

## **Feseability study of clinical leadership competency instrument: a strategic approach to strengthening nurse managers' roles in enhancing hospital service quality**

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### **ABSTRACT**

**Background:** Clinical leadership among nurse managers plays a vital role in ensuring the quality and effectiveness of hospital services. Nurse managers are responsible for integrating professional competence, managerial skills, and interpersonal collaboration to enhance patient outcomes and team performance. However, in Indonesia, there remains a lack of standardized and contextually relevant instruments to measure clinical leadership competencies.

**Objectives:** This study aimed to develop and validate a clinical leadership competency assessment instrument specifically tailored to the Indonesian hospital context and to evaluate its feasibility for practical application in nursing management.

**Methods:** The study employed a research and development design conducted in Tasikmalaya City. The sample consisted of 38 nurse managers selected through accidental sampling. The research process consisted of several stages: instrument design, expert validation, revision, and limited testing. Content validity was examined using the Content Validity Index to ensure conceptual and contextual relevance, while item validity and reliability were analyzed through appropriate statistical methods to ensure measurement accuracy and internal consistency.

**Results:** The developed instrument included 49 items across five core dimensions: communication, collaboration, decision-making, team empowerment, and change management. Validation results showed a CVI of 0.86 (>0.80), and high reliability (Cronbach's Alpha 0.950). Non-valid items were removed, resulting in a final instrument that is valid, reliable, and contextually appropriate for use by nurse managers.

**Conclusions:** The instrument is valid, reliable, and feasible for assessing nurse managers' clinical leadership competencies. Beyond its psychometric soundness, it provides a strategic framework to strengthen leadership accountability, improve team coordination, and enhance hospital service quality. The instrument can also serve as a valuable tool in hospital management and nursing education to guide professional development and promote evidence-based leadership practices.

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**KEYWORD:** *clinical leadership; competency instrument; hospital service quality; nurse managers*

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## INTRODUCTION

Delivering excellent healthcare services in hospitals that are patient-centered cannot be separated from effective clinical leadership at every level of service. Nurse managers, as front-line leaders in healthcare services, play a crucial role in improving service quality and team productivity. Competent and reliable nurse managers are essential for managing nursing staff effectively to meet increasing service quality demands, including possessing clinical leadership competencies (1). Studies have shown that strong clinical leadership contributes to patient safety and team efficiency (2).

Clinical leadership refers to the skills of nurses, both as practitioners and managers, to enhance service quality and patient safety by applying creative innovations to drive change and improve nursing care delivery. Effective clinical leadership is critical for the success of healthcare services. A clinical leader is expected to enhance their role in patient care, improve quality, achieve better clinical outcomes, and minimize risks through strong interpersonal relationships and effective communication. Clinical leadership

reflects not only intelligence but also the logic and wisdom that extend beyond mere clinical experience (3,4).

Nurse managers' clinical leadership is fundamental to improving performance and work effectiveness in healthcare environments (5). However, research on self-assessments of nurse managers' performance revealed that 76.2% rated their performance as below standard in areas such as motivation, compassion, emotional intelligence, interpersonal skills, communication, empathy, friendliness, teamwork, discipline, loyalty, initiative, responsibility, decision-making, and collaboration (6,7). These findings indicate a significant performance gap when compared with internationally recognized competency standards such as those established by the American Organization for Nursing Leadership (AONL) and the National Health Service (NHS) Clinical Leadership Competency Framework, which emphasize measurable leadership behaviors, communication excellence, team empowerment, and decision-making accountability. Previous studies have also highlighted the lack of structured and context-appropriate assessment tools for

evaluating clinical leadership competency among nurse managers, particularly in middle-management roles. As a result, leadership development and performance evaluation often rely on subjective judgments rather than standardized and evidence-based measurements. This gap reinforces the urgent need for a validated assessment instrument to ensure that nurse managers possess the clinical leadership skills required to optimize workflow, enhance staff engagement, and strengthen patient care outcomes. Subpar nurse manager performance not only affects team productivity but also negatively impacts service quality, decision-making efficiency, and continuity of care (8,10).

The ability of nurse managers to lead, motivate, and inspire their teams significantly influences the quality of healthcare services. Strong clinical leadership enables nurse managers to create a positive work environment, promote innovation, and ensure all team members align with the shared goal of delivering the best patient care. Clinical leadership goes beyond giving instructions; it involves fostering strong relationships, solving problems collaboratively, and ensuring clinical practices are continually updated to reflect the latest advancements (11). A survey conducted among 17 nurse managers in Tasikmalaya City found that seven held diplomas in nursing as their highest qualification. Four respondents reported having no opportunities to

enhance their work competencies, and three stated they lacked the chance to achieve accomplishments or promotions. While no strict regulations require clinical leaders or nurse managers to hold advanced degrees, several factors must be considered, such as institutional policies, key competencies like leadership, communication, management, team coordination, relevant experience, and additional training to fulfill clinical leadership competencies. Furthermore, the complexity of their roles and responsibilities necessitates clearly measurable clinical leadership competencies to ensure optimal healthcare service quality. Periodic competency assessments help determine how effectively nurse managers perform their duties and identify areas for improvement, enabling the design of appropriate development programs. In essence, competency assessments represent an investment in the organization's future, as competent nurse managers can improve team performance, enhance healthcare delivery, and ultimately provide greater benefits to patients (12).

While several standardized instruments already exist—such as the Clinical Leadership Competency Scale, Nurse Manager Competency Assessment, Leadership Practice Inventory, and Clinical Leadership Needs Analysis—efforts to comprehensively and systematically assess clinical leadership often encounter challenges. Existing tools may not fully align

with the dynamics of Indonesian hospitals or adequately address the critical aspects of clinical leadership needed today. Therefore, this study aims to design an instrument relevant to the hospital context, offering significant contributions to developing effective clinical leadership in healthcare settings.

## **MATERIALS AND METHODS**

This study employed a research and development (R&D) approach conducted from February to May 2025 in Tasikmalaya City. The objective was to develop and validate an assessment instrument for clinical leadership competencies among nurse managers in hospitals.

The study sample consisted of nurses serving as ward heads, team leaders, or primary care nurses in inpatient units of hospitals in Tasikmalaya City. Accidental sampling was used to select participants. For the limited trial, 38 respondents were involved to assess the consistency and initial validity of the instrument items (13).

The validation of the clinical leadership competency assessment instrument utilized quantitative tools administered to experts and respondents. The expert assessment used a questionnaire or checklist (✓) with agree and disagree responses. Content Validity Index (CVI) was applied to evaluate the content validity of the instrument based on expert judgment. CVI measured how well the items in the instrument reflected the

concepts being assessed and their conceptual and contextual relevance (14,15). For respondent assessment, Pearson product-moment correlation was used to test validity, while reliability was measured using Cronbach's Alpha (16,17).

The development process of the clinical leadership competency assessment instrument for nurse managers involved several stages: needs analysis, product design, initial product development, expert validation, design revision, and limited trials. Needs analysis was conducted to identify the clinical leadership competencies required of nurse managers. Problems identified included ineffective bureaucratic coordination and communication, poor problem-solving ability, gaps in interpersonal communication, lack of feedback on team performance, and resistance to new processes or changes.

In the product design stage, the instrument was developed based on identified potentials and challenges. The design considered nursing practice standards and adapted elements from international competency frameworks, such as the Clinical Leadership Competency Scale (15,18), *nurse manager competency assessment* from the AONE *leadership framework* (19,20), Leadership Practice Inventory (LPI) (21–23), and Clinical Leadership Needs Analysis Instrument (CLeeNA) (24,25). The instrument was then validated by four experts, comprising a language specialist, academic scholars,

and nursing practitioners with expertise in clinical leadership and instrument development. Expert feedback was used to refine and improve the instrument.

Data analysis involved content validity assessment, presenting responses in agree and disagree statements. Responses were scored as 1 for agree and 0 for disagree. Experts provided evaluations, comments, and suggestions for relevant revisions to the clinical leadership competency assessment instrument. An item was retained if its proportion score exceeded 0.75. Overall expert ratings were

categorized into three levels: weak content validity requiring major revision ( $<0.60$ ), moderate content validity requiring partial revision ( $0.60\text{--}0.79$ ), and excellent content validity ( $>0.80$ ).

## RESULTS AND DISCUSSION

### RESULTS

#### *Specifications of the Developed Product*

The resulting product is an assessment instrument named the Clinical Leadership Competency Assessment for Nurse Managers, designed to measure clinical leadership competencies among

**Table 1. The dimensions, foundations, and indicators of the clinical leadership competency instrument**

| Dimensions        | Foundations                                                             | Indicators                                                                                                                                                                                                   |
|-------------------|-------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Communication     | Interaction, task coordination, problem solving, motivation enhancement | Ability to convey information clearly and accurately<br>Ability to provide constructive feedback<br>Ability to facilitate effective communication<br>Ability to overcome communication barriers              |
| Collaboration     | Synergy, innovation, workload sharing, quality improvement              | Ability to work collaboratively with an interdisciplinary team<br>Ability to build positive working relationships<br>Ability to lead a collaborative team<br>Ability to ensure collaboration effectiveness   |
| Decision-Making   | Progress, problem solving, responsibility, efficiency                   | Ability to make evidence-based decisions<br>Ability to make timely decisions<br>Ability to involve the team in decision-making<br>Ability to make difficult decisions<br>Ability to improve decision quality |
| Team Empowerment  | Motivation, initiative, creativity, growth                              | Ability to delegate tasks<br>Ability to provide constructive feedback<br>Ability to motivate the team<br>Ability to develop team potential                                                                   |
| Change Management | Adaptation, development, efficiency, resilience                         | Ability to lead change<br>Ability to communicate change<br>Ability to overcome resistance to change<br>Ability to ensure change effectiveness                                                                |

nurse managers. The developed instrument consists of 49 items that evaluate five key dimensions of clinical leadership competency. The dimensions and their respective indicators are detailed in **Table 1**. **Table 1** describes the dimensions, foundations, and indicators of the Clinical Leadership Competency Instrument for nurse managers, which was developed and adapted to meet the needs of nurse managers. The five formulated dimensions include Communication, Collaboration, Decision-Making, Team Empowerment, and Change Management.

#### *Expert Validation*

The Clinical Leadership Competency Assessment for Nurse Managers underwent validation by four experts, including a language specialist, academic professionals, and nursing practitioners with expertise in clinical leadership and instrument development. The validation results showed that each item achieved a proportion score above 0.75, indicating that the items were acceptable and retained. The overall proportion score from all experts was 0.86 ( $>0.80$ ), demonstrating excellent content validity.

#### *Feasibility Study*

Following confirmation of excellent content validity, the instrument underwent further testing for validity and reliability of its items. The instrument initially contained 49 items and was tested with 38 respondents.

Validity testing was conducted to ensure that the items accurately measured the intended constructs (both in content and statistical terms). The analysis showed that twelve items did not meet the minimum validity threshold based on the Pearson product-moment correlation coefficient, where the calculated value was lower than the required *r*-table value of 0.3202. Although the primary basis for removal was statistical validity, the decision was also supported by expert review, which indicated that several of these items overlapped conceptually with other statements, lacked clarity, or were not sufficiently representative of the intended competency domains. Therefore, removing these items not only strengthened the psychometric structure of the instrument but also improved content precision and response efficiency.

After item reduction, the remaining 37 statements demonstrated strong reliability, with a Cronbach's Alpha value of 0.950 ( $>0.6$ ), indicating excellent internal consistency across dimensions. This high reliability suggests that the final instrument measures the construct of clinical leadership competency consistently and cohesively, without redundancy or measurement bias. From a practical perspective, reducing the number of items contributes to a more concise, user-friendly assessment tool that may increase response accuracy and reduce respondent fatigue. Additionally, the refined structure

ensures that each retained item contributes meaningfully to evaluating nurse managers' clinical leadership competencies. This enhances the instrument's applicability in routine performance appraisal, leadership development programs, and evidence-based managerial decision-making in hospital settings.

## DISCUSSION

The research and development process led to the formulation of a clinical leadership competency instrument designed to reflect the practical realities and leadership functions of nurse managers in hospital environments. Findings indicated that the instrument was both valid and reliable in measuring five key dimensions of clinical leadership competency, including communication, collaboration, decision-making, team empowerment, and change management. These results suggest that the instrument is feasible for implementation among nurse managers and can be utilized not only to assess leadership performance, but also to identify priority areas for improvement. In practical application, the instrument may serve as a structured and evidence-based tool to support competency development, inform leadership training programs, and strengthen managerial effectiveness within hospital settings. This instrument was developed by adapting theoretical frameworks from widely recognized international leadership models, such as the

Clinical Leadership Competency Scale from the NHS Leadership Academy (15), *the Nurse Manager Competency Assessment from the AONE leadership framework* (26), *the Leadership Practice Inventory (LPI)* (21,22), and the Clinical Leadership Needs Analysis Instrument (CleeNA) (24,25). While these tools have been widely applied in developed countries, local contextualization is essential due to the unique cultural, organizational, and human resource characteristics of Indonesian hospitals. The effectiveness of measuring clinical leadership competency largely depends on how well the instrument aligns with local organizational culture and healthcare system structures (2).

Previous studies have highlighted the lack of tools specifically designed to assess the impact and performance of clinical leadership at the middle management level. In this context, the present study contributes to addressing this gap by providing a structured and contextually relevant assessment instrument for nurse managers in Indonesian hospitals. The availability of this instrument represents a strategic advancement toward strengthening leadership accountability and supporting evidence-based evaluation practices within nursing management. The developed items reflect the characteristics and operational realities of Indonesian hospitals (2,8,10,27). This alignment ensures the instrument not only measures competencies but also supports strategic

efforts to strengthen nurse managers' roles in enhancing hospital service quality. The development of this clinical leadership competency instrument aligns with earlier findings showing that effective leadership contributes to collaborative problem-solving in clinical practice, building cultural capacity, and fostering continuous innovation to improve service quality. Nurse managers today are increasingly recognized as strategic components in improving patient clinical outcomes, team efficiency, and overall patient safety. Adaptive, visionary, and evidence-based clinical leaders are vital in facing global challenges such as cost pressures, workforce shortages, and the complexity of patient cases (2,28).

In complex healthcare systems marked by constant change, resource constraints, and growing demand, the role of clinical leadership is more critical than ever. It is now widely acknowledged as a key driver of quality and efficiency in healthcare services. The required competencies include change management, quality improvement, and collaborative, collective leadership with a strong focus on patient-centered care (29). Clinical leadership is often performed informally by Advanced Practitioners (APs) or nurses with master's degrees and/or specialist certifications. Although these activities deliver positive value, their impact cannot always be measured objectively. Furthermore, the limited involvement of APs in strategic decision-making hinders optimal

improvements to healthcare systems. To date, no studies have introduced measurement instruments specifically designed to assess the clinical leadership competencies of AP nurses (27). The feasibility study underscores the potential of this instrument as a strategic approach to enhancing nurse managers' leadership roles and improving hospital service quality.

## **CONCLUSION AND RECOMMENDATION**

This study developed a valid and reliable assessment instrument for measuring nurse manager clinical leadership competencies across five key dimensions: communication, collaboration, decision-making, team empowerment, and change management. The instrument has the potential to serve as a standard tool for evaluating nurse manager leadership capabilities to enhance hospital service quality. Further research should involve large-scale testing in various types of hospitals in Indonesia to strengthen generalization and adaptation of this instrument. Additionally, it is recommended that this instrument be used as a foundation for designing clinical leadership competency development programs for nurse managers.

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