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Development and Validation of an Authentic Leadership Assessment Rubric for Enhancing Nursing Students' Leadership: An R&D Study at Universitas Gadjah Mada.

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Abstract

Introduction: Authentic leadership (AL) has been shown to correlate positively with nurses' job satisfaction at the Universitas Gadjah Mada Academic Hospital, yet practical assessment tools for AL in undergraduate nursing education remain limited. The objective is to develop, validate, and test the effectiveness of a context-specific authentic leadership assessment rubric for evaluating nursing students' leadership performance in simulated clinical settings.

Methods: A research and development study using the ADDIE model was conducted with 30 expert validators and 120 bachelor nursing students in 2025. The 24-item rubric was adapted from the Authentic Leadership Questionnaire (ALQ) and organized into four core dimensions.

Results: The rubric showed strong content validity (CVI=0.87) and high internal consistency (Cronbach's α =0.845). Exploratory factor analysis confirmed a four-factor structure explaining 71.4% of variance. After a rubric-guided leadership workshop, students' leadership scores increased from 3.15 ± 0.58 to 4.12 ± 0.49 on a 5-point scale ($p < 0.001$, Cohen's $d = 1.62$).

Conclusions: The rubric is valid, reliable, and educationally effective as an authentic assessment tool in Indonesian nursing curricula and has potential to contribute indirectly to improved nurse job satisfaction and retention.

Keywords: Authentic leadership, Assessment rubric, Nurse job satisfaction, Nursing education, Instrument validation

Introduction

Authentic leadership is a positive leadership approach rooted in self-awareness, transparent relationships, balanced information processing, and an internalized moral perspective. It has been linked to higher job satisfaction and better performance across health-care settings. In the context of the Universitas Gadjah Mada Academic Hospital, a master's thesis demonstrated a significant positive relationship between head nurses' authentic

leadership and nurses' job satisfaction, with authentic leadership emerging as a key predictor of satisfaction.

At the same time, many Indonesian nursing programs struggle to translate leadership theory into observable behaviours during clinical simulations and group projects. Despite competency-based curricula that emphasize leadership, only a minority of programs systematically use behaviourally anchored rubrics to assess authentic leadership skills in students. This gap risks producing graduates who understand leadership concepts cognitively but lack demonstrable, measurable leadership behaviours in real or simulated practice.

Instrument development is therefore needed to bridge empirical findings from hospital-based research into the educational domain. By developing a rigorous, contextually relevant rubric based on the authentic leadership construct and evidence from the UGM academic hospital, this study aims to support more consistent, transparent, and formative assessment of nursing students' leadership performance.

Methods

Study design

A mixed-method research and development design was employed, structured around the ADDIE model (Analysis, Design, Development, Implementation, Evaluation). This approach allowed iterative refinement of the rubric based on expert input, psychometric testing, and educational use with students.

Setting and participants

The study was conducted at the Bachelor of Nursing program, Universitas Gadjah Mada, and the Universitas Gadjah Mada Academic Hospital as the main clinical reference. Participants were: 30 experts for validation (nursing lecturers, clinical nurse manager, and senior nurses), and 120 undergraduate nursing students selected through stratified random sampling from three academic cohorts.

Inclusion criteria for students were enrolment in a leadership or management course and participation in simulation or role-play activities.

Instrument development

The rubric was conceptually based on the four core dimensions of authentic leadership frequently referenced in leadership literature: self-awareness, relational transparency, balanced processing, and internalized moral perspective.

Items were drafted by translating these dimensions into observable behaviour statements relevant to student-led simulations, such as leading a ward team, handling ethical

dilemmas, or managing interprofessional communication. The initial pool consisted of 30 items, each scored on a 5point Likert scale (1=very poor, 5=excellent). After expert review, the pool was reduced to 24 items with clearer and more context-appropriate wording.

Procedures

1. Analysis: Focus group discussions with lecturers and clinical preceptors were used to identify current gaps in leadership assessment and to align rubric content with existing course outcomes.
2. Design: Draft items were created and mapped to course learning outcomes and professional standards in nursing leadership.
3. Development: Experts rated each item for relevance, clarity, and representativeness. Content Validity Index (CVI) values were calculated at item and scale levels. Items not meeting predetermined thresholds were revised or removed.
4. Implementation: The rubric was used by lecturers to assess student performance in structured leadership simulations. Students also received rubric-based feedback. Pre- and post-intervention scores were collected.
5. Evaluation: Psychometric testing, including factor analysis and reliability analysis, was conducted on the student data set, and the impact of rubric-based assessment on leadership scores was examined.

Results

Content validity

Expert ratings indicated high relevance and clarity of the items. All items met acceptable thresholds for item-level CVI, and the overall scale-level CVI was in the high range, indicating strong agreement among experts that the rubric adequately represented authentic leadership as it should be observed in nursing students.

Factor structure and construct validity

Exploratory factor analysis supported a four-factor model corresponding to the intended dimensions: self-awareness, relational transparency, balanced processing, and internalized moral perspective. The factors together account Reliability.

The rubric demonstrated high internal consistency for the total scale and satisfactory to high internal consistency for each of the four subscales. This suggests that the items within each dimension are measuring coherent aspects of authentic leadership behaviour and that the instrument is stable and reliable for assessment purposes.

Educational effectiveness

Students' leadership scores improved meaningfully after the introduction and use of the rubric in leadership simulations. The magnitude of change indicated not only statistical significance but also educational relevance. Students reported that the rubric clarified expectations, helped them understand what authentic leadership looks like in practice, and provided a concrete basis for self-reflection. ed for a substantial proportion of variance in leadership performance scores, supporting the theoretical structure underlying the rubric.

Dimensi	Item Contoh	Loading Faktor	α Sub-skala	Pre Mean $\pm$ SD	Post Mean $\pm$ SD	p-value
Self-awareness	"Refleksi diri pasca-roleplay"	0.847	0.812	3.02 $\pm$ 0.62	3.98 $\pm$ 0.51	<0.001
Relational transparency	"Komunikasi terbuka konflik"	0.792	0.831	3.21 $\pm$ 0.59	4.15 $\pm$ 0.48	<0.001
Balanced processing	"Inklusi opini minoritas"	0.765	0.798	3.10 $\pm$ 0.60	4.08 $\pm$ 0.50	<0.001
Internalized moral	"Prioritas pasien vs efisiensi"	0.823	0.827	3.28 $\pm$ 0.55	4.32 $\pm$ 0.47	<0.001S2-2023-486574-title.pdf

Table 1 shows four factors rubric authentic leadership

Discussion

This study translated empirical findings about authentic leadership and nurse job satisfaction at an academic hospital into a practical, education-focused assessment tool. The rubric formalizes authentic leadership into observable behaviours that can be consistently evaluated in nursing education settings. The strong validity (CVI=0.87) and reliability results (α =0.85) suggest that the rubric is psychometrically sound, while pre–post improvements (Cohen's d =1.62) indicate that it supports learning and not merely measurement.

Compared to other leadership assessment tools, this rubric offers distinct advantages. The widely used Authentic Leadership Questionnaire (ALQ) by Walumbwa et al. (2008) is a self-report measure effective for research but less suitable for observational assessment in simulations (Laschinger et al., 2012). The Leadership Practices Inventory (LPI; Kouzes & Posner, 2017) focuses on transformational leadership with good reliability (α =0.82–0.91) but lacks the ethical and transparency dimensions central to authentic leadership (Fischer, 2016). Unlike these self-report or general tools, the current rubric is behaviourally anchored, context-specific to nursing simulations, and validated for formative feedback, making it more actionable for educators than the Multifactor Leadership Questionnaire (MLQ), which is

By structuring assessment around four clearly defined dimensions, educators can give more precise feedback and guide students in developing leadership capacities that are aligned with both hospital expectations and professional standards. The rubric can also facilitate more transparent grading and create a shared language for leadership between academic and clinical educators.

Limitations include the study's single institution focus and the use of simulation rather than real clinical leadership situations as the primary context. Future work should involve multi-site validation, adaptation for other health professions, and longitudinal tracking to see whether rubric-based leadership development in students carries over into early career job satisfaction and performance.

Conclusion

The developed authentic leadership assessment rubric is a valid, reliable, and educationally useful tool for evaluating and fostering leadership competence among nursing students in Indonesia. It connects leadership theory, empirical hospital-based evidence, and classroom practice, and has the potential to contribute to broader goals of improving nurse job satisfaction and retention through early, structured leadership development.

Author Contributions

The conception and design of this study were carried out by the corresponding author, including the formulation of the research problem, theoretical framework, and selection of the research design. Data collection, coordination with expert validators, and supervision of the implementation of the rubric in the simulation sessions were also led by the corresponding author. Data analysis, including validity and reliability testing as well as interpretation of the findings, was performed by the corresponding author. The manuscript was drafted, critically revised for important intellectual content, and approved in its final version by the corresponding author, who is accountable for all aspects of the work.

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Conflict of Interest

The author declares that there are no known commercial, financial, or personal relationships that could be construed as a potential conflict of interest in relation to the research, authorship, and publication of this article.

Data Availability Statement

The data that support the findings of this study, including anonymised expert ratings, rubric items, and aggregated student assessment scores, are available from the corresponding author upon reasonable request. Access to the full dataset may be subject to institutional regulations and ethical approval to ensure the protection of participant confidentiality.

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