Scale [89] consisting of five components: collaborative potential, decision autonomy, manager support, developmental potential, and social support
Nakrem et al. [97], Norway	To identify the enablers and barriers of an intervention—designed to target geriatric assessments and care planning with a focus on quality improvement and organizational change—by exploring staff learning experiences	No definition of LO is provided. OL is defined as: 1) dissemination of new insights among organizational employees, which become shared insights and shared mental images; 2) improvements in care practices based on individuals' learning and adjustment of their attitudes and behaviour; and 3) implementation and sustainment of new procedures through their direct implantation in regular nursing home care practices	• Shared insights • Quality improvement • Attitudes and behaviour	• Argyris and Schön [71] on organizational learning	• Type of study: qualitative • Measure: intervention study with focus groups
Ejdys and Gedvilaite [98], Poland	To measure learning orientation as a predictor of organizational innovation	LO is defined as: an organization with a learning climate in which information is created, shared, and transferred, shaping employee behaviour and leading to improved individual development and organizational performance. OL is defined as: the ability of individuals and/or organizations to 1) adapt and respond (in thought and action) to internal and external changes; 2) process information and knowledge aimed at changing organizational behaviours, capabilities, and performance; and 3) facilitate structures and systems that promote organizational adaptiveness and responsiveness. Learning orientation is linked to LO and OL and refers to a collection of organizational values that shape a company's approach to generating and applying knowledge, and influencing proactively learning in the organization	• Learning orientation with four constructs: commitment to learning, shared vision, open-mindedness, and intra-organizational knowledge sharing • Learning at work • Employees as learning agents • Individual development • Adaptive and responsive attitude to change	• Senge [30, 53], Örtenblad , [87, 99, 100], Somunoğlu et al. [101], and Öneren [102] on learning organizations • Sinkula et al. [103], Kaya and Patton [104], Garvin [41], and Nasution et al. [105] on learning orientation • Cohen and Levinthal [106], Nevis et al. [107], Argyris and Schön [68], on organizational learning	• Type of study: quantitative • Measure: survey on learning orientations, based on four constructs: 1) commitment to learning, 2) shared vision, 3) open-mindedness, and 4) intra-organizational knowledge sharing and organizational innovativeness as an outcome variable

Table 1 (continued)

Author(s) and country	Study aim	Definition and/or description of a learning organization (LO) and/or organizational learning (OL)	Key terms derived from the studies' definitions and descriptions of LO and/or OL	Theories	Operationalizations
Rondeau and Wagar [108], Canada	To gain insight into whether a commitment to organizational learning facilitates the implementation of a TQM/CQI programme while securing enhanced organizational performance	LO is defined as: an organization that is skilled at creating, acquiring, and transferring knowledge, and at modifying its behaviour to reflect new knowledge and insights. In healthcare LOs, employees are empowered to participate and all individuals engage in recognizing and resolving issues, ongoing experimentation, risk taking, innovation, problem solving, and promoting continuous quality enhancement. LOs are further characterized by systems thinking and by open communication, collaboration, adaptability, and flexibility in work structures and processes. OL is described as: the learning that occurs within an organization that has successfully implemented a TQM/CQI programme, designed to support performance enhancements	• Creating, acquiring, and transferring knowledge • Behaviour • Empowerment • Communication • Collaboration • Adaptability and flexibility • Experimentation • Innovation • Risk taking • Problem solving • Systems thinking • Continuous improvement	• Garvin [109] on learning organizations • The framework of DiBella et al. [110] on organizational learning, which describes seven learning orientations: knowledge source, product-process focus, documentation mode, dissemination mode, learning focus, value-chain focus, and skill development focus	• Type of study: quantitative • Measure: three crafted surveys, namely 1) a nine-item survey on organizational learning [110]; 2) a survey on organizational performance (using a modified balanced scorecard with 12 variables); and 3) a four-item survey on quality improvement, grounded in Total Quality Management/Continuous Quality Improvement (TQM/CQI) principles

organizational learning, and Ejdys and Gedvilaite [98] introduce the concept of 'learning orientation' alongside their discussion of a learning organization and organizational learning. All definitions and descriptions emphasize the intended benefits for organizational performance in care, such as enhancing quality and improving care practices through new knowledge.

Our analysis reveals the following six shared elements of the definitions and descriptions presented in the studies: 1) individual and collective learning, 2) individual and interpersonal abilities, 3) an adaptive and responsive culture, 4) organizational knowledge development, 5) transformational leadership, and 6) systems thinking. The following sections discuss each of these key elements, followed by the organizational performance outcomes of the learning organization as presented in each study.

Individual and collective learning

Individual learning refers to the process of acquiring, interpreting, and experimenting with new or accumulated knowledge gathered from one's surroundings, followed by behavioural change [37]. Collective learning refers to the sharing of insights, experiences, and/or knowledge between members of a team or group in order to foster mutual understanding and collaborative problem solving [30, 76].

Overall, nine of the 14 studies conceptualize both individual and collective learning as essential to facilitating the sharing of knowledge and experiences at an organizational level, thereby fostering the culture of a learning organization [56, 62, 67, 72, 77, 86, 95, 97, 98]. To enable the transfer of insights from the individual to the organizational level, a climate in which learning occurs naturally must be fostered and embedded throughout the organization—thus promoting continuous improvement across all levels. Four studies emphasize this efficacy by highlighting the role of individual and collective learning in: transferring individual knowledge across an organization [72], achieving organizational benefits [56], turning individual insights into shared insights [97], and facilitating organizational learning through structured workplace learning activities [62]. Furthermore, five studies highlight the importance of enhancing the learning capacity of organizational employees. Examples of this include: combining individual learning with interpersonal experiences to foster a continuous learning culture [77], utilizing 'learning loops' to stimulate both individual and organizational learning [67], and establishing a learning climate to strengthen and support learning at both the individual and organizational levels [95, 97, 98].

Individual and interpersonal abilities

Individual and interpersonal abilities are skills and capacities that enable individuals to adapt, grow, and

collaborate with others in pursuit of organizational success [111]. Five studies define a range of key employee abilities that are crucial to fostering the effectiveness of a learning organization [56, 62, 69, 72, 77]. These abilities include: cooperation, role and responsibility awareness, reflective thinking, and both giving and receiving feedback. According to these five studies, these abilities are specifically responsible for fostering effective interactions between team members and thus contributing to organizational learning and organizational change (e.g., [29, 41]).

For instance, in the context of *individual* abilities, Amble [69] and Chalfont and Hafford-Letchfield [77] define the ability to reflect—both on one's personal actions and on those of the team or organization—as a prerequisite for organizational learning. Additionally, employees' willingness to take accountability [77], trustworthiness within teams, and self-awareness and expression of their emotions [56, 77] are mentioned as stimulating factors. Examples of *interpersonal* abilities described in these studies include: engagement in open dialogue about differing perspectives, asking questions, giving feedback, demonstrating goodwill, and fostering participation, cooperation, and collaboration [56, 62, 72]. Finally, three studies conceptualize the importance of flexible employee behaviour within a learning organization [62, 98, 108].

Adaptive and responsive culture

An adaptive and responsive culture is defined as a culture that emphasizes flexibility, continuous learning, and innovation, allowing an organization to adjust and thrive in response to change [112]. Such a culture enables organizations to stay resilient and navigate challenges and opportunities in a dynamic environment, while also taking advantage of new opportunities for organizational growth [112, 113].

Four of the 14 studies conceptualize that, in general, an adaptive and responsive organizational culture promotes flexibility not only in the thoughts and actions of its employees but also in its structures and processes [62, 72, 98, 108]. According to these authors, adaptivity and responsivity enable an organization to effectively respond to both internal and external changes, fostering flexible employee behaviour such as a willingness to adopt new viewpoints and actions, which leads to the increased generation and integration of innovative approaches. The conceptualizations of Augustsson et al. [72] and Rondeau and Wagar [108] reinforce the importance of organizational flexibility, describing it as the motor behind employees' openness to, and willingness to explore, innovative ideas.

Transformational leadership

Leadership entails the responsibility of guiding individuals, groups, and/or an organization as a whole in learning, managing knowledge, and achieving shared objectives [114]. Six studies specifically highlight leadership as the driving force behind a learning organization [52, 62, 69, 77, 86, 95]. Specifically, the concept of 'transformational leadership'—or its shared principles—is mentioned as being particularly relevant. This leadership style is characterized by leaders who adapt to environmental changes while inspiring and empowering employees to collaborate effectively toward shared and individual goals, thereby fostering the effectiveness of a learning organization [115]. Various dimensions of this are explored across the studies: Augustsson et al. [72] and Hauer [86, 95] emphasize the essential role of leadership in empowering employees and creating an ideal learning climate; Somerville and McConnell-Imbriotis [62] specifically advocate for a flat management structure while also stressing that managers must demonstrate an understanding of the relationship between work and learning; Antonsson et al. [52] highlight the need for proactive, innovative leaders when developing a learning organization; and Chalfont and Hafford-Letchfield [77] describe the role of leadership in cultivating a positive, trustworthy work culture—important for fostering motivated and satisfied employees, and for driving organizational development.

Organizational knowledge development

Knowledge can be described as a combination of information, experience, skills, and attitude, the sum of which drives the capacity of professionals to carry out their tasks. It can be either explicit (information) or tacit (experience, skills, and attitude) [116]. Within an organization, explicit knowledge encompasses procedural knowledge, e.g., routines and procedures, while tacit knowledge includes the organization's culture and shared mental models and insights. Effective knowledge sharing can occur laterally among individuals and/or teams or vertically across the entire organization [117].

Nine of the 14 studies conceptualize knowledge as being both a catalyst (input) for and the result (output) of both learning organizations and organizational learning [72, 77, 79, 84, 86, 95, 97, 98, 108]. Specifically, these studies highlight the role of individual learning in creating, transferring, sharing, and utilizing information, which, in turn, guides employee action, drives behavioural change, and contributes to the development of new collective organizational knowledge. For example, the studies by Desai [79, 84] describe procedural (explicit) knowledge—routines, procedures, and rules—and tacit knowledge—culture and shared mental models—as both shaped by organizational learning experiences and instrumental in guiding employee actions. Furthermore,

Augustsson et al. [72] emphasize the collective nature of workplace learning, describing it as a process that relies on the sharing of information and experiences between individuals to enable its effective dissemination throughout the organization.

Systems thinking

As the cornerstone of a learning organization, systems thinking defines the organization as a system made up of individual components, emphasizing their interconnections and patterns rather than viewing them as isolated entities [30]. A system approach stimulates the creation and/or pursuit of a shared vision or goals, for which the whole organization is involved and collaboratively engaged, such as quality improvement initiatives [118].

Five studies highlight systems thinking and/or shared vision in their definitions or descriptions of the learning organization and/or organizational learning [62, 67, 72, 108] or in the context of a learning orientation [98]. For example, Rondeau and Wagar [108] specifically underscore the importance of systems thinking in the context of healthcare, emphasizing that individuals in such learning organizations must internalize the concept of systems thinking to effectively drive improvements in quality or organizational performance. Likewise, Somerville and McConnell-Imbriotis [62] conceptualize that learning organizations depend on a system thinking approach in order to generate, share, and capture learning experiences at the systemic level—i.e., to integrate learning across all organizational levels—which in turn leads to service improvements. Finally, four studies emphasize the importance of a shared vision, describing it as essential to a systems thinking approach [62, 67, 72, 98].

Organizational performance as the primary aim of a learning organization

Organizational performance refers to the effectiveness with which an organization achieves its goals and completes its daily operations [119]. All 14 studies demonstrate a close link between the concept of the learning organization and organizational performance in nursing homes, highlighting its potential to drive performance improvements. While each study examines a different organizational performance outcome, they all share a common focus on improvement efforts aimed at enhancing nursing home care services. The outcomes of these studies are outlined in detail below.

In the context of the learning organization and/or organizational learning, 11 studies explain organizational performance improvements as resulting from the acquisition of new knowledge that enhances care (e.g., its quality), whether achieved through improving service provision, routines, or work practices, or by generating new solutions [56, 62, 72, 77, 79, 84, 86, 95, 97, 98, 108]. For example, Grealish et al. [56] assert that nursing homes in the process of transitioning into learning organizations can achieve high-quality service by prioritizing continuous improvement. Similarly, Rondeau and Wagar [108] highlight that learning organizations in healthcare, such as in nursing homes, have been shown to significantly improve patient care by supporting the successful implementation of improvement initiatives.

Four studies specifically underline the efficacy of organizational learning for improving organizational performance—such as improved safety of care—by increasing employees' capacity to learn from feedback. For example, Vinther et al. [67] highlight that learning cycles and feedback loops, facilitated by a reporting system, enhance organizational learning while fostering the exchange of feedback and reporting. Similarly, the studies of Desai [79, 84] focus on how stakeholder feedback stimulates organizational learning, and Antonsson et al. [52] emphasize that learning from mistakes is a crucial component of a learning organization. Lastly, an increased ability to learn from feedback was also linked to other positive organizational performance outcomes in three studies, such as enhanced professional development [98], employee job satisfaction, and organizational development—for example, by boosting an organization's ability to transform and adapt [56, 77].

Theories used to conceptualize the learning organization

The theories used in each study are presented in Table 1 (column 5). As we have based our perspective on both the learning organization and organizational learning on the definitions proposed by Senge [30] and Watkins and Marsick [31], we also use these definitions as a starting point for our analysis. Occasionally, we will also draw on other theories to further clarify the concept within the context of nursing homes.

As a whole, the studies encompass a wide range of theories in their definitions and descriptions of the learning organization and organizational learning. Of the 14 studies, five referred [52, 67, 69, 77, 98] to the theories of Senge (e.g., [30, 53]), three referred [62, 86, 95] to Marsick and Watkins (e.g., [63, 74]), and one mentioned both theories [72].

The four studies that reference Marsick and Watkins (e.g., [63, 74]) highlight several shared aspects of a learning organization, including: the presence of a shared vision, a systems approach to learning, collective problem solving, employee flexibility and adaptability, workplace learning, and transformational leadership [62, 72, 86, 95]. Six of the studies that reference Senge (e.g., [30, 53]) emphasize the themes of: reflection, acquisition of new knowledge, learning experiences, shared vision, collective problem solving, systems thinking, transformational

leadership, and the adaptability and responsiveness of employees and organizations [52, 67, 69, 72, 77, 98].

Other theories cited in the studies are often mentioned in conjunction with those of Senge [30, 53] and Marsick and Watkins [63, 74]. These include several theories of Argyris and Schön [68, 71], such as organizational learning, workplace learning, and single- and double-loop learning that are cited in fives studies [67, 69, 72, 97, 98] while three studies reference Örtenblad's [87] theory on learning organization and organizational learning [86, 95, 98]. Lastly, two studies mention Wenger's [76] theory of individual and collective learning [72, 77], and two mention Garvin's [41, 109] theory on the learning organization and learning orientation [98, 108].

Operationalizations of the learning organization in included studies

The operationalizations of each study are presented in Table 1 (column 6). Overall, the 14 studies show a diverse range of approaches to operationalizing the learning organization, with only a few studies examining its full scope and key elements. The operationalizations can be categorized into four groups: 1) the full concept of the learning organization or organizational learning ($n = 3$); 2) related concepts of the learning organization ($n = 4$); 3) quality improvement approaches to foster a learning organization or organizational learning ($n = 4$); and 4) conditions for fostering a learning organization or organizational learning ($n = 3$). These four categories are discussed in the sections below.

First, the three studies examining the full scope of the learning organization applied a range of methodological approaches: Augustsson et al. [72] used the Dimensions of the Learning Organization Questionnaire from Marsick and Watkins [74] to explore the progression from individual to organizational learning; Somerville and McConnell-Imbriotis [62] combined the same questionnaire from Watkins and Marsick [66] with interviews and focus groups to assess learning organization culture; and Grealish et al. [56] employed the Clinical Learning Organizational Culture Survey [61] to evaluate the impact of an educational programme on organizational learning culture.

Second, four studies primarily focused on the learning orientation or learning climate of an organization, but did not explore the full concept nor adhere to the theories of Senge [30] or Watkins and Marsick [31]. For instance, Ejdys and Gedvilaite [98] employed a survey on learning orientations to assess organizational innovativeness, focusing on employees' commitment to learning, shared vision, open-mindedness, intra-organizational knowledge sharing, and innovation strategies—all of which are established key elements of the learning organization concept. Similarly, Rondeau and Wagar [108] used questionnaires designed to assess organizational learning orientation and organizational performance when implementing a quality-improvement programme. Additionally, the studies of Hauer [86, 95] evaluated learning and development interventions designed to support collaborative learning, administering the Learning Climate Scale [89] to measure collaborative potential, decision autonomy, managerial support, developmental potential, and social support.

Third, as one of the four studies focusing on learning and quality improvement in care services or work methods, Nakrem et al. [97] employed focus groups to explore staff learning experiences related to an intervention on geriatric assessments and care planning within the context of individual and organizational learning. The operationalizations of the other three studies focused on learning from feedback, with data gathered from surveys of various stakeholders [79, 84], and interviews and observations of an adverse event reporting system [67].

Fourth, of the three studies examining the conditions that foster a learning organization or organizational learning, two conducted interviews to explore the role of leadership in supporting a learning organization [52, 77], and one employed focus groups and surveys to examine the quality of reflection as a prerequisite for organizational learning [69].

Discussion

The aim of our study was to explore whether the concept of a learning organization may offer a promising perspective in the context of nursing homes and the challenges they face. The scoping review of 14 articles highlights a shared consensus in the nursing home literature that the primary aim of learning organizations and organizational learning is to enhance organizational performance. Specifically, the studies in this review link organizational performance to quality improvement, organizational growth, and job satisfaction, highlighting that the learning organization can be utilized as a tool to drive these outcomes at both the organizational and employee levels. This suggests that the learning organization may indeed hold potential in addressing challenges in nursing home care, such as attracting and retaining employees.

Notably, the conceptualizations of the learning organization in these studies are presented not as clear definitions, but as collections of attributes or dimensions. Other studies focused on a single element of the learning organization, rather than attempting to operationalize its full scope. As a result, a diverse range of terms is used to describe the learning organization, which has led to variety of operationalizations across the studies. This is unfortunate as a clear, shared definition, is prerequisite for meaningful operationalization of the concept of the learning organization.

In a first step towards such a clear conceptualization, we identified six key elements that, collectively, define and characterize the concept of a learning organization in nursing homes: 1) individual and collective learning, 2) individual and interpersonal abilities, 3) an adaptive and responsive culture, 4) transformational leadership, 5) organizational knowledge development, and 6) systems thinking. The identified elements are based on analysis of the 14 included studies but also on the work of Senge [30, 53] and Marsick and Watkins [63, 74], as their contributions were the most prevalent in the studies in the review.

Below we examine the role of these six elements, one by one. Subsequently, we discuss how these elements may interact and function together, ultimately fostering a 'true' learning organization in nursing homes. In this, we highlight the role of systems thinking for a learning organization. In addition, we examine related mechanisms fostering learning behaviour. These mechanisms, namely psychological safety and voice behaviour, have been shown to positively influence job satisfaction, offering valuable leverage points for addressing challenges in nursing homes, such as workforce shortages.

Six elements shaping learning organizations in nursing homes

First, *learning and collective learning* refers to a profound ability to learn from experience on all levels of the organization—individual, team and organizational. Employees of learning organizations are conscious of their learning opportunities and actively choose to engage in reflective and learning practices and acknowledge its importance—all of which necessitate a supportive organizational learning culture [30, 31]. These findings reinforce the WHO's perspective [15], highlighting the importance of learning at all organizational levels to help care organizations stay flexible, adapt to changing demands, and improve care.

Second, a learning culture also fosters an environment that stimulates *individual and interpersonal abilities,* such as inquiry, feedback, collaboration, and engagement in open dialogue with peers and colleagues [30, 31]. However, encouragement from leaders can support care professionals to provide feedback and engage in open dialogue about work-related matters [31].

Third, an *adaptive and responsive culture* enables both nursing home organizations as a whole and their individual employees to proactively anticipate changes, reflect on and learn from these changes, and apply gained experiences to facilitate organizational development. Kok et al. [29] similarly highlight the importance of cultivating a culture of learning and continuous improvement in healthcare organizations to effectively adapt and respond in a changing environment, thereby ensuring high-quality care. Flexible and adaptive planning is particularly essential to navigating the unique, daily challenges of nursing homes [120].

Fourth, *transformational leadership*, plays a pivotal role in empowering employees in these learning processes by cultivating an environment with open communication, where learning opportunities are seamlessly integrated into daily work practices. Our findings align with the literature on transformational leadership, highlighting its crucial role in both facilitating effective adaptation and empowering employees to pursue shared goals [113, 121]. Specifically, first-line managers play a central role in balancing the interests of management and staff while actively supporting and enhancing employees' daily practices [122]. Furthermore, transformational leaders are crucial to fostering a supportive work environment—one that both enhances employee well-being and satisfaction, and shapes their perceptions of quality care [123, 124]. We therefore assume that effective leadership not only serves to cultivate a learning organization, but it also enhances the appeal of nursing homes as workplaces, helping to attract and retain employees [125].

Fifth, *organizational knowledge development,* fosters the development of shared knowledge and drives organizational transformation [116]. Specifically, learning organizations collectively share and integrate the knowledge they gain through learning across the entire organization—including procedural or explicit knowledge (procedures and routines) and tacit knowledge (organizational culture, skills, and mental models). A study on knowledge management and implementation in nursing homes underscores the crucial role of teamwork in facilitating knowledge activities—such as creation, storage, transfer, and implementation—particularly in the ever-evolving landscape of nursing home care, where daily adjustments to care processes are essential. Given the shortages of care professionals in nursing homes and frequent job transitions, fostering an organizational knowledge framework within care teams, where there is a shared understanding of how to provide care, is essential [126].

Sixth and finally, *systems thinking* emphasizes the interconnectedness of the other five elements described above. Building a learning organization requires addressing all of the five aspects simultaneously through a systems approach: individuals must collaborate to achieve common goals, driven by a shared vision, which eventually leads to collective solutions and organizational change [33]. Systems thinking also empowers leaders to understand organizational challenges by helping them analyse the interrelated factors at play [127]. Finally, a systems approach supports the achievement of both a learning organization and the effective management of complexity and uncertainty in care [30, 32, 33].

The six elements highlight that when individuals and organizations learn, they continuously renew and adapt

their knowledge to current circumstances. This process enhances their capabilities, fosters innovation, and better equips them to deliver effective and competitive services or products, which are essential for addressing challenges [37, 128–130]. We suggest that to develop the various elements, nursing homes must approach this from a systems thinking perspective, considering the interaction of elements (e.g., factors, actors) and navigating the complexities of care. This approach could ultimately foster the development of a learning organization. Our findings align with Löfqvist [35], who emphasizes that healthcare organizations must adapt to challenges and improve through continuous learning—echoing our perspective on systems thinking.

Mechanisms shaping the development of a learning organization

Based on our findings on the conceptualization of the learning organization, we anticipate that its development—as an organizational change process—is not straightforward and requires careful consideration for effective implementation. Additionally, nursing homes will continue to face challenges related to complex care needs and an aging population, while maintaining a focus on person-centred care [1–12]. Therefore, we explore additional mechanisms, such as psychological safety and voice behaviour, that could help foster a learning culture and subsequently mitigate workforce shortages while enhancing employee satisfaction and job retention.

Löfqvist's systematic review [35] examines key attributes for promoting continuous organizational improvement and learning. Löfqvist [35] identifies the importance of autonomy, capability, and safety for individuals and teams, highlighting the need for a psychologically safe and supportive environment that fosters behavioural change in learning and improvement. A scoping review on facilitators of a learning culture in nursing homes found similar results, highlighting the importance of a safe, respectful, and transparent environment, as well as the role of frontline managers in supporting change [131]. Reflecting on our findings, since psychological safety plays a role in enabling individuals and teams to learn within organizations [35, 131], it could also be essential in fostering the development of a learning organization.

Edmondson [132] introduced the concept of 'psychological safety', highlighting its influence on individual and group learning behaviours. Psychological safety can be defined as a psychological safe environment where (team) members feel safe to share their ideas and concerns, ask questions, and acknowledge mistakes without fear of negative consequences [132]. Edmonson [132] highlight that particularly in healthcare settings where teamwork is vital, a supportive and safe environment is essential for effective shared learning. Consequently, a psychological safe culture emerges in communicative behaviour at the workplace in which individuals actively reflect, inquire, seek feedback, experiment, and openly address mistakes or unforeseen outcomes [132].

A pivotal aspect of such communicative behaviour, particularly in the context of nursing homes, is employee 'voice behaviour'. Voice behaviour refers to the voluntary sharing of viewpoints, ideas, and concerns, through which individuals seek to express their opinions and potentially influence issues that affect their work or lives [133]. To encourage voice behaviour, employees must feel safe to speak up without fear of personal harm or strained relationships [132, 134], and trust that their voice will be heard and acted upon [133]. Prior studies suggest that voice behaviour is crucial for improving quality and safety of care [135–137] and nurses' job satisfaction, engagement, and retention [138–142].

However, in nursing homes, hierarchy can make speaking up more difficult for care professionals with varying education levels and skills, in which care professionals with higher job roles are more likely to voice their concerns [142–144]. Leaders (i.e. first-line managers or directors) have an important role in creating a supporting environment to engage in voice behaviour [142]. When leaders value and acknowledge employees' contributions, employees feel capable and willing to engage in voice and learning behaviour [134, 145–147]. Feeling appreciated by leaders motivates care professionals to speak up and actively engage in reflection, solving and learning from mistakes, and willing to improving care—key aspects of a learning organization [31, 142], ultimately lead to organizational improvements and job satisfaction [133, 141, 148]. Given the increasing workforce shortages in nursing homes, it is crucial to ensure that care professionals remain satisfied with their jobs and are motivated to stay in their current roles [142].

In conclusion, psychological safety and voice behaviour might be important mechanisms in developing learning organizations. It remains, however, unclear how the concepts relate to one another, and which should precede the other. Nonetheless, psychological safety and voice behaviour may support the creation of a learning culture where employees feel empowered to voice their opinions, learn from everyday practice, and stay focused on continuous improvement. This, in turn, positively contributes to job satisfaction and organizational performance.

Strengths and limitations

This study presents both strengths and limitations. Notably, it contributes to our understanding of how the concepts of both a learning organization and organizational learning are framed within the context of nursing homes. Furthermore, this study offers an overview

of relevant peer-reviewed literature from nursing home studies, highlighting key elements that influence learning organizations and organizational learning in this setting. Finally, this study follows a transparent and reproducible review process.

Nonetheless, our study has some limitations. First, many of the definitions and descriptions presented in the included studies contain tautologies, such as indicating that various learning processes (e.g., individual learning and collective learning) lead to a learning organization. When the concepts of multiple studies appear reliant on tautologies, it raises concern about the precision of the concept and complicates further advancements in the field. Second, the lack of a consistent definition of the learning organization may have introduced selection bias, as studies examining aspects of the learning organization without explicitly defining it as such were excluded. This also led to the omission of studies not addressing the multilayered nature of learning organizations, such as those focused on team or workplace learning rather than the full scope of a learning organization. While these studies offer valuable insights, our review specifically focused on studies that explicitly address learning organizations to gain a comprehensive understanding of the body of research related to this concept in the context of nursing home care. To mitigate potential bias, the research team regularly reviewed the search terms used during the study selection process. However, we acknowledge that this approach may have excluded relevant studies that discuss learning organizations using different terminology.

Conclusions

In summary, this scoping review has identified six key elements related to the learning organization and organizational learning in a nursing home setting: 1) individual and collective learning, 2) individual and interpersonal abilities, 3) an adaptive and responsive culture, 4) transformational leadership, 5) organizational knowledge development, and 6) systems thinking. The concept of the learning organization may hold potential for enhancing person-centred care, organizational performance and job satisfaction, and thus helping to address the current challenges in nursing home care. Together, our understanding of the learning organization could help shape a new quality paradigm in nursing homes, where continuous learning is essential for navigating the dynamic and complex care landscape, especially the context-dependent nature of nursing home care in which person-centred care is pivotal.

However, research in this area is still in its early stages and lacks a universally accepted definition, which could hinder nursing homes in the practical implementation of a learning organization. Nonetheless, this scoping review provides insights into key elements that seems essential for a learning organization in nursing homes and offers new directions for future research.

Moving forward, gaining a deeper understanding of how the elements of the learning organization interact across all organizational levels, and their practical implications for organizational performance in nursing homes, appears essential. Focusing on a single aspect of the learning organization complicates comparisons and may lead to suboptimal outcomes. Additionally, viewing the learning organization in fragments may lead to a loss of its original meaning, with various components becoming disconnected. Future empirical research should aim to develop a consistent operationalization of the concept and the components of the learning organization as a system.

Subsequently, more research is needed on the development of learning organizations. Given that a learning organization approach encompass systems thinking, it seems prudent to adopt a maturity perspective that views these elements as interconnected and interacting components. Therefore, further research into identifying underlying causal mechanisms, such as psychological safety and voice behaviour, could enhance our understanding of how the elements of a learning organization operate together in different contexts, with systems thinking as the foundational aspect. In this regard, further research on how leaders and managers influence a safe learning culture could provide valuable insights into optimizing leadership practices to support learning organizations in nursing home care. A realist evaluation design or the development of a theory of change model could help achieve this goal.

Finally, our findings highlight that the development of learning organizations should not be seen as a goal in itself, but rather as a means to achieve broader organizational goals, such as providing person-centred care, improving organizational performance, and job satisfaction. Given the limited empirical evidence on whether organizations achieve performance through the learning organization, further empirical research is needed to gather evidence on the relationship between the learning organization (i.e. the identified key elements), organizational goals, and organizational performance. This is particularly relevant for care organizations such as nursing homes, which must maintain or enhance responsiveness and competitiveness in an industry primarily driven by regulation, societal benefit, and limited competition, compared to commercial sectors. Additionally, longitudinal research would be suitable for monitoring changes and development over time. Nevertheless, our review serves as an initial step towards explicitly defining the concept of the learning organization in the context of nursing home care, thus contributing to a clearer understanding of the concept and its relevance to the challenges nursing homes face today.

Supplementary Information

The online version contains supplementary material available at https://doi.org/10.1186/s12913-025-12674-0.

Additional file 1.

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Authors' contributions
CB, BvdB, KE, HN and BB conceived the project idea. All authors contributed to the design of the scoping review. JK and CB performed the literature search and CB and PV screened and analysed the articles. CB interpreted the data, prepared the summary tables, and drafted the manuscript. CB, BvdB, KE, HN and BB discussed the results. BvdB, KE, HN, and BB contributed to the final manuscript by reviewing and revising its drafts.

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References

1. Bevan H. A trilogy for health care improvement: Quality, productivity and innovation. In: Spurgeon P, Cooper C, Burke R, editors. The innovation imperative in health care organisations: Critical role of human resource management in the cost, quality and productivity equation. Cheltenham/Northampton: Edward Elgar Publishing; 2012. p. 37–59.
2. Both-Nwabuwe JM, Dijkstra MT, Klink AB, Beersma B. Maldistribution or scarcity of nurses? The devil is in the detail. J Nurs Manag. 2018;26(2):86–93.
3. Marešová P, Mohelská H, Dolejš J, Kuča K. Socio-economic aspects of Alzheimer's disease. Curr Alzheimer Res. 2015;12(9):903–11.
4. Nakrem S, Vinsnes AG, Seim A. Residents' experiences of interpersonal factors in nursing home care: A qualitative study. Int J Nurs Stud. 2011;48(11):1357–66.
5. Rantz MJ, Zwygart-Stauffacher M, Hicks L, Mehr D, Flesner M, Petroski GF, Madsen RW, Scott-Cawiezell J. Randomized multilevel intervention to improve outcomes of residents in nursing homes in need of improvement. J Am Med Direct Asso. 2012;1;13(1):60–8.
6. Spilsbury K, Hewitt C, Stirk L, Bowman C. The relationship between nurse staffing and quality of care in nursing homes: A systematic review. Int J Nurs Studies. 2011;48(6):732–50.
7. World Health Organization (WHO). State of the world's nursing 2020: Investing in education, jobs and leadership. 2020. Available from: https://iris.who.int/bitstream/handle/10665/331677/9789240003279-eng.pdf?sequence=1.
8. Bouwman R, Bomhoff M, Robben P, Friele R. Is there a mismatch between the perspectives of patients and regulators on healthcare quality? A survey study. J Patient Saf. 2021;17(7):473–82.
9. Koksma JJ, Kremer JA. Beyond the quality illusion: The learning era. Acad Med. 2019;94(2):166–9.
10. Leicher V, Mulder RH, Bauer J. Learning from errors at work: A replication study in elder care nursing. Vocat Learn. 2013;6:207–20.
11. Nies H, Leichsenring K. Concepts and strategies of quality assurance in care for older people. In: Boll T, Ferring D, Valsiner, J, editors. Cultures of care in aging. Charlotte: Information Age Publishing (Advances in Cultural Psychology); 2018. p. 347–71.
12. Xie A, Carayon P, Cartmill R, Li Y, Cox ED, Plotkin JA, Kelly MM. Multi-stakeholder collaboration in the redesign of family-centered rounds process. Appl Ergon. 2015;46:115–23.
13. Van Kemenade E, Hardjono TW. Twenty-first century total quality management: The emergence paradigm. TQM J. 2019;31(2):150–66.
14. Lachman P, Batalden P, Vanhaecht K. A multidimensional quality model: An opportunity for patients, their kin, healthcare providers and professionals to coproduce health. F1000Res. 2021;9:1140.
15. Sheikh K, Abimbola S, editors. Learning health systems: Pathways to progress. Flagship report of the alliance for health policy and systems research. Geneva: World Health Organization; 2021. Available from: https://iris.who.int/bitstream/handle/10665/344891/9789240032217-eng.pdf?sequence=1%26;isAllowed=y.
16. Björnsdóttir K. 'Holding on to life': An ethnographic study of living well at home in old age. Nurs Inq. 2018;25(2):e12228.
17. Nakrem S, Vinsnes AG, Harkless G, Paulsen B, Seim A. Nursing sensitive quality indicators for nursing home care: International review of literature, policy and practice. Int J Nurs Stud. 2009;46(6):848–57.
18. Backman A, Lindkvist M, Lövheim H, Sjögren K, Edvardsson D. Longitudinal changes in nursing home leadership, direct care staff job strain and social support in Swedish nursing homes—findings from the U-AGE SWENIS study. Int J Older People Nurs. 2022;18(1):e12515.
19. Coulter A, Locock L, Ziebland S, Calabrese J. Collecting data on patient experience is not enough: They must be used to improve care. BMJ. 2014;348:g2225.
20. Kane RA. Long-term care and a good quality of life: Bringing them closer together. Gerontologist. 2001;41(3):293–304.
21. Aqtam I, Ayed A, Zaben K. Quality of life: Concept analysis. Saudi J Nurs Health Care. 2023;6(1):10–5.
22. Bökberg C, Behm L, Ahlström G. Quality of life of older persons in nursing homes after the implementation of a knowledge-based palliative care intervention. Int J Older People Nurs. 2019;14(4):e12258.
23. Leegaard M, Utne I, Halvorsrud L, Valeberg BT, Torbjørnsen A, Bjørnnes AK, Bjørge H, Grov EK, Løyland B. A review of self-rated generic quality of life instruments used among older patients receiving home care nursing. Health Soc Care Community. 2017;26(3):e321–8.
24. Rajamohan S, Porock D, Chang Y. Understanding the relationship between staff and job satisfaction, stress, turnover, and staff outcomes in the person-centered care nursing home arena. J Nurs Scholarsh. 2019;51(5):560–8.
25. Harrington C, Woolhandler S, Mullan JT, Carrillo H, Himmelstein DU. Does investor ownership of nursing homes compromise the quality of care? Am J Public Health. 2001;91(9):1452–5.
26. Wiener JM. An assessment of strategies for improving quality of care in nursing homes. Gerontol. 2003;43(suppl_2):19–27.
27. Hoben M, Dymchuk E, Corbett K, Devkota R, Shrestha S, Lam J, Banerjee S, Chamberlain SA, Cummings GG, Doupe MB, Duan Y. Factors associated with the quality of life of nursing home residents during the COVID-19 pandemic: A cross-sectional study. J Am Med Dir Assoc. 2023;24(6):876–84.
28. Koster L, Nies H. It takes three to tango: An ethnography of triadic involvement of residents, families and nurses in long-term dementia care. Health Expect. 2022;25(1):80–90.
29. De Kok K, Van Der Scheer W, Ketelaars CA, Leistikow I. Organizational attributes that contribute to the learning & improvement capabilities

of healthcare organizations: A scoping review. BMC Health Serv Res. 2023;23(1):1–14.
30. Senge PM. The fifth discipline: The art and practice of the learning organization. New York: Doubleday/Currency; 1990. p. 3.
31. Watkins KE, Marsick VJ. Sculpting the learning organization: Lessons in the art and science of systemic change. San Francisco: Jossey-Bass; 1993. p. 10.
32. Arnold RD, Wade JP. A definition of systems thinking: A systems approach. Procedia Computer Sci. 2015;44:669–78.
33. Senge PM, Sterman JD. Systems thinking and organizational learning: Acting locally and thinking globally in the organization of the future. Eur J Oper Res. 1992;59(1):137–50.
34. Bui HT, Galanou E. Translation of systems thinking to organizational goals: A systematic review. J Gen Manag. 2022;47(4):233–45.
35. Löfqvist N. Enhancing capability for continuous organisational improvement and learning in healthcare organisations: A systematic review of the literature 2013–2022. BMJ Open Qual. 2024;13(2):e002566.
36. Werner RM, Konetzka RT. Advancing nursing home quality through quality improvement itself. Health Aff. 2010;29(1):81–6.
37. Odor HO. A literature review on organizational learning and learning organizations. Int J Econ Manag Sci. 2018;7(1):1–6.
38. Argote L, Miron-Spektor E. Organizational learning: From experience to knowledge. Organ Sci. 2011;22(5):1123–37.
39. Saadat V, Saadat Z. Organizational learning as a key role of organizational success. Procedia Soc Behav Sci. 2016;230:219–25.
40. Jones AM, Hendry C. The learning organization: Adult learning and organizational transformation. Br J Manag. 1994;5(2):153–62.
41. Garvin DA. Building a learning organization. Harv Bus Rev. 1993;74(4):78–91.
42. De Weerd-Nederhof PC, Pacitti BJ, Da Silva Gomes JF, Pearson AW. Tools for the improvement of organizational learning processes in innovation. J Work Learn. 2002;14(8):320–31.
43. Griego OV, Geroy GD, Wright PC. Predictors of learning organizations: A human resource development practitioner's perspective. Learn Organ. 2000;7(1):5–12.
44. Moilanen R. Diagnostic tools for learning organizations. Learn Organ. 2001;8(1):6–20.
45. Davis K, Drey N, Gould D. What are scoping studies? A review of the nursing literature. Int J Nurs Stud. 2009;46(10):1386–400.
46. Daudt HM, Van Mossel C, Scott SJ. Enhancing the scoping study methodology: A large, inter-professional team's experience with Arksey and O'Malley's framework. BMC Med Res Methodol. 2013;13:1–9.
47. Arksey H, O'Malley L. Scoping studies: Towards a methodological framework. Int J Soc Res Methodol. 2005;8(1):19–32.
48. Levac D, Colquhoun H, O'Brien KK. Scoping studies: Advancing the methodology. Implement Sci. 2010;5:1–9.
49. Peters MDJ, Godfrey C, McInerney P, Munn Z, Tricco AC, Khalil H. Chapter 11: Scoping reviews (2020 version). In: Aromataris E, Munn Z, editors. JBI Manual for evidence synthesis. 2020. Available from: https://doi.org/10.46658/JBIMES-20-12.
50. Otten R, De Vries R, Schoonmade L. Amsterdam Efficient Deduplication (AED) method (Versie 1). Amsterdam: Zenodo; 2019.
51. Bramer WM, Giustini D, de Jonge GB, Holland L, Bekhuis T. De-duplication of database search results for systematic reviews in EndNote. J Med Library Assoc JMLA. 2016;104(3):240.
52. Antonsson H, Korjonen SE, Rosengren K. First-line managers' experiences of alternative modes of funding in elderly care in Sweden. J Nurs Manag. 2012;20(6):737–47.
53. Senge PM. The fifth discipline: The art and practice of the learning organization. New York: Doubleday/Currency; 2006.
54. Senge PM. Spirituality in business and life: Asking the right questions. 2004. Available from: https://www.researchgate.net/publication/265363734_Spirituality_in_Business_and_Life_Asking_the_Right_Questions.
55. Rosengren K, Bondas T. Supporting "two-getherness": Assumption for nurse managers working in a shared leadership model. Intensive Crit Care Nurs. 2010;26(5):288–95.
56. Grealish L, Henderson A, Quero F, Phillips R, Surawski M. The significance of 'facilitator as a change agent'–organisational learning culture in aged care home settings. J Clin Nurs. 2014;24(7–8):961–9.
57. DeSilets LD, Pinkerton SE. Education: The key to the magnet culture. J Contin Educ Nurs. 2005;36(1):12–3.
58. Sheaff R, Pilgrim D. Can learning organizations survive in the newer NHS?. Implement Sci. 2006;1(27):1–11.
59. Eraut M. Learning from other people in the workplace. Oxf Rev Educ. 2007;33(4):403–22.
60. Billett S. Toward a Workplace Pedagogy: Guidance, Participation, and Engagement. Adult Educ Q. 2002;53(1):27–43.
61. Henderson A, Creedy D, Boorman R, Cooke M, Walker R. Development and psychometric testing of the Clinical Learning Organisational Culture Survey (CLOCS). Nurse Educ Today. 2010;30(7):598–602.
62. Somerville M, McConnell-Imbriotis A. Applying the learning organisation concept in a resource squeezed service organisation. J Work Learn. 2004;16(4):237–48.
63. Marsick VJ, Watkins KE. The learning organization: An integrative vision for HRD. In: Academy of human resource development conference proceedings, 3-6 March 1994. San Antonio: 1994. p. 129–34.
64. Marsick VJ, Watkins KE. Envisioning new organisations for learning. In: Boud D, Garrick J, editors. Understanding learning at work. London: Routledge; 1999.
65. Burns R. The adult learner at work. Sydney: Business and Professional Publishing; 1995.
66. Watkins KE, Marsick VJ. Dimensions of the learning organization questionnaire. Warwick: Partners for the learning organization; 1997.
67. Vinther LD, Jensen CM, Meulengracht Hjelmager D, Lyhne N, Nøhr C. Technology-induced errors and adverse event reporting in an organizational learning perspective. Stud Health Technol Inform. 2017;234:358–63.
68. Argyris C, Schön DA. Organisational learning: A theory of action perspective. New York: Addison-Wesley Publishing; 1978.
69. Amble N. Reflection in action with care workers in emotion work. Action Res. 2012;10(3):260–75.
70. Bandura A. Self-efficacy: The exercise of control. New York: W. H. Freeman; 1997.
71. Argyris C, Schön DA. Organizational learning II: Theory, method, and practice. Reading: Addison-Wesley Publishing; 1996.
72. Augustsson H, Törnquist A, Hasson H. Challenges in transferring individual learning to organizational learning in the residential care of older people. J Heal Organ Manag. 2013;27(3):390–408.
73. Senge PM, Kleiner A, Roberts C. The fifth discipline fieldbook. London: Nicholas Brealey; 1996.
74. Marsick VJ, Watkins KE. Demonstrating the value of an organization's learning culture: The dimensions of the learning organization questionnaire. Adv Dev Hum Resour. 2003;5(2):132–51.
75. Marsick VJ, Watkins KE. Facilitating learning organizations: Making learning count. Aldershot: Gower; 1999.
76. Wenger E. Communities of practice: Learning, meaning, and identity. Cambridge: Cambridge University Press; 1998.
77. Chalfont G, Hafford-Letchfield T. Leadership from the bottom up: Reinventing dementia care in residential and nursing home settings. Soc Work Soc Sci Rev. 2010;14(1):27–46.
78. Hafford-Letchfield T, Leonard K, Begum N, Chick N. Leadership and management in social care. London: Sage; 2008.
79. Desai VM. Power, legitimacy, and urgency in organizational learning: Learning through stakeholder complaints to improve quality in the California nursing home industry. J Lead Org Stud. 2010;17(3):264–75.
80. Argote L, Beckman SL, Epple D. The persistence and transfer of learning in industrial settings. Manag Sci. 1990;36(2):140–54.
81. Darr ED, Argote L, Epple D. The Acquisition, transfer, and depreciation of knowledge in service organizations: Productivity in franchises. Manag Sci. 1995;41(11):1750–62.
82. Levitt B, March JG. Organizational Learning. Annu Rev Sociol. 1988;14(1):319–38.
83. Mitchell RK, Agle BR, Wood DJ. Toward a theory of stakeholder identification and salience: Defining the principle of who and what really counts. Acad Manag Rev. 1997;22(4):853–86.
84. Desai VM. Ignorance isn't bliss: Complaint experience and organizational learning in the California nursing home industry, 1997–2004. Br J Manag. 2010;21(4):829–42.
85. Cyert RM, March JG. A behavioral theory of the firm. Englewood Cliffs: Prentice-Hall; 1963.
86. Hauer E, Nordlund AM, Westerberg K. Developmental intervention, learning climate and use of knowledge in elderly care. J Work Learn. 2012;24(1):19–33.
87. Örtenblad A. A typology of the idea of learning organization. Manag Learn. 2002;33(2):213–30.
88. Mikkelsen, A, Saksvik, PØ, Ursin, H. Job stress and organizational learning climate. Int J Stress Manag. 1998;5(4):197–209.

89. Westerberg K, Hauer E. Learning climate and work group skills in care work. J Workplace Learn. 2009;21(8):581–94.
90. Marsick VJ, Watkins KE. Informal and incidental learning in the workplace. London: Routledge; 1990.
91. Marsick VJ. Toward a unifying framework to support informal learning theory, research and practice. J Workplace Learn. 2009;21(4):265–75.
92. Ellström PE. Integrating learning and work: Problems and prospects. Hum Resour Dev Q. 2001;12(4):421–35.
93. Clarke N. Workplace learning environment and its relationship with learning outcomes in healthcare organizations. Hum Resour Dev Int. 2005;8(2):185–205.
94. Salas E, Cannon-Bowers JA. The science of training: A decade of progress. Annu Rev Psychol. 2001;52(1):471–99.
95. Hauer E, Westerberg K, Nordlund AM. Intervening with care–varying outcomes of a training and development programme in elderly care in Sweden. J Vocational Educ Training. 2017;69(4):617–36.
96. Institute for Healthcare Improvement (IHI). The Breakthrough Series: IHI's collaboration model for achieving breakthrough improvement, IHI innovation series white paper. 2003. Available from: www.IHI.org.
97. Nakrem S, Stensvik G, Skjong RJ, Ostaszkiewicz J. Staff experiences with implementing a case conferencing care model in nursing homes: A focus group study. BMC Health Serv Res. 2019;19(191):1–11.
98. Ejdys J, Gedvilaite D. Learning orientation in nursing homes in Poland. Eng Manag Product Serv. 2017;9(3):51–62.
99. Örtenblad A. On differences between organizational learning and learning organization. The Learning Organization. 2001;8(3):125–33.
100. Örtenblad A. Handbook of research on the learning organization: Adaptation and context. Cheltenham/Northampton: Edward Elgar Publishing; 2013.
101. Somunoğlu S, Erdem E, Erdem U. A study on determining the perception of learning organisation applications by health sector workers. J Med Syst. 2012;36(6):3925–31.
102. Öneren M. The approach of learning organisation in companies. Zonguldak Karaelmas University J Soc Sci. 2008;7(4):163–78.
103. Sinkula JM, Baker WE, Noordewier T. A framework for market-based organizational learning: Linking values, knowledge, and behavior. J Acad Mark Sci. 1997;25(4):305–18.
104. Kaya N, Patton J. The effects of knowledge-based resources, market orientation and learning orientation on innovation performance: An empirical study of Turkish firms. J Int Dev. 2011;23(2):204–19.
105. Nasution HN, Mavondo FT, Matanda MJ, Ndubisi NO. Entrepreneurship: Its relationship with market orientation and learning orientation and as antecedents to innovation and customer value. Ind Mark Manag. 2011;40(3):336–45.
106. Cohen WM, Levinthal DA. Absorptive Capacity: A new perspective on learning and innovation. Administrative Science Quarterly. 1990;35(1):128–52.
107. Nevis EC, DiBella AJ, Gould JM. Understanding organizations as learning-systems. Sloan Manag Rev. 1995;36(2):73–85.
108. Rondeau KV, Wagar TH. Organizational learning and continuous quality improvement: Examining the impact on nursing home performance. Healthc Manag Forum. 2002;15(2):17–23.
109. Garvin DA. Building a learning organization. Harvard business review on knowledge management. Boston: Harvard Business; 1998. p. 47–80.
110. DiBella AJ, Nevis EC, Gould JM. Understanding organizational learning capability. J Manag Stud. 1996;33(3):361–79.
111. Biswal L, Malap V, Chaudhary SK, Patro S. A study on impact of skills on employee performance to achieve the organizational goal. Econ Sci. 2024;20(1):144–54.
112. Patel J. Role of adaptive culture in organizational success: A comprehensive review. J Organ Culture Commun Conflict. 2024;28(S2):1–3.
113. Ali A, Wang H, Johnson RE. Empirical analysis of shared leadership promotion and team creativity: An adaptive leadership perspective. J Organ Behav. 2020;41(5):405–23.
114. Lakshman C. Organizational knowledge leadership: An empirical examination of knowledge management by top executive leaders. Leadersh Org Dev J. 2009;30(4):338–64.
115. Raijal S. Leading the learning organization. Bus Educ Accreditation. 2009;1(1):131–40.
116. Weggeman MC. Leidinggeven aan professionals? Niet doen!: Over kenniswerkers, vakmanschap en innovatie. Schiedam: Scriptum; 2007.
117. Garvin DA, Edmondson AC, Gino F. Is yours a learning organization? Harv Bus Rev. 2008;86(3):109–34.
118. Martin J, McCormack B, Fitzsimons D, Spirig R. Evaluation of leadership practices: How to develop a vision. J Res Nurs. 2014;19(2):102–15.
119. Richard PJ, Devinney TM, Yip GS, Johnson G. Measuring organizational performance: Towards methodological best practice. J Manag. 2009;35(3):718–804.
120. Anvik C, Vedeler JS, Wegener C, Slettebø Å, Ødegård A. Practice-based learning and innovation in nursing homes. J Work Learn. 2020;32(2):122–34.
121. Ramaswamy K, Von Glinow MA. Organizational performance following changes in ownership: Modelling post-privatization outcomes. Strateg Change. 2000;9(5):297–310.
122. Holden L, Roberts I. The depowerment of European middle managers: Challenges and uncertainties. J Manag Psychol. 2004;19(3):269–87.
123. Nielsen K, Randall R, Yarker J, Brenner SO. The effects of transformational leadership on followers' perceived work characteristics and psychological well-being: A longitudinal study. Work Stress. 2008;22(1):16–32.
124. Westerberg K, Tafvelin S. The importance of leadership style and psychosocial work environment to staff-assessed quality of care: Implications for home help services. Health Soc Care Community. 2014;22(5):461–8.
125. Backhaus, R, Jochem, I, Reijnders-Paffen, H, Meijers, J. M. How to position, attract and retain registered nurses in nursing homes: A qualitative, explorative study. J Long-Term Care. 2021;192–200.
126. Kejžar A, Dimovski V, Colnar S. The impact of knowledge management on the quality of services in nursing homes. Front Psychol. 2023;13:1106014.
127. Cezarino LO, Junior FH, Correa HL. Organization performance evaluation using system thinking: A study in Brazilian chemical organizations models. Syst Pract Act Res. 2012;25:81–92.
128. Jiménez-Jiménez D, Sanz-Valle R. Innovation, organizational learning, and performance. J Bus Res. 2011;64(4):408–17.
129. Hael M, Belhaj FA, Zhang H. Organizational learning and innovation: A bibliometric analysis and future research agenda. Heliyon. 2024;10(11):e31812.
130. Van Den Hoed MW, Backhaus R, De Vries E, Hamers JP, Daniëls R. Factors contributing to innovation readiness in health care organizations: A scoping review. BMC Health Serv Res. 2022;22(1):997.
131. Verbeek FH, Van Lierop ME, Meijers JM, Van Rossum E, Zwakhalen SM, Laurant MG, Van Vught AJ. Facilitators for developing an interprofessional learning culture in nursing homes: A scoping review. BMC Health Serv Res. 2023;23(1):178.
132. Edmondson A. Psychological safety and learning behavior in work teams. Adm Sci Q. 1999;44(2):350–83.
133. Morrison EW. Employee voice and silence. Annu Rev Organ Psych Organ Behav. 2014;11:173–97.
134. Garon M. Speaking up, being heard: Registered nurses' perceptions of workplace communication. J Nurs Manag. 2012;20(3):361–71.
135. Edmondson AC. Learning from mistakes is easier said than done: Group and organizational influences on the detection and correction of human error. J Appl Behav Sci. 1996;32(1):5–28.
136. Leistikow I, Mulder S, Vesseur J, Robben P. Learning from incidents in healthcare: The journey, not the arrival, matters. BMJ Qual Saf. 2017;26(3):252–6.
137. Levine KJ, Carmody M, Silk KJ. The influence of organizational culture, climate and commitment on speaking up about medical errors. J Nurs Manag. 2020;28(1):130–8.
138. Both-Nwabuwe JMC. Making work meaningful: A way to attract nurses to remain in their jobs. Doctoral dissertation. VU Amsterdam: Vrije Universiteit Amsterdam; 2020.
139. Moloney W, Fieldes J, Jacobs S. An integrative review of how healthcare organizations can support hospital nurses to thrive at work. Int J Environ Res Public Health. 2020;17(23):8757.
140. Pinho M, Ferreira P, Gomes S. Healthcare professionals' voice as a road to burnout and work engagement? The role of relational outcomes: An exploratory study of European countries. J Health Organ Manag. 2024;38(7):971–91.
141. Kee K, Van Wieringen M, Nies H, Beersma B. The relationships between certified nursing assistants' voice behaviour and job satisfaction, work engagement and turnover intentions: A two-wave survey study. J Adv Nurs. 2025;81(2):798–808.
142. Van Den Berg B, Reijmer Y, Kee K, Nies H, Beersma B, Zondervan-Zwijnenburg M. Is a stimulating work environment related to job satisfaction and retention among care professionals? A cross-sectional study in Dutch nursing homes. J Health Org Manag. 2025;39(9):210–27.
143. Nembhard IM, Edmondson AC. Making it safe: The effects of leader inclusiveness and professional status on psychological safety and improvement efforts in health care teams. J Org Behav. 2006;27(7):941–66.

144. Kee K, Van Wieringen M, Beersma B. The relational road to voice: How members of a low-status occupational group can develop voice behavior that transcends hierarchical levels. J Prof Organ. 2021;8(3):253–72.
145. Edmondson AC. Speaking up in the operating room: How team leaders promote learning in interdisciplinary action teams. J Manage Stud. 2003;40(6):1419–52.
146. Tangirala S, Ramanujam R. Ask and you shall hear (but not always): Examining the relationship between manager consultation and employee voice. Pers Psychol. 2012;65(2):251–82.
147. Verbeek FH, Nouwens ES, Lovink MH, Huisman-de Waal G, Fluit CR, Laurant M, Van Vught AJ. Which actions contribute to the development of an interprofessional learning and working culture in nursing homes? A realist action study. BMJ Open. 2024;14(9):e085096.
148. Puhakka IJ, Nokelainen P, Pylväs L. Learning or leaving? Individual and environmental factors related to job satisfaction and turnover intention. Vocat Learn. 2021;14(3):481–510.

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