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Enhancing Care Quality and Wellness for Older Adults: Empathy Training in Nursing

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Abstract

Background: Empathy plays an essential role in older adult care and patient wellness, by strengthening healthcare quality and the nurse-patient relationship. This study evaluated the effectiveness of Carl Rogers-based empathy training in improving the capacity of empathy among nurses, particularly in caring for older adults and wellness of patients.

Methods: A quasi-experimental pre- and post-test design was conducted in October 2024 at Bekasi Regency Hospital, Indonesia. Nurses from inpatient and outpatient units were selected through purposive sampling. Empathy was assessed using the interpersonal reactivity index (IRI) before and after a three-day training program. The analysis included overall empathy scores and four subdimensions: empathic concern (EC), perspective taking (PT), fantasy scale (FS), and personal distress (PD). Data were analyzed using the Wilcoxon signed-rank test and effect size calculations.

Results: The mean total empathy score slightly decreased from 47.91±7.4 to 46.14±2.6 (p=0.190, r=0.22). However, significant improvements were observed in EC (p=0.004, r=0.51) and FS (p=0.007, r=0.42), whereas PD decreased significantly (p=0.001, r=0.61). No significant change was found in PT (p=0.457, r=0.12).

Conclusions: Short-term empathy training effectively enhances emotional dimensions of empathy, such as empathic concern and fantasy scale, while reducing personal distress. However, it does not significantly improve overall empathy scores. Long-term training, reinforcement strategies, and cognitive-based interventions may be needed to support sustained empathy developments in nursing care for older adults and patient wellness.

Keywords: Empathic capacity, empathy training, older adults, quality of care, wellness

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Introduction

Hospitals play an important role in delivering comprehensive healthcare services that address the diverse needs of patient. Nurses, as essential members of the healthcare team, are responsible for providing holistic care that encompasses the biological, psychological, social, and spiritual dimensions of health.[1] The quality of nursing care is a fundamental determinant of patient satisfaction and healthcare outcomes, extending beyond physical well-being to include emotional and mental wellness.

Empathy is a critical component of patient-centred care. An empathetic approach enhances therapeutic relationship, fosters trust, and promotes a healing environment, all of which contribute to improved treatment adherence, psychological resilience, and overall wellness.[2] When patients feel understood, valued, and supported, they experience reduced anxiety, improved coping ability, and a greater sense of well-being.[2]

Despite its importance, studies in various healthcare settings have shown that empathy in nursing practice often falls short of expectations. For instance, a study in China

has reported a decline in empathy levels among nurses over the past decade.[3] Similarly, research in Indonesia have found moderate empathy levels, particularly in the cognitive and affective dimensions, with limited application in practice due to inconsistent training and institutional barriers.[4–6] These gaps in empathetic engagement can adversely affect patient outcomes, particularly among older adults, who may be more vulnerable to emotional distress, and care-related dissatisfaction.

One of the main challenges in enhancing empathy in nursing is the lack of structured and multidimensional training programs. Many existing programs emphasize only the cognitive or affective components of empathy without integrating both into a cohesive learning framework.[5] Additionally, traditional training methods, such as lectures and self-reflection, have often failed to translate theoretical understanding into practical clinical application.[4–6] This lack prevents nurse-patient interaction and ultimately impacts quality of care and wellness outcomes.

Challenges in maintaining high levels of empathy among nurses are attributed to various factors, including work stress, lack of organizational support, and limited opportunities for practical application.[7,8] To address these issues, this study introduces an empathy training program based on Carl Rogers' theoretical framework, which emphasize unconditional positive regard, deep understanding, therapeutic relationships, and active, compassionate engagement.[9] Carl Rogers conceptualized empathy as comprising for dimensions: perspective-taking (PT), which refers to the cognitive capacity to adopt another person's viewpoint; empathic concern (EC), the affective ability to express care and compassion; personal distress (PD), the regulation of one's own emotional responses in stressful situations; and fantasy scale (FS), the ability to imagine and emotionally relate to others in diverse contexts.[10,11] This multidimensional perspective highlights the need for integrated training approaches that address empathy in its full complexity, an aspects often overlooked in current programs.[12] Empirical studies on empathy training have yielded inconsistent findings, with some reporting short-term improvements and others finding no significant changes, often due to limitations in design and assessment tools. By targeting all four dimensions, this study seeks to strengthen empathy holistically, improve nurse-patient interactions, reduce work-related stress, and foster a clinical environment conducive to wellness and recovery.

Recognizing the critical role of empathy in promoting wellness, this study aimed to fill existing gaps in empathy training by implementing a structured, multidimensional approach grounded in Carl Rogers' theoretical frameworks to enhance nurses' ability to establish deeper connections with patients, thereby improving patient satisfaction, emotional wellness, treatment adherence, and overall quality of care, particularly for older adults. Findings from this study may support the integration of empathy training into continuing professional development programs, contributing to a more sustainable and effective approach to empathy development in nursing. Strengthening empathy in nursing practice not only enhances the quality of patient-centred care but also supports a healthcare system where wellness and healing can thrive.

Methods

This study used a quasi-experimental pre- and post-test design to assess the effectiveness of Carl Rogers-based empathy training in enhancing nurses' empathic capacity at Bekasi Regency Hospital, Indonesia with a particular focus on its relevance to older adults' care and wellness promotion. The study was conducted in October 2024 and involved nurse from inpatient and outpatient units. Participants were selected using purposive sampling. The inclusion criteria were registered nurses with at least one year of work experience, had not received empathy training within the last six months, and were willing to participate in and complete the entire training program. Nurses who were on leave or experiencing illness during the study period were excluded.

The sample size was calculated using the formula for a paired-samples t-test with a medium effect size (d=0.5), a significance level (α=0.05), and statistical power (1-β=0.8). The formula used was $n=(Z\alpha/2+Z\beta)/d2$, where $Z\alpha/2=1.96$ and $Z\beta = 0.84$.13 Substituting these values yielded $n=(1.96+0.84)2/0.52=7.84/0.25=31.36$, which was rounded up to 32 participants. To ensure sufficient power and account for potential dropouts or incomplete data, a total of 35 participants were included.

The training program was based on Carl Rogers' theory of empathy, and included theoretical modules, practical role-play, and reflective discussions. The curriculum was

specifically designed to develop nurses' empathic capacity in the four key dimensions of empathy: PT, EC, PD, and FS. Quality assurance was maintained through standardized training manuals and pre-training calibration of facilitators, confirmed through kappa testing ($p<0.0001$). Participants practiced empathy through real-life clinical scenarios relevant to their roles in inpatient and outpatient care settings.

Empathy was measured using the interpersonal reactivity index (IRI) questionnaire, a validated 28-item questionnaire employing a 5-point Likert scale with response options were never, strongly disagree, disagree, undecided, and strongly agree. The IRI assessed empathy across the four dimensions: perspective taking (PT), empathic concern (EC), personal distress (PD), and fantasy scale (FS). Reliability of the IRI has been supported by previous study, with Cronbach's alpha values ranging from 0.70 to 0.83.[14] Higher scores indicated greater empathic capacity in each dimension. The questionnaire was administered before and after the training to evaluate changes in empathy levels.

The training was conducted over three consecutive days, with each session lasting 8 hours. Interactive methods included lectures, videos presentations, case studies, role-play, and brainstorming activities. Sessions were led by certified nursing practitioners (Kappa test, $p<0.0001$), assisted by three trained facilitators who had undergone perception standardization (kappa test, $p<0.0001$). Day one covered concept of empathy, Carl Rogers' theory, self-reflection, and goal setting. Day two focused on active listening, empathetic communication, relationship-building, and resilience. On day three, participants practiced empathy in various service units as per group assignments under facilitator supervision. Pre-tests were conducted 30 minutes before the first session, and post-tests performed immediately after the final session.

This study received ethical approval from the Health Research Ethics Committee of Cibitung District Hospital (Approval Number: KP.11/8501/RSUD/2024). Ethical principles adhered to throughout the study included autonomy (through informed consent), beneficence (maximizing the benefits of training), justice (fair and equitable sampling), and non-maleficence (minimizing any potential risks).[15,16] Participant confidentiality and safety were strictly maintained. The research protocol was also aligned with international ethical guidelines for studies involving human subjects and included ongoing monitoring to address any ethical concerns.[17] Data collection followed ethical procedures, beginning with informed consent and ensuring confidentiality during questionnaires administration to promote honest and reliable responses.

Data were analyzed using both univariate and bivariate methods. Univariate analysis described participant demographic (age, gender, and workplace unit) and empathy scores using means, standard deviations, frequencies, and percentages. Bivariate analysis evaluated changes in empathy scores between pre-test and post-test using paired t-tests for normally distributed data (as determined by the Shapiro-Wilk test, $p>0.05$) and Wilcoxon signed-rank tests for non-normally distributed

Table 1 Frequency Distribution of Participants by Age, Gender, and Workplace

Variables	Frequency	Percentage
Age (years)		
21–25	4	11.4
26–30	13	37.1
31–35	14	40.0
36–40	2	5.7
41–45	2	5.7
Gender		
Male	8	22.9
Female	27	71.1
Workplace		
Hospitalization	19	54.3
Outpatient	3	8.6
Intensive	10	28.6
Surgery	3	8.6

data. Statistical significance was set at $p<0.05$ with a 95% confidence level. To complement p-values and reflect the clinical significance of findings, effect size measurements were calculated: Cohen's d for parametric tests and rank-biserial correlation for non-parametric tests, were included to quantify the strength of the intervention's impact on empathy scores. Effect sizes were categorized as small (0.2–0.49), medium (0.5–0.79), or large (≥0.8). This approach ensures that the results reflect both statistical and practical significance, particularly in evaluating the implications of empathy training in clinical nursing practice.[14,18]

Results

Of the 35 nurses included, predominantly in age group of 31–35 years (40%) followed by those aged 26–30 years (37.1%), indicating that most participants were in the early to mid-stages of their career. Most of nurses were females (71.1%), reflecting broader workforce trends in nursing, where gender-related factors could influence empathic engagement and patient-centred communication.

There were 54.3% of participants worked in inpatient care, providing prolonged patient interactions could either foster or challenge empathy development. Nurses in intensive care units accounted for 28.6%, representing a substantial proportion of those working in high-stress environments that could challenge the sustainability of empathetic practices or potentially leading to empathy fatigue. The remaining participants were equally distributed between outpatient and surgical units (each 8.6%), where interactions with patients tended to be shorter (Table 1). These demographic and professional characteristics provided relevant context for understanding how age, gender, and workplace settings might influence responses to empathy training.

Contrary to expectations, the mean overall empathy scores slightly decreased from 47.91 (SD ±7.4) at pre-test to 46.14 (SD ±2.6) at post-test. Although the post-test standard deviation was lower, suggesting more consistent self-reported empathy levels among participants, the change was not statistically significant ($p=0.190$) (Table 2). This implied that a short-term intervention might not be sufficient for meaningful changes in empathy capacity. These results highlight the importance of training duration, content delivery and the potential influence of working stressor such as emotional fatigue and high clinical demands.

Analysis of empathy subdimensions revealed significant changes in specific areas. Empathic concern (EC) significantly increased after training ($p=0.004$, $r=0.51$), suggesting enhanced emotional engagement with patients' feelings. The fantasy scale (FS) also showed improvement ($p=0.007$, $r=0.42$), indicating a greater ability to imagine oneself in another person's situation. Personal distress (PD) decreased significantly ($p=0.001$, $r=0.61$),

Table 2 Differences in Overall Nurses Empathy Score Before and After Training

Nurse Empathy Capacity	n	Mean	Min-Max ± SD	Z	P-value	Effect Size (r)
Pre-test	35	47.91	(29-63) ± 7.4	-1.311	0.190	0.22
Post-test	35	46.14	(40-47) ± 2.6			

Note: $p<0.05$ considered statistically significant. Effect sizes (r): small (0.2−0.49), medium (0.5−0.79), or large (≥0.8)

Table 3 Comparison of Empathy Subdimensions Before and After Training

Empathy Subdimensions	Pre-test Mean (SD)	Post-test Mean (SD)	p-value	Effect Size (r)
Empathic concern (EC)	13.42 (±2.1)	14.31 (±1.7)	0.004*	0.51 (medium)
Perspective taking (PT)	12.78 (±2.4)	12.53 (±2.2)	0.457	0.12 (small)
Fantasy scale (FS)	11.56 (±2.7)	12.12 (±2.5)	0.007*	0.42 (small)
Personal distress (PD)	10.15 (±2.3)	9.27 (±2.0)	0.001*	0.61 (medium)

Note: *$p<0.05$ indicates a statistically significant difference. Effect size interpretation (r): small (0.2–0.49), medium (0.5–0.79), large (≥ 0.8).

suggesting that nurses experienced reduced emotional overwhelm in response to others' suffering (Table 3).

However, perspective taking (PT) did not show significant change (p=0.457, r=0.12), despite its importance in cognitive empathy and patient-centred communication. This indicates that while the training effectively improved emotional aspects of empathy (EC, FS) and reduced distress (PD), it might have lacked sufficient focus on cognitive-based techniques needed to enhance PT. Thus, this study found that the three-day empathy training program significantly impacted specific subdimensions of empathy, particularly by increasing EC and reducing PD, but did not yielded significant effects on overall empathy scores.

Discussion

The findings of this study suggest that while Carl Rogers-based empathy training positively influenced specific affective dimensions of empathy, it did not result in a statistically significant increase in the overall empathy capacity of participating nurses. This aligns with a previous study showing that longer-term, repeated interventions are often required to achieve sustained improvement in empathy.[19] A short-term intervention alone may be insufficient for meaningful changes, particularly in high stress clinical environments. These results suggest the need for healthcare institutions to consider long-term, structured empathy development programs, as short-duration formats may be limited in both dept and impact. Factors such as emotional exhaustion and competing clinical demands may have influenced the effectiveness of the training.

Notably, significant improvements were observed in the subdimension of EC and PD with large effect sizes, indicating enhanced emotional sensitivity and reduced emotional overwhelm in response to patient suffering. Additionally, the FS also showed a significant increase, reflecting improved imaginative engagement with patients' experiences. However, PT, representing the cognitive dimension of empathy, did not exhibit a statistically significant change. This suggest that cognitive empathy may require more extensive reinforcement and deeper internalization to show measurable improvement.

Several factors may explain the limited overall impact of the intervention. First, the brief training duration likely restricted the program's ability to support sustained behavioural change. A previous studies emphasize the importance of reinforcement, longitudinal exposure, and reflective practices in achieving durable improvements in empathy.[20–22] Future interventions should consider incorporating immersive, ongoing experiences, such as mentorship, clinical supervision, and real-time feedback. Second, the high pre-training empathy scores suggest a ceiling effect, limiting the potential for further enhancement through brief interventions.[23–25] Research has shown that nurses with already high baseline empathy often exhibit minimal gains from short interventions.[20,24] Conducting programs to target individuals with lower baseline empathy or designing differentiated training modules may help enhance the impact. Third, external stressors inherent in the nursing profession may have diminished the practical application of training content. Chronic occupational stress is known to impair emotional regulation and diminish empathetic engagement.[26] Addressing organizational stressors, preventing burnout, and fostering supportive leadership may enhance empathy retention.[23,27] Fourth, the measurement instrument sensitivity and self-assessment bias. The reliance on the interpersonal reactivity index (IRI) may have limited the detection of nuanced empathy changes, especially in high-stress environments.[28,29] Cultural and contextual variations in expressing empathy also affect self-reported scores.[14] Moreover, post-test responses may reflect more critical self-evaluation after training exposure rather than true declines in empathy.

This study extends Carl Rogers' client-centred theory by demonstrating that systemic and contextual factors, such as institutional support, emotional resilience, and stress management, are essential for empathy retention. particularly in older adults care. Given the psychological vulnerabilities of older adults, models that emphasize holistic, relationship-centred care can improve patient wellness and nurse-patient rapport. The findings also highlight that standalone empathy training is insufficient for fostering sustainable improvements in nursing practice, necessitating a multifaceted approach that integrates workforce optimization, transformational leadership, and stress-responsive training.[30]

For instance, optimizing nurse-to-patient ratios enables meaningful empathetic interactions, while transformational leadership can promote a culture of compassion and

empathy. Furthermore, integrating emotional regulation strategies into empathy training is particularly crucial for nurses caring for older adults with chronic illnesses or cognitive impairments. Although the overall empathy score did not significantly increase, the improvements in EC, PD, and FS support the potential effectiveness of experiential, affective-focused empathy training.

However, the cognitive domain, particularly PT, requires further reinforcement through extended training durations, mixed-method approaches, and behavioural assessments beyond self-reported measures. Thus, examining the interplay between empathy training and organizational dynamics is essential to ensuring long-term effectiveness.

In conclusion, a three-day Carl Rogers' theory-based empathy training effectively enhance emotional empathy and reduce personal distress, although it does not significantly improve perspective-taking, suggesting the limitations of short-term interventions. Long-term and structured empathy training is essential for sustaining compassionate, patient-centred care, particularly for older adults. To ensure a lasting impact, healthcare institutions should implement longitudinal empathy training program including follow-up assessments every 3 to 5 months. Peer mentorship, leadership engagement, and policy integration into licensure or institutional standard can help embed empathy into daily practice.

Furthermore, fostering an empathy-centred environment through regular refresher courses, experiential learning, and stress management strategies can enhance nurses' empathic engagement and reduce burnout. By shifting from one-time interventions to continuous professional development model, institutions can promote sustained empathy-driven care, ultimately improving emotional resilience among nurses and the overall quality of care for older patients.

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