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Impact of a narrative empathy transformative teaching model on caring ability toward oncology patients among traditional Chinese medicine nursing interns: A pre-post educational intervention study

Shuang Xu¹, Li Zhang¹, Weiye Chen¹, Li Ning², Qinqin Li¹, Mengying Li^{1,*}

¹ Hangzhou Fuyang Hospital of TCM Orthopedics and Traumatology, Hangzhou 311400, China

² Nursing Department, Hangzhou First People's Hospital, Hangzhou 310006, China

* Corresponding author: Mengying Li, limengying1982@163.com

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Abstract: Empathy and caring ability are essential competencies in psycho-oncology nursing, yet they are often insufficiently supported during clinical training. Narrative based and empathy oriented educational approaches may enhance humanistic competence, but evidence within Traditional Chinese Medicine nursing education remains limited. A quantitative pre-post intervention study was conducted among 60 Traditional Chinese Medicine nursing interns who participated in a 4-week narrative empathy-based transformative teaching program during clinical internship training. Empathy was measured using the Jefferson Scale of Empathy Student Version, caring ability using the Caring Ability Inventory, and clinical reflective ability was evaluated descriptively post-intervention. Empathy scores increased from 69.50 ± 2.95 to 86.50 ± 2.95 ($p < 0.001$), representing a 24.46% improvement. Caring ability scores increased from 74.48 ± 2.95 to 90.48 ± 2.95 ($p < 0.001$), corresponding to a 21.48% improvement. Most interns (98.3%) demonstrated good or excellent clinical reflective ability following the intervention. A narrative empathy-based transformative teaching program may effectively enhance empathy, caring ability, and reflective competence among Traditional Chinese Medicine nursing interns in oncology settings, supporting its integration into psycho-oncology-oriented nursing education.

Keywords: empathy; caring ability; psycho-oncology; oncology nursing care; psychosocial support; transformative teaching; clinical reflection

1. Introduction

Advances in oncology have significantly improved survival rates, which has shifted focus towards the psychosocial dimensions of cancer care. Patients with cancer commonly face emotional distress, existential uncertainty, and shifts in personal identity. These aspects necessitate sensitive and sustained humanistic support from healthcare professionals. Empathy and caring ability, recognized as core competencies in psycho-oncology, underpin effective communication, psychological support, and patient-centred care [1,2]. Nurses are integral to this framework, frequently serving as the primary caregivers who address the emotional and psychosocial needs of oncology patients. However, studies indicate that nursing trainees often struggle with empathetic engagement in high-stress clinical settings, such as oncology wards, due to the pressures of clinical workloads and emotional fatigue [3,4]. The emotional toll on oncology nurses can lead to a gradual shift toward task-oriented practices, compromising the quality of empathic and reflective communication. Barriers such as insufficient communication training and high

emotional demands exacerbate this issue [5,6]. Many oncology nurses report a greater need for education in communication strategies to better support their patients and families [4,7].

In response to these challenges, narrative medicine and empathy-focused educational strategies have gained traction within health professions education. Narrative medicine emphasizes the importance of attentive listening to patients' stories, promoting the understanding of disease as both a biomedical and human experience [8,9]. Research has shown that integrating empathy-focused training into nursing curricula can significantly enhance healthcare trainees' emotional awareness and relational competencies [1,2]. Such training aligns with psycho-oncology's goals of understanding and supporting patients' subjective experiences and mental well-being. Transformative teaching approaches play a crucial role in this educational paradigm shift. By employing narrative and empathy-based methods, students engage in critical reflection and meaning-making, which fosters profound changes in their values and professional identities beyond mere technical skills acquisition [8]. Transformative learning theory posits that critical reflection enhances the depth of engagement with patients' experiences, thereby facilitating long-term shifts in how trainees view their roles in patient care [10].

Within the context of Traditional Chinese Medicine (TCM) nursing education, the integration of narrative and empathy-based teaching holds particular relevance. TCM emphasizes a holistic view of health, recognizing the interconnection between physical symptoms, emotional states, and environmental factors [11]. This holistic perspective resonates strongly with narrative medicine's focus on patients' lived experiences and psycho-oncology's concern with emotional and existential dimensions of illness [1]. However, empirical studies examining structured narrative empathy teaching interventions among TCM nursing interns, particularly in oncology settings, remain limited [12]. Existing educational research in nursing has often focused on either empathy or caring ability as isolated outcomes, with fewer studies examining their concurrent development through integrated teaching interventions [3]. Moreover, while reflective practice is widely recognized as an effective mechanism for consolidating empathic and caring competencies, it is not always systematically incorporated into clinical training or formally evaluated in educational research [13]. The lack of empirical evidence in integrating narrative empathy training within TCM highlights the necessity for further investigation in this area. Studies indicate that programs targeting empathy in nursing can strengthen communication skills and emotional understanding among healthcare professionals, reinforcing the importance of narrative and reflective practices in nursing education [14].

The novelty of the present study lies in its integrative educational approach and its explicit orientation toward psycho-oncology-focused nursing training. By operationalizing narrative medicine and empathy-based communication within a structured transformative teaching model tailored to oncology care, the study moves beyond conceptual discussion to the empirical evaluation of educational outcomes [9]. Incorporating narrative listening, reflective engagement, and empathic response training into routine clinical internships provides practical evidence for the feasibility of narrative empathy teaching in real-world oncology education settings [11]. The

intervention is situated within the framework of TCM nursing education, which emphasizes holistic care and emotional regulation, yet has rarely been empirically examined concerning narrative and empathic clinical communication for oncology patients [3]. By bridging Eastern holistic nursing philosophy with contemporary psycho-oncology and narrative medicine paradigms, the study offers a culturally grounded model of humanistic oncology education. This approach not only examines empathy and caring ability as interconnected but distinct educational outcomes but also addresses a limitation of prior nursing education research that has often considered these constructs in isolation [15].

Against this background, the present study aimed to evaluate the impact of a narrative empathy-based transformative teaching program on empathy and caring ability among TCM nursing interns engaged in oncology-related clinical training. Utilizing a quantitative pre-post design, the study assessed changes in empathy and caring ability following a 4-week educational intervention while descriptively examining post-intervention clinical reflective ability [5]. This situational focus builds on previous findings that suggest formal narrative medicine training can enhance empathy among healthcare providers [11,12]. By embedding a narrative and empathic framework within nursing internships, this study contributes empirical evidence to psycho-oncology-oriented nursing education and informs future development of humanistic training strategies in oncology care [1]. Such training not only holds potential for improving clinical outcomes but also for mitigating challenges faced by oncology nurses, such as compassion fatigue and burnout, thereby supporting their emotional well-being [14].

2. Literature review

2.1. Psycho oncology and the need for humanistic competence in cancer care

Psycho-oncology recognizes that cancer is not only a biological illness but also a complex psychosocial issue that affects patients' identities, meaning in life, family dynamics, and future outlooks. Recent literature indicates that patients undergoing cancer treatment experience multiple forms of distress, including anxiety stemming from diagnosis, uncertainties about treatment outcomes, side effects, and fears of disease recurrence, which can persist throughout treatment and survivorship [16–18]. The quality of communication between clinicians and patients is crucial in influencing psychological adaptation, building trust, enhancing perceived support, and improving overall satisfaction with care [19,20]. Evidence shows that consistent bedside interactions by nursing staff that focus on effective symptom-related discussions enhance their capacity for empathy and compassion, critical components of high-quality psycho-oncology care [7,21].

In oncology settings, the importance of humanistic competence is essential for effective clinical practice. Engaging patients with empathy help uncover psychosocial issues, reduces feelings of isolation, and significantly enhances the treatment experience, especially during challenging times [22,23]. Conversely, communication approaches that lack emotional warmth or are overly procedural can

hinder comprehensive psychosocial assessments and lead to unmet supportive care needs [4,24]. This underscores the necessity of fostering relational competencies within professional training programs for nursing interns, who are shaping their clinical practices and professional identities in demanding environments [25,26].

To tackle these communication and care gaps, research by Wittenberg et al. highlights the critical need for tailored communication training among oncology nurses throughout the cancer continuum, asserting that such training can improve empathetic engagement [27,28]. Programs that integrate communication skills training have been shown to enhance nurses' abilities to manage discussions concerning emotional and psychosocial factors that significantly impact patient outcomes [20,29]. Furthermore, developing standard training that includes techniques such as role-play and experiential learning has demonstrated effectiveness in nurturing empathy in nursing curricula [30,31]. This approach aligns with calls from nursing educators to incorporate communication skills as fundamental components of nursing education, equipping future nurses with the necessary tools for fostering genuinely humanistic care [32].

2.2. Empathy in health professions education and clinical training

Empathy is commonly conceptualized as a multidimensional construct that includes cognitive perspective taking, emotional attunement, and the capacity to communicate understanding in a way that is helpful to the patient [12,33,34]. In health professions education, empathy is often measured using validated self-report instruments, with the Jefferson Scale of Empathy being among the most widely used across disciplines and training stages [33,34]. A consistent concern in the literature is that empathy may stagnate or decline during periods of clinical training, potentially due to time pressure, emotional overload, and exposure to suffering without adequate reflective support [35,36]. This pattern has been reported in multiple contexts, motivating the development of educational interventions aimed at preserving or strengthening empathic orientation among trainees [12,37].

Educational programs targeting empathy commonly include communication skills training, simulation with standardized patients, reflective writing, and narrative-based activities [2,11]. Evidence suggests that empathy is not fixed and can be enhanced through structured training, especially when interventions emphasize reflection and meaning-making rather than short technical scripts [1,2,38]. However, heterogeneity in intervention content, intensity, duration, and evaluation methods has made it challenging to draw uniform conclusions across studies. For many interventions, improvements are modest, and long-term retention remains uncertain, highlighting the need for context-specific models that align educational content with clinical realities [30,39].

2.3. Narrative medicine as an educational pathway for empathic practice

Narrative medicine is grounded in the view that clinical care is fundamentally interpretive and relational, requiring clinicians to recognize and respond to the stories patients tell about illness, suffering, and identity [9,12]. Through narrative competence, learners cultivate skills in attentive listening, interpretation, and ethical

responsiveness, which can strengthen empathic engagement and improve clinician-patient relationships [11,40]. In oncology, narrative approaches may be particularly relevant because cancer narratives often involve complex emotions, existential meaning, and social disruption that extend beyond clinical symptoms [12].

Narrative-based education can take many forms, including reflective writing, close reading of patient accounts, discussion of illness narratives, and guided narrative interviews. These activities aim to foster humility, perspective taking, and emotional awareness while creating structured space for learners to process difficult experiences [11,15,41]. Studies in nursing and medical education have reported that narrative-based interventions can improve empathic understanding, communication confidence, and reflective capacity, although outcomes depend on the quality of facilitation and the integration of narrative learning into real clinical encounters [2,40]. For interns, narrative approaches may help bridge the gap between technical task performance and meaningful engagement with the patient as a person, which is central to psycho-oncology aligned care [9,40].

2.4. Transformative teaching and professional identity formation

Transformative learning theory proposes that deep learning involves shifts in how individuals interpret experience, including changes in beliefs, values, and self-understanding [38,42]. In clinical education, transformative teaching seeks to move beyond knowledge transmission toward reflective reconsideration of professional roles and relational responsibilities. This is particularly relevant in settings where learners may adopt task-driven identities under pressure, potentially at the expense of patient-centred engagement [35,38,42].

Transformative teaching in healthcare typically emphasizes critical reflection, dialogic learning, and experiential meaning-making. These elements can provide a structured mechanism for integrating narrative medicine into clinical training. Narrative listening and reflective discussion can function as triggers for perspective change, while guided facilitation helps learners reconstruct clinical experiences into more empathic professional identities [43,44]. Educational research suggests that interventions combining experiential exposure with facilitated reflection are more likely to produce sustained attitudinal shifts than brief didactic instruction alone [1,38]. This conceptual foundation supports the use of a narrative empathy transformative model as an intervention strategy for oncology-oriented nursing interns [37,44].

2.5. Caring ability and the caring ability inventory in nursing education

Caring is a core professional value in nursing, encompassing emotional presence, ethical commitment, and relational behaviours that communicate respect and support [11,15]. Caring ability can be conceptualized as a measurable competency reflecting the capacity to recognize patient needs and respond with patience, responsibility, and intentional relational action [1,36]. In educational research, caring is often positioned as both an affective disposition and a learned clinical skill that can be strengthened through training environments that promote reflection and relational practice [30,43].

The Caring Ability Inventory has been used to assess caring capacity in nursing students and practitioners across diverse contexts [43]. While the instrument includes conceptual dimensions, many applied studies report total scores as an overall index of caring competence, especially when item-level data are not accessible or when study aims focus on global change rather than subcomponents [2,39,45]. In oncology-related care, caring ability is particularly relevant because patients often rely on nursing staff for emotional support, symptom-related guidance, and sustained interpersonal contact throughout treatment and recovery [12,41]. Interventions that increase both empathy and caring ability may, therefore, have meaningful implications for psycho-oncology aligned nursing practice [1,15].

2.6. Integrating traditional Chinese medicine nursing with narrative empathy approaches

Traditional Chinese Medicine nursing emphasizes holism, pattern differentiation, emotional regulation, and individualized care, often viewing physical symptoms and emotional states as mutually influential [9]. This orientation parallels psycho-oncology perspectives that treat emotional distress as intertwined with symptom burden and illness meaning. It also aligns with narrative medicine, which privileges the subjective experience of illness and encourages clinicians to listen for the personal and cultural meanings embedded in patient narratives [12,46]. Despite this conceptual compatibility, empirical work integrating TCM nursing education with structured narrative and empathy training remains limited. Many educational efforts emphasize theoretical holism without operationalizing it into communication behaviours that can be taught, practiced, and evaluated in modern oncology contexts [9,11]. An intervention that translates holistic assessment principles into narrative listening and empathic response strategies may, therefore, offer a culturally grounded model for strengthening humanistic competence. This integration can also support institutional training goals by providing a coherent bridge between TCM philosophy and contemporary psycho-oncology communication expectations [9,39].

2.7. Reflection as a mechanism linking education to clinical behaviour

Reflective practice is commonly described as a process through which clinicians examine experiences, emotions, and assumptions to improve professional judgment and relational responsiveness [38,47]. In nursing education, reflection is often treated as a mechanism for consolidating empathic learning and for supporting professional identity formation, especially in emotionally demanding settings [11,35]. In oncology training, reflective competence may be particularly important because repeated exposure to suffering can lead to emotional withdrawal if learners lack structured support for meaning-making and emotional processing [12,47]. Educational interventions that incorporate reflection may increase learners' capacity to recognize patient distress signals, respond empathically, and maintain caring engagement over time. Reflection can be measured in multiple ways, including qualitative analysis of reflective writing and structured rubric-based evaluation by instructors [1,15]. When item-level qualitative data are not available, descriptive ratings of reflective performance can still offer an applied indicator of whether

empathic learning is translating into clinical interactions [37,44]. In educational intervention studies, such applied outcomes complement self-report measures by capturing aspects of clinical integration [30,40,45].

2.8. Summary of the evidence base and rationale for the present study

Collectively, existing evidence supports the importance of empathy, caring ability, and reflective practice in oncology-related care and suggests that narrative and transformative educational approaches may enhance these competencies. However, gaps remain regarding the integration of narrative empathy teaching within the training context of Traditional Chinese Medicine nursing interns and the empirical evaluation of concurrent changes in empathy and caring ability within a single program [9,37,44]. Building on psycho-oncology principles and narrative medicine theory, the present study evaluates a structured narrative empathy transformative teaching intervention delivered during clinical internship training and examines changes in empathy and caring ability using validated measures, with post-intervention reflective ability described as an applied practice-oriented outcome [36,37,45].

3. Methods

3.1. Study design and setting

A quantitative pre post intervention study was conducted to evaluate the impact of a narrative empathy based transformative teaching program on empathy and caring ability among nursing interns. The study was implemented through an institutional collaborative teaching model involving nursing education units and affiliated clinical oncology training settings. Changes in outcome measures were assessed within participants before and after completion of the educational intervention.

3.2. Participants

Participants were Traditional Chinese Medicine nursing interns enrolled in the 2024 2025 clinical internship program. A total of 60 interns who completed the full intervention and both pre-intervention and post-intervention assessments were included in the final analysis. Interns represented diverse educational backgrounds, including diploma, undergraduate, and bridging bachelor programs, and included both male and female participants. All interns completed an extended clinical internship period, ensuring adequate exposure to oncology-related patient care contexts.

3.3. Educational intervention

The intervention consisted of a 4-week narrative empathy transformative teaching program integrated into routine clinical internship training. The program was delivered under the guidance of experienced clinical instructors and designed to enhance empathic understanding and humanistic care competencies in oncology settings. Core components of the intervention included structured workshops on

empathic communication, guided narrative listening exercises, scenario-based simulations, and reflective discussions grounded in oncology patient narratives. Interns were encouraged to engage with patients' descriptions of illness experience, treatment burden, emotional responses, and psychosocial adjustment. Instruction emphasized the translation of Traditional Chinese Medicine holistic assessment principles into empathic listening, reflective understanding, and individualized patient communication strategies.

3.4. Outcome measures

Empathy was assessed using the Jefferson Scale of Empathy, Student Version (JSE-S), a validated self-report instrument widely used to measure empathic orientation among healthcare trainees [48]. Caring ability was assessed using the Caring Ability Inventory (CAI), developed [49], which evaluates overall caring capacity relevant to clinical nursing practice. In the present study, analyses were conducted using total CAI scores, as item-level or subscale data were not available. Clinical reflective ability was assessed post-intervention as an ordered categorical outcome based on instructor evaluation during the internship period. Reflective performance was classified into predefined levels reflecting the interns' ability to integrate empathic understanding into clinical interactions.

3.5. Statistical analysis

Descriptive statistics were used to summarize participant characteristics and outcome measures. Continuous variables are reported as mean $\pm$ standard deviation, and categorical variables are presented as frequencies and percentages. Changes in empathy and caring ability scores before and after the intervention were examined using within-subject paired comparisons appropriate for repeated measurements. Statistical significance was defined as $p < 0.05$; where p values were substantially smaller, results are reported as $p < 0.001$. Analyses were restricted to total scale scores to ensure methodological consistency with the available dataset. Clinical reflective ability was analysed descriptively due to the absence of pre-intervention baseline ratings, and no inferential statistical testing was applied to this outcome. All statistical analyses were performed using IBM SPSS Statistics (version 25.0; IBM Corp., Armonk, NY, USA).

4. Results

4.1. Participant characteristics

A total of 60 Traditional Chinese Medicine (TCM) nursing interns completed the 4-week narrative-empathy transformative teaching program and both pre-intervention and post-intervention assessments. The majority of participants were female (86.7%), and most were enrolled in undergraduate nursing programs (73.3%). The mean duration of clinical internship was 4.23 ± 1.01 weeks, indicating sustained exposure to clinical practice, including oncology-related care contexts were summarized in **Table 1**.

Table 1. Demographic and educational characteristics of Traditional Chinese Medicine nursing interns participating in the narrative empathy transformative teaching program.

Characteristic	Category	<i>n</i>	Percentage (%)
Sex	Female	52	86.7
Educational level	Undergraduate	44	73.3
	Associate (diploma)	9	15
	Top-up bachelor	4	6.7
	Vocational to bachelor	3	5
	Mean $\pm$ SD (weeks)	4.23 $\pm$ 1.01	—
Internship duration	Male	8	13.3

4.2. Changes in empathy and caring ability

Paired pre- and post-intervention analyses demonstrated statistically significant improvements in both empathy and caring ability following participation in the narrative–empathy transformative teaching program. Empathy, measured using the Jefferson Scale of Empathy–Student Version (JSE-S), increased from a pre-intervention mean score of 69.50 ± 2.95 to a post-intervention mean score of 86.50 ± 2.95 , representing a mean increase of 17.00 points ($p < 0.001$). This change corresponds to a relative improvement of 24.46% compared with baseline values. Caring ability, assessed using the Caring Ability Inventory (CAI), also showed a significant increase, rising from 74.48 ± 2.95 before the intervention to 90.48 ± 2.95 after completion of the program. The mean increase was 16.00 points, corresponding to a 21.48% improvement ($p < 0.001$). Pre- and post-intervention scores for both outcome measures are presented in **Table 2** and illustrated in **Figure 1**.

Table 2. Comparison of empathy and caring ability scores before and after the narrative empathy transformative teaching intervention.

Outcome measure	Pre-intervention (M $\pm$ SD)	Post-intervention (M $\pm$ SD)	Mean difference	<i>p</i> -value*
JSE-S	69.50 $\pm$ 2.95	86.50 $\pm$ 2.95	+17.00	<0.001
CAI total score	74.48 $\pm$ 2.95	90.48 $\pm$ 2.95	+16.00	<0.001

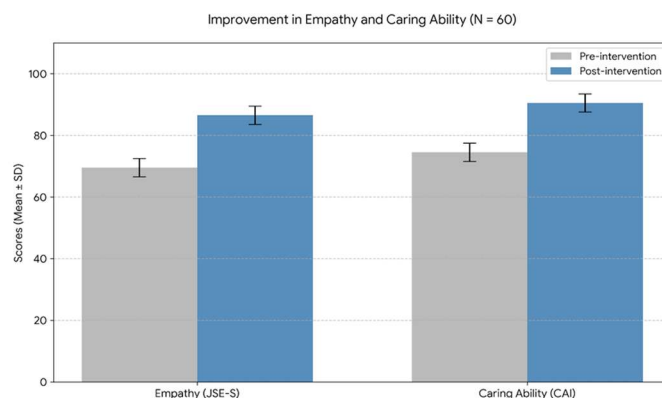


Figure 1. Changes in empathy and caring ability scores before and after the narrative empathy transformative teaching intervention among Traditional Chinese Medicine nursing interns.

4.4. Magnitude of improvement across primary outcomes

To further characterize the educational impact of the intervention, absolute and percentage changes in empathy and caring ability scores were calculated in **Table 3**. Empathy demonstrated the largest relative gain, followed closely by caring ability. These findings indicate a substantial and educationally meaningful effect of the intervention on both humanistic competencies.

Table 3. Absolute and percentage changes in empathy and caring ability scores following the intervention.

Outcome	Absolute increase (points)	Percentage change (%)
Empathy (JSE-S)	17	24.46%
Caring Ability (CAI)	16	21.48%

4.5. Clinical reflective ability

Post-intervention clinical reflective ability was evaluated descriptively using instructor-based ratings. As shown in **Figure 2**, nearly all interns (98.3%) achieved a rating of Good or Excellent. Specifically, 81.7% were rated as Good and 16.7% as Excellent. Only one participant (1.7%) was rated at the Pass level, and no participants were rated as Fail. These findings suggest that most interns were able to effectively translate empathic understanding into applied clinical reflection during patient care encounters.

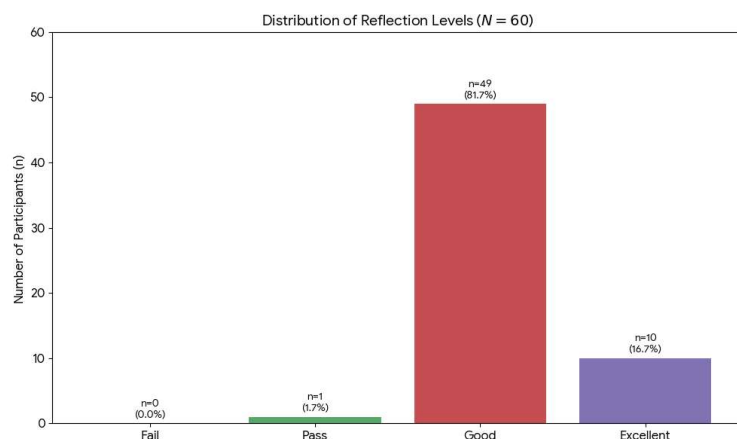


Figure 2. Post-intervention distribution of clinical reflective ability ratings among nursing interns.

4.6. Statistical considerations

The study employed a pre post within-subject design to evaluate changes in empathy and caring ability following a 4-week narrative empathy transformative teaching intervention. Continuous outcome variables, including Jefferson Scale of Empathy Student Version and Caring Ability Inventory total scores, were analysed using paired comparisons appropriate for repeated measurements within the same participants. Given the sample size of 60 nursing interns, the analyses were sufficiently powered to detect meaningful changes in outcome measures. Statistical significance was defined as $p < 0.05$, and results with substantially smaller p values are reported as $p < 0.001$. To avoid overinterpretation and ensure methodological

transparency, only total scale scores were analysed, as item-level or subscale data were not available. Clinical reflective ability was evaluated descriptively due to the absence of pre-intervention baseline ratings, and no inferential testing was applied to this outcome.

5. Discussion

This study evaluated the impact of a narrative empathy-based transformative teaching program on empathy, caring ability, and clinical reflective performance among Traditional Chinese Medicine nursing interns engaged in oncology-related clinical training. Using a pre-post design with a cohort of 60 participants, the findings demonstrated significant and meaningful improvements in both empathy and caring ability following the 4-week intervention, accompanied by favourable post-intervention reflective outcomes.

5.1. Enhancement of empathy through narrative empathy transformative teaching

Empathy, as measured by the Jefferson Scale of Empathy Student Version, increased markedly following the intervention, with a relative improvement exceeding 24% compared with baseline levels. This magnitude of change is noteworthy in the context of healthcare education, where empathy scores are often reported to remain stable or decline during clinical training due to workload, emotional fatigue, and task-oriented learning environments [14,50]. The observed increase suggests that structured narrative empathy teaching may counteract these trends by fostering reflective engagement and patient-centred perspective-taking. Narrative-based educational approaches emphasize attentive listening to patients' illness stories, encouraging learners to recognize emotional, social, and existential dimensions of disease [43]. In oncology settings, where patients frequently experience complex psychological distress, such narrative engagement may be particularly important [14]. By embedding narrative listening within a transformative teaching framework, the present intervention likely facilitated deeper cognitive and emotional processing of patient experiences, contributing to the observed enhancement in empathic orientation.

5.2. Improvement in caring ability and humanistic competence

In parallel with empathy gains, caring ability, assessed using the Caring Ability Inventory, demonstrated a substantial increase following the intervention. Caring ability encompasses not only emotional responsiveness but also cognitive understanding and intentional relational behaviour within clinical practice [37]. The improvement observed in this study suggests that narrative empathy teaching may promote broader humanistic competence beyond empathic disposition alone. Previous research has emphasized the close relationship between empathy and caring behaviours in nursing practice, particularly in emotionally demanding clinical contexts such as oncology [50,51]. The concurrent improvement in both constructs observed here supports the notion that empathy-oriented educational interventions can translate into enhanced caring capacity, reinforcing the interconnected nature of

these psychosocial competencies.

5.3. Integration of traditional Chinese medicine holistic principles

An important contextual factor in this study is the integration of Traditional Chinese Medicine (TCM) holistic principles within the narrative empathy teaching model. TCM nursing emphasizes the unity of physical symptoms, emotional states, and environmental influences, aligning conceptually with narrative medicine's focus on the patient's lived experience [17]. This conceptual alignment may have enhanced the cultural and pedagogical coherence of the intervention, facilitating internalization of empathic and caring values among interns. By reframing traditional assessment practices into narrative listening and reflective understanding, the intervention may have provided a culturally resonant pathway for translating theoretical humanistic concepts into practical clinical behaviours. Such integration may be particularly relevant in educational settings where biomedical and holistic paradigms coexist [52].

5.4. Clinical reflective ability as an applied outcome

Instructor-rated clinical reflective ability further indicated favourable outcomes following the intervention, with the majority of interns demonstrating good or excellent reflective performance. Reflection is widely regarded as a key mechanism through which empathy and caring competencies are consolidated and sustained in clinical practice [50]. Although reflective ability was assessed descriptively in this study, the distribution of post-intervention ratings suggests effective application of empathic understanding during patient interactions. The use of reflective activities, including narrative discussion and guided reflection, has been shown to support professional identity formation and ethical sensitivity among healthcare trainees [53]. In oncology contexts, reflective competence may be particularly important for managing emotional complexity and preventing disengagement or burnout [54].

5.5. Educational implications for psycho-oncology training

From a psycho-oncological perspective, the findings underscore the potential value of integrating narrative empathy-based transformative teaching into nursing education curricula. Psycho-oncology emphasizes not only patient psychological outcomes but also the emotional competencies of healthcare providers, recognizing that empathic and caring interactions are central to effective psychosocial support [37]. Educational interventions targeting these competencies may therefore represent a meaningful upstream strategy for enhancing the quality of oncology care. Importantly, the present study demonstrates that such interventions can be implemented within routine clinical internship structures through institutional collaboration, without requiring extensive additional resources. This practical feasibility enhances the relevance of the findings for nursing education programs seeking to strengthen humanistic training in oncology settings [55].

5.6. Methodological considerations and interpretation

Several methodological considerations should be noted when interpreting the

findings. The study employed a single-group pre-post design, which limits causal inference and precludes direct comparison with alternative teaching approaches [53]. In addition, analyses were restricted to total scale scores due to data availability, and subscale-level insights into specific empathy or caring dimensions could not be examined [17]. Clinical reflective ability was assessed post-intervention only and descriptively, limiting conclusions regarding change over time. Despite these limitations, the consistency of improvement across primary outcomes and the magnitude of observed changes strengthen confidence in the educational relevance of the intervention. The relatively large sample size for an educational intervention study further supports the robustness of the findings [55].

6. Conclusions

This study demonstrates that a narrative empathy based transformative teaching model is associated with meaningful improvements in empathy and caring ability among Traditional Chinese Medicine nursing interns engaged in oncology-related clinical training. By integrating narrative medicine, reflective practice, and holistic nursing principles within routine internship education, the intervention offers a feasible approach to strengthening humanistic competencies central to psycho-oncology care. The concurrent enhancement of empathy and caring ability, together with favourable post-intervention reflective performance, highlights the potential educational value of narrative empathy approaches for preparing nursing interns to address the psychosocial needs of patients with cancer. Although the findings are derived from a single-group pre post design, they provide empirical support for incorporating structured narrative and empathy-focused teaching into oncology-oriented nursing education. Future research employing controlled study designs and longitudinal follow-up is needed to confirm the sustainability of these effects and to further clarify the role of narrative empathy education in professional development and psycho-oncology practice.

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References

1. Huang Q, Zhao X, Liu M, et al. Role of narrative education in cultivating humanistic care and empathy in nursing students. Research Square. 2023. doi: 10.21203/rs.3.rs-3284130/v1
2. Xue M, Sun H, Xue J, et al. Narrative medicine as a teaching strategy for nursing students to developing professionalism, empathy and humanistic caring ability: A randomized controlled trial. BMC Medical Education. 2023; 23(1): 38. doi: 10.1186/s12909-023-04026-5
3. Taleghani F, Ashouri E, Memarzadeh M, Saburi M. Barriers to empathy-based care: Oncology nurses' perceptions. International Journal of Health Care Quality Assurance. 2018; 31(3): 249–259. doi: 10.1108/IJHCQA-12-2016-0185
4. Wittenberg E, Goldsmith J, Buller H, et al. Communication training: Needs among oncology nurses across the cancer continuum. Clinical Journal of Oncology Nursing. 2019; 23(1) 82–91. doi: 10.1188/19.CJON.82-91
5. Alizadeh M, Yamani N, Taleghani F, et al. Determining the expected competencies for oncology nursing: A needs assessment study. Iranian Journal of Nursing and Midwifery Research. 2018; 23(3): 188. doi: 10.4103/ijnmr.ijnmr_217_16
6. Lelorain S, Brédart A, Dolbeault S, et al. A systematic review of the associations between empathy measures and patient outcomes in cancer care. Psycho-Oncology. 2012; 21(12): 1255–1264. doi: 10.1002/pon.2115
7. Banerjee SC, Manna R, Coyle N, et al. Oncology nurses' communication challenges with patients and families: A qualitative study. Nurse Education in Practice. 2016; 16(1): 193–201. doi: 10.1016/j.nepr.2015.07.007
8. Xiao L, Peng D, Zhong J, et al. Storytelling as a transformative tool: How narrative-based teaching reshapes clinical education outcomes in vocational nursing internships. Frontiers in Medicine. 2025; 12: 1587526. doi: 10.3389/fmed.2025.1587526
9. Cheng J. Development and application of a narrative medicine-based training course to improve health education competency in nursing interns. Research Square. 2025; doi: 10.21203/rs.3.rs-7878405/v1
10. Kannappan SR. Voices from the Frontline: Nurses' insights on end-of-life care through the palliative care value-added course—A qualitative study. Indian Journal of Palliative Care. 2025; 31(4): 363. doi: 10.25259/ijpc_184_2025
11. Zhao J, Xiantao O, Li Q, et al. Role of narrative medicine-based education in cultivating empathy in residents. BMC Medical Education. 2023; 23(1): 124. doi: 10.1186/s12909-023-04096-5
12. Yang N, Xiao H, Cao Y, et al. Does narrative medicine education improve nursing students' empathic abilities and academic achievement? A randomised controlled trial. Journal of International Medical Research. 2018; 46(8): 3306–3317. doi: 10.1177/0300060518781476
13. Zhao Y, Wang X, Zhang Q, et al. Influence of nurses' narrative competence on communication ability with angry patients: The mediating effect of reflection. International Nursing Review. 2024; 72(1): e13067. doi: 10.1111/inr.13067
14. Wu S, Singh-Carlson S, Odell A, et al. Compassion fatigue, burnout, and compassion satisfaction among oncology Nurses in the United States and Canada. Oncology Nursing Forum. 2016; 43(4): E161–E169. doi: 10.1188/16.onf.e161-e169
15. Lina M, Qin G, Yang L. Mediating effects of emotional intelligence on the relationship between empathy and humanistic care ability in nursing students: A cross-sectional descriptive study. Medicine. 2022; 101(46): e31673. doi: 10.1097/md.00000000000031673
16. Banerjee SC, Manna R, Coyle N, et al. The implementation and evaluation of a communication skills training program for oncology nurses. Translational Behavioral Medicine. 2017; 7(3): 615–623. doi: 10.1007/s13142-017-0473-5
17. Kruijver I, Kerkstra A, Bensing J, et al. Communication skills of nurses during interactions with simulated cancer patients. Journal of Advanced Nursing. 2001; 34(6): 772–779. doi: 10.1046/j.1365-2648.2001.01807.x
18. Shaw J, Allison K, Cuddy J, et al. Identifying and responding to anxiety and depression in adult cancer patients: development, acceptability and uptake of an on-line communication skills education program targeting challenging conversations for oncology health professionals. 2021; doi: 10.21203/rs.3.rs-731726/v1
19. Butow P, Price MA, Shaw JM, et al. Clinical pathway for the screening, assessment and management of anxiety and depression in adult cancer patients: Australian guidelines. Psycho-Oncology. 2015; 24(9): 987–1001. doi: 10.1002/pon.3920
20. Shaw J, Allison K, Cuddy J, et al. Development, acceptability and uptake of an on-line communication skills education program targeting challenging conversations for oncology health professionals related to identifying and responding to anxiety and depression. BMC Health Services Research. 2022; 22(1): 132. doi: 10.1186/s12913-022-07521-5

21. Wittenberg-Lyles E, Goldsmith J, Richardson B, et al. The practical nurse. *American Journal of Hospice and Palliative Medicine*[®]. 2012; 30(2): 162–166. doi: 10.1177/1049909112446848
22. Sedaghati Kesbakhi M, Rohani C. Changes in the level of nursing students' empathy during four years education. *Journal of Medical Education*. 2020; 19(2): e107179. doi: 10.5812/jme.107179
23. Kramer D, Chow K, Davis ME, et al. The acknowledge–normalize–partner (ANP) framework: A novel empathic communication tool for oncology nurses. *Palliative and Supportive Care*. 2022; 21(1): 12–19. doi: 10.1017/s1478951522000086
24. Wikström B, Svidén G. Exploring communication skills training in undergraduate nurse education by means of a curriculum. *Nursing Reports*. 2011; 1(1): 7. doi: 10.4081/nursrep.2011.e7
25. Öztürk A, Kaçan H. Compassionate communication levels of nursing students: Predictive role of empathic skills and nursing communication course. *Perspectives in Psychiatric Care*. 2021; 58(1): 248–255. doi: 10.1111/ppc.12954
26. Avci D, Alp Yilmaz F. Association between Turkish clinical nurses' perceptions of individualized care and empathic tendencies. *Perspectives in Psychiatric Care*. 2020; 57(2): 524–530. doi: 10.1111/ppc.12573
27. Chant S, Jenkinson T, Randle J, et al. Communication skills: some problems in nursing education and practice. *Journal of Clinical Nursing*. 2002; 11(1): 12–21. doi: 10.1046/j.1365-2702.2002.00553.x
28. ÖZTÜRK A. The effect of nursing communication training on empathy and communication skills of nursing students: A quasi-experimental study. *OPUS Uluslararası Toplum Araştırmaları Dergisi*. 2021; 18: 1120–1135. doi: 10.26466/opus.888874
29. Macdonald L, Stubbe M, Tester R, et al. Nurse-patient communication in primary care diabetes management: an exploratory study. *BMC Nursing*. 2013; 12(1): 20. doi: 10.1186/1472-6955-12-20
30. Alhassan M. Effect of a 2-day communication skills training on nursing and midwifery students' empathy: A randomised controlled trial. *BMJ Open*. 2019; 9(3): e023666. doi: 10.1136/bmjopen-2018-023666
31. Coyle N, Manna R, Shen M, et al. Discussing death, dying, and end-of-life goals of care: A communication skills training module for oncology nurses. *Clinical Journal of Oncology Nursing*. 2015; 19(6): 697–702. doi: 10.1188/15.cjon.697-702
32. Ak M, Cinar O, Sutçigil L, et al. Communication skills training for emergency nurses. *International Journal of Medical Sciences*. 2011; 8(5): 397–401. doi: 10.7150/ijms.8.39
33. Saeidi S, Reza-Masouleh S, et al. Empathy with patients compared between first and final year nursing students. *Journal of Holistic Nursing and Midwifery*. 2017; 27(1): 79–85. doi: 10.18869/acadpub.hnmj.27.1.79
34. Gallagher P, Moriarty H, Huthwaite M, et al. Challenging some assumptions about empathy. *The Clinical Teacher*. 2017; 14(6): 437–440. doi: 10.1111/tct.12607
35. Son D, Honma M, Pickering J. Bridging the gap in medical education: A qualitative study on the perspectives of Japanese medical students and patients on outcomes-based education. *Cureus*. 2025; 17(10). doi: 10.7759/cureus.95527
36. Dehning S, Girma E, Gasperi S, et al. Comparative cross-sectional study of empathy among first year and final year medical students in Jimma University, Ethiopia: steady state of the heart and opening of the eyes. *BMC Medical Education*. 2012; 12(1): 34. doi: 10.1186/1472-6920-12-34
37. Wang Q, Cao X, Du T. First-year nursing students' initial contact with the clinical learning environment: Impacts on their empathy levels and perceptions of professional identity. *BMC Nursing*. 2022; 21(1): 234. doi: 10.1186/s12912-022-01016-8
38. Mostafa A, Hoque R, Mostafa M, et al. Empathy in undergraduate medical students of bangladesh: Psychometric analysis and differences by gender, academic year, and specialty preferences. *ISRN Psychiatry*. 2014; 2014: 1–7. doi: 10.1155/2014/375439
39. Kim HY, Lee JH, Lee EH. Virtual experience of perioperative patients: Walking in the patients' shoes using virtual reality and blended learning. *International Journal of Environmental Research and Public Health*. 2021; 18(12): 6457. doi: 10.3390/ijerph18126457
40. Pearlman Shapiro MA, Crystal-Ornelas L, Lunde B. A qualitative analysis of experiences of medical students serving as abortion doulas. *Journal of Midwifery & Women's Health*. 2023; 68(6): 728–733. doi: 10.1111/jmwh.13569
41. Huang C, Jenq C, Liao K, et al. How does narrative medicine impact medical trainees' learning of professionalism? a qualitative study. *BMC Medical Education*. 2021; 21(1): 391. doi: 10.1186/s12909-021-02823-4
42. Chang H, Do Y. A spark of change: developing an innovative gerontological nursing intervention mapping initiative for training and education (IGNITE). *BMC Medical Education*. 2024; 24(1): 266. doi: 10.1186/s12909-024-05240-5
43. Zhou ZY, Hu LY, Wang ML, et al. Narrative education combined with experiential teaching in the development of empathic

- competence of undergraduate nursing students: Pre-test post-test design. *Sage Open*. 2023; 13(3): 21582440231193948. doi: 10.1177/21582440231193948
44. Hobenu KA, Adefuye AO, Naab F, et al. Strategies to enhance clinical teaching and learning in undergraduate nursing education: A scoping review. *Musie MR, ed. PLOS One*. 2025; 20(6): e0305789. doi: 10.1371/journal.pone.0305789
45. Song Y, Shi M. Associations between empathy and big five personality traits among Chinese undergraduate medical students. *Bianchi C, ed. PLOS ONE*. 2017; 12(2): e0171665. doi: 10.1371/journal.pone.0171665
46. Bientzle M, Eggeling M, Kanzleiter M, et al. The impact of narrative writing on empathy, perspective-taking, and attitude: Two randomized controlled experiments on violations of Covid-19 protection regulations. *PLOS ONE*. 2021; 16(7): e0254501. doi: 10.1371/journal.pone.0254501
47. Larti N, Ashouri E, Aarabi A. The effects of an empathy role-playing program for operating room nursing students in Iran. *Journal of Educational Evaluation for Health Professions*. 2018; 15: 29. doi: 10.3352/jeehp.2018.15.29
48. Hsiao CY, Tsai YF, Kao YC. Psychometric properties of a Chinese version of the jefferson scale of empathy-health profession students. *Journal of Psychiatric and Mental Health Nursing*. 2013; 20(10): 866–873. doi: 10.1111/jpm.12024
49. Ward J, Schaal M, Sullivan J, et al. Reliability and validity of the Jefferson scale of empathy in undergraduate nursing students. *Journal of Nursing Measurement*. 2009; 17(1): 73–88. doi: 10.1891/1061-3749.17.1.73
50. Cai Y, Liu M, Li Y, et al. Secondary traumatic stress and vicarious posttraumatic growth in oncology nurses: The mediating role of empathy. *Frontiers in Public Health*. 2024; 12: 1454998. doi: 10.3389/fpubh.2024.1454998
51. Saribudak T, Güner P. Effect of a compassion fatigue resiliency program on nurses' professional quality of life, perceived stress, resilience: a randomized controlled trial. *Journal of Advanced Nursing*. 2020; 76(12): 3584–3596. doi: 10.1111/jan.14568
52. Güveli H, Anuk D, Oflaz S, et al. Oncology staff: burnout, job satisfaction and coping with stress. *Psycho-Oncology*. 2015; 24(8): 926–931. doi: 10.1002/pon.3743
53. Lungulescu C, Dănciulescu M, Răileanu Ștefan. The impact of oncology rotation on medical students' perception of cancer. *Journal of Medical and Radiation Oncology*. 2021; 1(2): 55–62. doi: 10.53011/jmro.2021.02.06
54. Dhiaa Alrahman Hussein, Waleed Ibrahim Saad. Effect of job satisfaction on empathic skills among oncology nurses at Kirkuk city. *Medico Legal Update*. 2021; 21(2): 445–449. doi: 10.37506/mlu.v21i2.2721
55. Poodineh Moghadam M, Nasiri A, Mahmoudirad G. Oncology nurses' communication challenges during caring for cancer patients: A qualitative content analysis study. *Modern Care Journal*. 2021; 18(3). doi: 10.5812/modernc.118425