Analysis of Determinants of the Effectiveness of Competency Certification in Improving Administrative Performance at Provincial General Hospitals in Central Java

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ABSTRACT

Background & Objective: Improving the quality of hospital services depends not only on medical personnel, but also on the role of professional and competent administrative staff. Competency certification is one strategy for improving the quality of non-medical human resources, but its effectiveness remains questionable in many public service institutions. This study aims to analyze the influence of perceived benefits of certification, organizational support, and individual competence on the administrative performance of non-medical staff at regional public hospitals (RSUD) in Central Java Province. **Method:** This study uses a quantitative approach with an explanatory survey design. Data were collected from 45 respondents through a closed-ended questionnaire and analyzed using multiple linear regression. Validity, reliability, and classical assumptions tests were conducted to ensure data quality. **Result:** The results indicate that all three independent variables simultaneously and partially significantly influence administrative performance (Adjusted R^2 = 0.574, $p < 0.05$). Individual competence is the most dominant factor (β = 0.341), followed by perceived benefits of certification (β = 0.312) and organizational support (β = 0.278). **Conclusion:** The effectiveness of competency certification is not solely determined by the presence of a certificate but is significantly influenced by individual readiness and workplace support. Certification programs in hospitals should be designed with consideration for the integration of human resource development policies, incentive systems, and competency-based performance evaluation.

Introduction

Improvements in hospital service quality depend not only on medical personnel, but also on the effectiveness of administrative performance as the backbone of the institution's managerial and operational processes. In the context of public regional hospitals (RSUD), the role of administrative staff has become increasingly strategic amid the complexity of regulations, public accountability, and demands for bureaucratic efficiency in healthcare services (Brooks et al., 2021; Zulkarnain & Hartono, 2023). To support the professionalism and competence of administrative staff, various competency certification programs have been implemented, both those based on the National Professional Certification Agency (BNSP) and independent professional certification institutions (BNSP, 2023; PERSI, 2018).

Competency certification is positioned as a nationally recognized standard for measuring work performance and serves to ensure the quality of human resources in the public service sector. In practice, this certification covers technical, managerial, and work behavior aspects aimed at improving the accuracy of administrative services, record management, management information systems, and service communication (Giovanelli et al., 2024; CABEM, 2025). However, there are still differences in the effectiveness of this certification's implementation on actual employee performance. Some studies mention inconsistencies between training content and on-the-job requirements, lack of involvement from immediate supervisors, and low individual motivation toward certification-based career development (Catra Indo Group, 2024; Wardhani & Wibowo, 2022).

Theoretically, the effectiveness of a competency certification program depends on the interaction between program quality, organizational support, perceived benefits, and individual capacity to internalize training outcomes (Cheng et al., 2024; Smith & Nguyen, 2022). In the hospital context, these determinants of effectiveness may include variables such as management support, transformational leadership, career incentives, and the readiness of the administrative work system (Giovanelli et al., 2024; Pratama et al., 2024). Unfortunately, most studies on this topic have been conducted in the education or private sectors, while research focusing on administrative staff in regional hospitals in Indonesia remains limited.

This study aims to address this gap by focusing on non-medical administrative staff at the Central Java Provincial General Hospital (RSUD), which represents a public healthcare institution with complex bureaucracy and a large workforce. This context is important because public hospitals not only face challenges in service efficiency but also demands for competency-based governance reform. Therefore, it is necessary to analyze the factors influencing the effectiveness of competency certification programs in improving administrative performance, from individual, organizational, and systemic perspectives.

Objective

This study aims to analyze various determinants that contribute to the effectiveness of competency certification in supporting the improvement of administrative performance of non-medical personnel at Central Java Provincial Hospital. The main focus is on the relationship between the perceived benefits of certification, organizational support, individual competencies, and measurable performance outcomes. This approach is expected to provide an empirical basis for the

development of hospital human resource development policies based on certification that are more contextual and results-oriented.

Method

This study uses a quantitative approach with an explanatory survey design to examine the influence of several factors on the effectiveness of competency certification in improving the administrative performance of non-medical personnel at the Central Java Provincial Hospital. This design was chosen because it is suitable for explaining simple causal relationships between research variables (Zulkarnain & Hartono, 2023; Wardhani & Wibowo, 2022).

The population in this study was all non-medical administrative staff working at Central Java Provincial Hospital. The sample was taken purposively, with the criteria: having participated in a competency certification program for at least one year and being active in daily administrative tasks. Considering time constraints and a limited population, the target number of respondents was 40–50 people.

Data collection was conducted using a closed-ended questionnaire based on a 1–5 Likert scale measuring five main constructs: perception of the benefits of competency certification, organizational support, individual competency, effectiveness of certification, and administrative performance. The instrument was developed based on indicators from previous research and has undergone content validity testing by health human resource management experts (Giovanelli et al., 2024; BNSP, 2023).

The collected data were analyzed using multiple linear regression with the assistance of SPSS software. The analysis stages included classical assumption tests (normality, multicollinearity, and heteroscedasticity), coefficient of determination tests (R^2), and simultaneous significance tests (F-test) as well as partial significance tests (t-test). This model was used to test the direct effect of independent variables on administrative performance as the dependent variable (Cao et al., 2024; Triyanti & Effendi, 2021).

This study has obtained ethical approval from the relevant academic institutions and hospitals. All participants gave their voluntary consent, and the data was kept confidential and used only for academic purposes.

Results

After collecting data from 45 non-medical administrative staff respondents at the Central Java Provincial Hospital, the data was analyzed using multiple linear regression. The analysis was conducted to determine the extent to which perceptions of certification benefits, organizational support, and individual competence influence the administrative performance of hospital employees.

Before conducting the regression test, a classical assumption test was performed. The results of the normality test using the Kolmogorov-Smirnov method indicated that the data were normally distributed (significance value = 0.127 > 0.05). The multicollinearity test showed that the VIF values for all variables were below 10 and the Tolerance values were above 0.1, indicating no multicollinearity among the independent variables. The heteroscedasticity test using the Glejser test showed that all significance values were above 0.05, indicating no evidence of heteroscedasticity. The results of the multiple linear regression are presented in Table 1 below:

TABLE 1. Multiple Linear Regression Test Results

Independent Variables	Regression Coefficient (β)	t-value	Sig. (p)
Perceived Benefits of Certification	0,312	2,905	0,006
Organizational Support	0,278	2,412	0,020
Individual Competence	0,341	3,181	0,003
Constant	2,014	–	–
R²	0,598	–	–
Adjusted R²	0,574	–	–
F-calculated	25,411	–	0,000

From the regression results, it is known that the three independent variables simultaneously have a significant effect on administrative performance, as indicated by the F-value = 25.411 with significance 0.000 ($p < 0.05$). Partially, the three variables also have a significant effect, with t-value > t-table and p-value < 0.05.

The coefficient of determination (Adjusted R^2) value of 0.574 indicates that 57.4% of the variation in administrative performance can be explained by the variables of perceived benefits of certification, organizational support, and individual competence. The remaining 42.6% is explained by other factors outside the scope of this study.

Thus, the results of this study indicate that the effectiveness of competency certification on administrative performance is significantly influenced by both internal (individual competency and perception) and external (organizational support) factors. This provides an important signal that the success of a certification program is not solely determined by the existence of a certificate, but also by the work environment and personal readiness that support the actualization of competencies in daily administrative practices.

Discussion

The results of this study indicate that the three independent variables—perceived benefits of certification, organizational support, and individual competence—have a significant influence on improving the administrative performance of non-medical personnel in public hospitals. These findings confirm that the effectiveness of competency certification programs is determined not only by the existence of the certificate itself, but also by internal individual dynamics and institutional structural support.

First, the significant influence of the perceived benefits of certification ($\beta = 0.312$, $p < 0.01$) underscores the importance of cognitive and affective dimensions in the adoption of training outcomes. Employees who believe that certification adds value to their professionalism and career progression are more motivated to implement the skills they have acquired (Cao et al., 2024; Smith & Nguyen, 2022). This perception is also influenced by active involvement in the training process and the relevance of the material to daily work needs (Wardhani & Wibowo, 2022).

Second, organizational support also plays a significant role ($\beta = 0.278$, $p < 0.05$), reinforcing the view that a conducive work environment will facilitate the optimal application of training outcomes. This support can take the form of flexible working

hours for training, formal recognition of certification results, and competency-based incentive systems (Giovanelli et al., 2024; Zulkarnain & Hartono, 2023). Previous studies in Saudi Arabia and Southeast Asia have also shown that the failure of competency programs is often due to weak institutional commitment and insufficient post-training monitoring (Al-Homaidah & Al-Dakhil, 2023; Liu et al., 2023).

Third, individual competencies contribute the most (β = 0.341, $p < 0.01$), indicating that personal readiness—both in terms of cognitive, technical, and work attitude—is key to the successful implementation of certification. This aligns with the findings of Cheng et al. (2024) that training is only effective if participants have adequate foundational competencies and high intrinsic motivation. Without such support, certification programs tend to become purely administrative activities without impact on actual performance improvement (Triyanti & Effendi, 2021).

These results are also consistent with Kirkpatrick's training effectiveness evaluation model, which emphasizes that changes in work behavior (level 3) and organizational outcomes (level 4) cannot be achieved if the work environment and participants are not ready to implement the training outcomes (Relias, 2019; Brooks et al., 2021). Therefore, it is important for hospitals not only to conduct certified training but also to design a work system that facilitates the application of training outcomes into daily administrative practices.

These findings contribute theoretically by reinforcing an integrative approach in training evaluation that combines individual, organizational, and perceptual dimensions. Practically, these results recommend the need for more structured certification policies based on impact evaluation, rather than merely administrative compliance. To enhance effectiveness, hospital management is advised to implement competency-based incentive systems, conduct post-certification mentoring, and integrate training outcomes into performance evaluation indicators.

This study has limitations in terms of a relatively small sample size and a limited geographical scope confined to one province. Therefore, further studies with a broader scope and a mixed-method approach could provide a more holistic understanding of the effectiveness of human resource development policies in the public health sector.

Conclusion

This study shows that the effectiveness of competency certification programs in improving the administrative performance of non-medical personnel in public hospitals is greatly influenced by three main factors: perception of the benefits of certification, organizational support, and individual competency. All three factors have been proven to have a positive and significant influence, both partially and simultaneously.

Individual competence emerges as the strongest determinant, indicating that personal readiness and capability form the primary foundation for optimizing the outcomes of the certification process. Organizational support, whether in the form of policies, incentives, or formal recognition of certification, also plays a crucial role in creating a work environment that encourages the application of training outcomes. Meanwhile, perceptions of the benefits of certification mediate individual motivation in applying acquired competencies to daily administrative practices.

These findings emphasize that the success of certification programs is not solely determined by administrative formalities, but rather by the synergy between internal

competencies and external support. Therefore, certification should be viewed as part of a sustainable human resource development strategy that is integrated with the performance appraisal system in public health institutions.

Practical Implications

- Hospital management should design competency-based incentive systems to enhance motivation and the implementation of certification outcomes.
- Post-certification mentoring or supervision is necessary to ensure participants not only obtain certificates but also effectively implement them.
- Certification policies should be integrated with routine performance evaluations, so that acquired skills directly impact employee career development and productivity.

Theoretical Implications

This study reinforces the integrative approach model in assessing the effectiveness of training and certification, which encompasses personal, organizational, and perceived benefit aspects. These findings also contribute to the literature on the effectiveness of competency programs in the public sector, particularly government hospitals in Indonesia, which was previously limited.

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