

Review Article

Storytelling-based learning in nursing education: enhancing disease knowledge, clinical reasoning and professional competence among nursing students: a narrative review

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Received: 23 August 2026

Revised: 24 September 2026

Accepted: 25 September 2026

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ABSTRACT

Storytelling has returned as a purposeful teaching strategy in nursing education. It offers an alternative to didactic, fact-centred instruction by placing disease knowledge within lived clinical narratives. This narrative review synthesises current evidence on storytelling-based learning, including digital storytelling and narrative pedagogy and its influence on nursing students' disease knowledge, clinical reasoning and professional competence. PubMed/MEDLINE, CINAHL, Scopus, Embase, ERIC and Google Scholar were searched using Medical Subject Headings and free-text terms combined with Boolean operators. Primary studies, systematic reviews and theoretical papers published in English were included and synthesised narratively. The literature suggests that storytelling-based learning improves retention of pathophysiological and clinical content, strengthens critical thinking and clinical reasoning and supports empathy, communication, professional identity and humanistic caring ability. Digital and simulation-embedded narratives were particularly effective in engaging learners and encouraging reflective practice and narrative pedagogy helped students move from novice thinking toward more expert-like clinical judgement. The evidence is limited, however, by methodological heterogeneity, small samples and inconsistent outcome measures. Overall, storytelling-based learning appears to be a useful adjunct to traditional nursing curricula, linking theory with clinical practice while nurturing the humanistic side of care. Larger, adequately powered trials with standardised outcome measures are needed to establish its long-term effect on clinical competence and patient outcomes.

Keywords: Clinical reasoning, Narrative pedagogy, Nursing education, Nursing students, Professional competence, Storytelling

INTRODUCTION

Nursing education today has to prepare graduates who can combine expanding biomedical knowledge with the interpersonal and ethical demands of bedside care.¹ Lecture-based teaching is an efficient way to transmit facts, but it has been criticised for producing fragmented, decontextualised knowledge that students find hard to transfer to real clinical encounters.¹ Nurse educators have therefore turned increasingly to pedagogies that place learning within authentic human experience and storytelling holds a distinctive place among them.^{2,3}

Storytelling-based learning is the deliberate use of narrative, whether spoken, written or digitally mediated, to convey clinical content, model professional reasoning and evoke the lived experience of illness.² Narrative pedagogy emerged in nursing education as an interpretive alternative to behaviourist curricula. It holds that knowing arises from interpreting the stories shared among students, teachers and clinicians, not from the one-way transmission of facts.¹ The approach draws on a wider intellectual tradition that treats narrative as a fundamental way in which people organise experience and construct meaning.⁴

Two learning theories offer a coherent rationale for storytelling-based learning in health professions curricula. Kolb's experiential learning cycle proposes that durable learning arises from the interplay of concrete experience, reflective observation, abstract conceptualisation and active experimentation and narrative case material can approximate this cycle even without direct patient contact.⁵ Mezirow's transformative learning theory adds that disorienting or emotionally resonant narratives can lead learners to examine and revise their assumptions about illness, patients and their own professional role.⁶

Interest in storytelling has grown alongside digital tools, which have given rise to digital storytelling, that is, short first-person multimedia narratives, as a distinct teaching format in health professions education.⁷ Reviews of this literature report that a large share of digital storytelling research has been carried out in undergraduate nursing programmes, which fits the discipline's long-standing emphasis on lived experience and reflective practice.⁷ Storytelling has also been used in clinical placement education to help students work through emotionally charged encounters with patients, families and interdisciplinary teams.⁸

Despite this growing body of work, the evidence on storytelling-based learning is scattered across disciplines, formats and outcome measures, which range from disease-specific knowledge retention to clinical reasoning, empathy and professional identity.

This review therefore set out to synthesise the available literature on storytelling-based learning in nursing education, focusing on its reported effects on disease

knowledge, clinical reasoning and professional competence and to identify gaps that need further research.

This article is a narrative literature review informed by recognised frameworks for integrative and scoping synthesis, an approach that suits evidence spanning experimental, qualitative and theoretical designs.⁸

Rather than pooling effect sizes, the review set out to describe the range of storytelling interventions used in nursing education and to synthesise their reported outcomes narratively.

METHODS

A structured search was carried out in PubMed/MEDLINE, CINAHL, Scopus, Embase, ERIC and Google Scholar for literature published between January 2010 and June 2026. Controlled vocabulary (Medical Subject Headings, MeSH) was combined with free-text keywords and Boolean operators to allow for differences in terminology across databases, as summarised in Table 1.

Studies were eligible if they were peer-reviewed, published in English and evaluated storytelling, narrative pedagogy or digital storytelling among nursing, midwifery or closely related health-profession students and if they reported outcomes related to knowledge, clinical reasoning, competence or related constructs such as empathy and professional identity.⁷

Conference abstracts without accessible full text, purely anecdotal opinion pieces and studies reporting only patient-level rather than student-level outcomes were excluded.

Titles and abstracts identified in the search were screened for relevance and potentially eligible articles were then assessed in full against the inclusion criteria. For each included study, the data extracted were author and year, country, study design, sample size, a description of the storytelling intervention, the comparator where applicable and the outcomes reported.

Because the included designs ranged from randomised and quasi-experimental trials to qualitative and mixed-methods studies, a formal risk-of-bias assessment was not undertaken. Methodological features such as sample size, use of a comparison group and outcome measurement tools were noted instead, to put the strength of each study's findings in context, in line with prior integrative reviews in this field.⁸

Study selection

The search and screening yielded systematic and integrative reviews, randomised and quasi-experimental trials, qualitative studies and theoretical or descriptive papers on storytelling-based learning, from countries

including the United Kingdom, China, Iran, Taiwan, South Africa, Japan, Australia and Canada.⁷ Digital storytelling has been studied mainly within undergraduate nursing curricula, more than in other health professions.⁷

Characteristics of included studies

Table 2 summarises the design, sample, intervention and key outcomes of representative studies included in this review. The studies show how varied storytelling formats are, from live oral narrative and reflective writing to digital video and interactive web-based stories and they cover both pre-registration nursing and midwifery education.

Effect on disease knowledge

Several studies report that narrative formats improve the acquisition and retention of disease-specific content compared with conventional instruction. In a quasi-experimental comparison, digital storytelling built into an oncology curriculum produced a significantly greater post-test improvement than routine teaching, which points to a measurable knowledge benefit alongside gains in reasoning.¹⁰

A systematic review of simulation-based learning, which often uses narrative patient scenarios, likewise found improvements in students' knowledge and skill acquisition in most of the included studies.¹⁵ A broader systematic review of digital storytelling in health professions education found that most studies reported positive learning-level outcomes, with undergraduate nursing the largest single setting.⁷

Effect on clinical reasoning and critical thinking

Narrative-based teaching is consistently associated with gains in clinical thinking and reasoning. In a cluster-randomised trial of biweekly narrative teaching sessions that combined storytelling, role-play and reflective writing, vocational nursing interns in the intervention group scored significantly higher on clinical thinking and core competency than those receiving standard apprenticeship training.⁹ A mixed-methods study used an outcome-present state test model, which combines patient narrative with structured reasoning and reported improved open-mindedness, a core dimension of critical-thinking disposition, among psychiatric nursing students.¹³

Related approaches built on dialogue and reflection, such as Socratic inquiry and argumentation, have also produced statistically significant improvements in most domains of a validated critical-thinking rubric.¹⁴

This fits the wider view that clinical reasoning is a recursive cognitive process that depends on knowledge, experience and structured teaching strategies, with narrative and case-based approaches forming an important part.¹⁹ Simulation using structured clinical-judgment

models has produced similar gains in nursing students' clinical reasoning, which reinforces the value of narrative, case-anchored formats over content delivered in the abstract.²⁰

Effect on professional competence, empathy and humanistic care

Beyond cognitive outcomes, storytelling-based learning is repeatedly linked to the humanistic side of nursing competence. A large quasi-experimental study of narrative pedagogy in a paediatric nursing curriculum found significantly higher scores on a validated caring-ability inventory among students who received narrative teaching and qualitative accounts described deeper empathy toward hospitalised children.¹¹

Similarly, a narrative-pedagogy death-education module within a palliative care course improved nursing students' death attitudes, coping and attitudes toward caring for dying patients.¹² These findings agree with evidence that structured empathy education, in which narrative and perspective-taking exercises are a core component, is generally effective in undergraduate nursing curricula.²¹

Storytelling has also been linked to professional identity formation, as nursing students expressed a wish to have their own stories and lived experiences recognised as part of what makes a nurse.²²

Engagement, satisfaction and implementation considerations

Nurse educators describe storytelling, in qualitative accounts, as an engaging and memorable teaching strategy that turns abstract course content into vivid, retrievable clinical images.¹⁶ Web-based interactive storytelling introduced into pre-registration midwifery education has similarly been reported to increase student engagement with complex curricular content.¹⁷ Earlier work that used digital storytelling to prepare students for the emotional realities of clinical placement found that it helped soften the so-called shock of reality that students meet when moving from the classroom to clinical settings.²³

A descriptive qualitative study also identified several practical reasons why educators adopt digital stories, including their ability to condense complex narratives into accessible, reusable teaching resources.²⁴ At the same time, reviews caution that research on digital storytelling in health professions education is still at an early stage, with relatively few rigorous empirical studies given its growing popularity.²⁵

Comparison with other active-learning approaches, such as problem-based learning for evidence-based practice, suggests that narrative and case-anchored strategies belong to a wider move away from passive, content-transmission models of nursing education.²⁶

Table 1: MeSH term and keyword search strategy.

Concepts	MeSH term(s)	Free-text / keyword terms	Boolean operator
Teaching method	"Teaching"(Mesh); "Problem-Based Learning"(Mesh); "Simulation Training"(Mesh)	storytelling; narrative pedagogy; digital storytelling; narrative-based teaching; case narrative	OR
Learner population	"Education, Nursing"(Mesh); "Students, Nursing"(Mesh); "Education, Nursing, Baccalaureate"(Mesh)	nursing students; undergraduate nursing; nurse education; nursing curriculum	OR
Knowledge outcome	"Health Knowledge, Attitudes, Practice"(Mesh); "Educational Measurement"(Mesh)	disease knowledge; pathophysiology knowledge; knowledge retention; academic achievement	OR
Reasoning outcome	"Clinical Reasoning"(Mesh); "Thinking"(Mesh); "Problem Solving"(Mesh); "Clinical Competence"(Mesh)	clinical reasoning; critical thinking; clinical judgment; decision making	OR
Professional competence	"Professional Competence"(Mesh); "Empathy"(Mesh); "Professionalism"(Mesh)	professional competence; empathy; caring ability; professional identity; communication skills	OR

Table 2: Characteristics of representative included studies.

Author, Year	Country	Design	Sample	Intervention	Key outcomes
Moreau et al⁷, 2018	Canada (review)	Systematic review	16 HPE studies	Digital storytelling across health professions	Learning and behaviour-level gains; nursing was the most common context
Timpani et al⁸, 2021	Australia (review)	Integrative review	13 international papers	Storytelling during clinical placement	Improved student–patient, student–RN and student–educator communication
Xiao et al⁹, 2025	China	Cluster-randomised trial	n=82 interns	Biweekly narrative teaching: storytelling, role-play, reflective writing	Higher professional identity and core competency scores (P < 0.001)
Zarei et al¹⁰, 2021	Iran	Quasi-experimental	n=32 students	Digital storytelling in oncology curriculum	Significant post-test gain in critical-thinking scores vs control
Liu et al¹¹, 2023	China	Quasi-experimental, mixed-methods	n=588 students	Narrative pedagogy in paediatric nursing course	Higher Caring Ability Inventory scores; richer qualitative reflection
Zhu et al¹², 2023	China	Pre–post quasi-experimental	n=60 students	Narrative pedagogy death-education module	Improved death attitude, coping and FATCOD scores
Ma et al¹³, 2023	Taiwan	Mixed-methods	n=19 students	OPT clinical-reasoning/narrative model in psychiatry practicum	Increased open-mindedness dimension of critical thinking
Malape et al¹⁴, 2025	South Africa	Quasi-experimental pretest–posttest	n=32 students	Socratic inquiry, reflection and argumentation	Significant gains in 5 of 6 critical-thinking domains
Alharbi et al¹⁵, 2024	UK/Saudi Arabia (review)	Systematic review	33 studies	Simulation-based learning (narrative clinical scenarios)	Improved knowledge and skill acquisition across studies
Attenborough & Abbott¹⁶, 2020	United Kingdom	Qualitative study	Nurse lecturers	Storytelling as a teaching strategy	Lecturers viewed storytelling as engaging and memorable
Scamell & Hanley¹⁷, 2017	United Kingdom	Educational innovation study	Midwifery students	Web-based interactive storytelling	Enhanced engagement in pre-registration midwifery curriculum
Nojima et al¹⁸, 2025	Japan (review)	Scoping review	21 studies	Simulation-based learning incl. narrative scenarios	Positive effect on intrinsic motivation and self-efficacy

DISCUSSION

Overall, the reviewed studies suggest that storytelling-based learning, in oral, written and digital forms, has a consistent influence on several nursing student outcomes: disease knowledge, clinical reasoning and the humanistic and professional aspects of competence. This fits the theoretical premise that narrative lets learners meet clinical content as it is actually lived, not as an abstract list of facts and so supports both cognitive retention and affective engagement.⁴

The apparent benefit for clinical reasoning matters especially because reasoning is central to safe nursing practice. Narrative case material seems to work as a scaffold on which students can practise the cognitive moves of noticing, interpreting and responding that make up clinical judgement, echoing Benner's account of the shift from novice rule-following to more intuitive, experience-based expertise.³ Kolb's experiential learning cycle offers a likely explanation, since a well-constructed clinical narrative lets students take part vicariously in concrete experience and reflective observation before direct patient contact is possible.⁵

The consistent gains in empathy, caring ability and professional identity across the reviewed studies suggest that storytelling-based learning may suit curricular areas such as paediatric, palliative and mental health nursing, where humanistic engagement is hard to teach through procedural instruction alone.¹¹ This is consistent with transformative learning theory, in which emotionally resonant narratives can unsettle taken-for-granted assumptions and prompt deeper reflection on one's professional role.⁶

The evidence base does have clear limitations. Many of the included studies used small, single-site samples and quasi-experimental rather than randomised designs, which limits causal inference.¹⁴ Outcome measures varied widely, from validated psychometric instruments to bespoke satisfaction surveys, which makes direct comparison and any quantitative synthesis difficult.²⁵ In addition, most digital storytelling research so far has focused on short, single-module interventions, so the durability of knowledge and competence gains and whether they transfer to actual clinical performance, has not been adequately examined.⁷

In practical terms, storytelling is best positioned as a complement to, not a replacement for, other evidence-based active-learning strategies such as simulation and problem-based learning, with which it shares the aims of contextualised, learner-centred instruction.¹⁵ Faculty development in narrative construction and facilitation, together with validated instruments to measure knowledge, reasoning and competence, would strengthen both the practice and the evidence base of storytelling-based learning.

CONCLUSION

Storytelling-based learning, including narrative pedagogy and its digital variants, is associated with meaningful improvements in nursing students' disease knowledge, clinical reasoning and professional competence, along with gains in empathy, communication and professional identity. The evidence is promising but methodologically heterogeneous and it comes mostly from short-term, small-scale evaluations. Larger, adequately powered trials with standardised outcome measures and longer follow-up are needed to confirm how durable these effects are and to clarify how storytelling can best be integrated into nursing curricula alongside simulation, problem-based learning and other established approaches.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: Not required

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Cite this article as: Nirmala M, Sreerenjini B, Roselin Myvizhi JE, Barren JJ, Thakur P, Tippesh BY et al. Storytelling-based learning in nursing education: enhancing disease knowledge, clinical reasoning and professional competence among nursing students: a narrative review. *Int J Res Med Sci* 2026;14:4960-5.