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Career Path, Education-Training, Motivation, and Nurse Performance

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ABSTRACT

This study analyzes how career path and education-training influence the performance of civil-servant nurses through work motivation at Bali Mandara Eye Hospital. A quantitative cross-sectional explanatory survey involved all 101 civil-servant nurses selected through a census technique. Data were collected using a validated Likert-scale questionnaire and supported by interviews, observation, and aggregate performance documentation. PLS-SEM showed that career path and education-training significantly improved work motivation, and work motivation significantly improved nurse performance. Direct effects on performance were not significant. Work motivation functioned as a full mediator, implying that career and training programs improve performance when they create appreciation, commitment, and professional motivation.

INTRODUCTION

Human resources are a strategic element in health service organizations because service quality depends on the competence, motivation, discipline, and consistency of health workers' behavior. In Indonesian public hospitals, civil-servant nurses are responsible for clinical services as well as functional-position administration, credit-point accumulation, Employee Performance Targets (SKP), and digital performance reporting. Therefore, career management, education, and training should strengthen motivation and performance rather than remain administrative obligations.

Bali Mandara Eye Hospital is a specialized eye hospital owned by the Provincial Government of Bali. Its ophthalmology services are high-volume, time-sensitive, and require clinical precision in outpatient care, operating rooms, preoperative and postoperative services, and emergency eye care. These conditions require nurses to maintain service quality, punctuality, accurate documentation, team coordination, and patient-safety compliance.

Career development for civil-servant nurses is linked to functional positions, credit-point fulfillment, competence, experience, and performance achievement (Ministry of Administrative and Bureaucratic Reform of the Republic of Indonesia, 2019). In practice, this system may face limited position formation, uneven understanding of credit points, service workload, and the need for administrative coaching. A clear career system may support nurse career growth, but its effect on performance may weaken if it is not accompanied by perceived appreciation, organizational support, and motivation (Firman et al., 2024; Ni et al., 2025).

Education and training are essential because specialized eye care requires patient safety, infection prevention, ophthalmic perioperative care, surgical instrumentation, documentation, and emergency triage competencies. However, training outcomes do not automatically translate into performance unless they are supported by learning transfer, supervision, opportunities for application, and internal motivation (Mohamed & Al-Hmaimat, 2024; Tsirigoti et al., 2024; Nugraha et al., 2025).

The research gap addressed in this study is the limited number of studies that simultaneously examine civil-servant nurses' career path, education-training, work motivation, and performance in one structural model, particularly in a specialized eye hospital owned by a local government. This study contributes by integrating PLS-SEM results with supporting data from interviews, observation, and aggregate SKP documentation. The study aims to analyze the effects of career path and education-training on civil-servant nurse performance with work motivation as a mediating variable at Bali Mandara Eye Hospital.

Theoretical Review

Career Path of Civil-Servant Nurses

Career path is a structured professional development process related to competence, roles, responsibilities, recognition, and promotion opportunities. For civil-servant nurses, career path is linked to nurse functional positions, credit-point fulfillment, SKP, and evidence of professional development. A transparent career system may enhance perceptions of fairness, security, and self-development orientation (Ministry of Health of the Republic of Indonesia, 2017; Maharani & Susilo, 2025).

Education and Training

Education and training are systematic processes for improving knowledge, skills, professional attitudes, and work readiness. In a specialized eye hospital, relevant training improves technical competence and strengthens perceived capability and self-confidence. Training has a stronger effect on performance when the material is aligned with unit needs, access is equitable, and outcomes are implemented through supervision and feedback (Aziz, 2023; Kusnabilla et al., 2023; Mumpuni, 2023).

Work Motivation and Nurse Performance

Work motivation refers to internal and external drives that make individuals willing to exert effort to achieve organizational goals. Nurse motivation includes achievement orientation, recognition, professional responsibility, self-development opportunities, and expectations of rewards. Nurse performance refers to work achievement in providing nursing services according to professional standards, operational procedures, and organizational targets. In the civil-service context,

performance is also reflected in documentation discipline, SIKePO reporting, and SKP achievement.

Conceptual Framework and Hypotheses

The conceptual framework places career path (X1) and education-training (X2) as exogenous variables, work motivation (Z) as the mediating variable, and civil-servant nurse performance (Y) as the endogenous variable. The model tests direct effects, the effect of motivation on performance, and indirect effects through motivation.

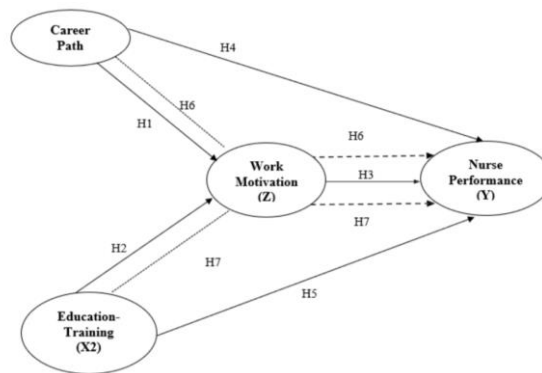


Figure 1. Conceptual Framework and Hypothesis Paths

Source: Developed By the Author Based on the Research Model, 2026

H1: Career path has a positive and significant effect on work motivation.

H2: Education-training has a positive and significant effect on work motivation.

H3: Work motivation has a positive and significant effect on nurse performance.

H4: Career path has a positive and significant effect on nurse performance.

H5: Education-training has a positive and significant effect on nurse performance.

H6: Career path has a positive and significant indirect effect on nurse performance through work motivation.

H7: Education-training has a positive and significant indirect effect on nurse performance through work motivation.

METHODS

This study used a non-experimental quantitative approach with a cross-sectional explanatory survey design. The research was conducted at Bali Mandara Eye Hospital, Bali Province. The population consisted of all 101 civil-servant nurses. Because the population was limited and all members were relevant to the research objectives, the sampling technique used was a census or saturated sampling method (Sugiyono, 2017).

Primary data were collected using a structured five-point Likert-scale questionnaire measuring career path (X1), education and training (X2), work motivation (Z), and civil-servant nurse performance (Y). Supporting data were obtained through semi-structured interviews, non-participant observation, and aggregate SKP documentation. Institutional permission and informed consent were obtained, and respondent identities were coded anonymously.

The instrument was examined through content validity, a pilot study involving 30 respondents, Pearson item-total correlation, and Cronbach's Alpha reliability. The main analysis used Partial Least Squares-Structural Equation Modeling (PLS-SEM) with SmartPLS. The outer model evaluation included outer loading, Average Variance Extracted (AVE),

Fornell-Larcker criterion, Cronbach's Alpha, rho_A, and Composite Reliability. The inner model evaluation included R Square, Q2 predictive relevance, path coefficients, t-statistics, p-values, and specific indirect effects through bootstrapping (Hair et al., 2021).

Table 1. Variables, Indicators, and Descriptive Means

| Variable | Indicators | Mean | Indicators below the mean |
|-------------------------|--|------|--|
| Career path (X1) | Clarity of career path; competence development opportunities; increased roles and responsibilities; organizational support; promotion transparency. | 4.15 | X1.2 = 4.10; X1.4 = 4.08 |
| Education-training (X2) | Competency-based learning; relevance to work duties; professional readiness; participation in continuing training; application of training outcomes. | 4.27 | X2.1 = 4.22; X2.2 = 4.26; X2.4 = 4.25; X2.5 = 4.26 |
| Work motivation (Z) | Achievement drive; recognition of work results; professional responsibility; self-development opportunities; expectation of rewards and benefits. | 4.30 | Z1 = 4.28; Z2 = 4.25; Z4 = 4.20; Z5 = 4.25 |
| Nurse performance (Y) | Service quality; work quantity; punctuality; professional responsibility; teamwork and initiative. | 4.41 | Y2 = 4.30; Y3 = 4.36; Y5 = 4.40 |

Source: Processed Research Data, 2026

RESULTS AND DISCUSSION

Respondent Characteristics

The study involved 101 civil-servant nurse respondents. The dominant profile consisted of 76 women (75.2%), 49 respondents aged 30-39 years (48.5%), 49 respondents with a professional nurse

qualification (48.5%), 43 respondents with more than 15 years of work experience (42.6%), 30 respondents holding the functional position of Junior Expert (29.7%), and 31 respondents assigned to the operating room (30.7%).

Table 2. Dominant Respondent Characteristics

| Characteristic | Dominant category | Frequency | Percentage |
|---------------------|--------------------|-----------|------------|
| Sex | Female | 76 | 75.2% |
| Age | 30-39 years | 49 | 48.5% |
| Last education | Professional Nurse | 49 | 48.5% |
| Length of service | >15 years | 43 | 42.6% |
| Functional position | Junior Expert | 30 | 29.7% |
| Work unit | Operating room | 31 | 30.7% |

Source: Processed Research Data, 2026

Measurement and Structural Model

The measurement model evaluation showed that all indicators were valid and reliable. Outer loading values ranged from 0.737 to 0.922, Composite Reliability values ranged from 0.913 to 0.948, and AVE values ranged from 0.678 to 0.785. The Fornell-Larcker criterion was satisfied because

the square root of AVE for each construct was greater than its correlations with other constructs. The inner model showed an R Square of 0.754 for work motivation and 0.638 for nurse performance. The Q2 value of 0.911 indicates very strong predictive relevance.

Table 3. Summary of PLS-SEM Evaluation

| Construct | Outer loading | Cronbach Alpha | CR | AVE | R Square |
|-------------------------|---------------|----------------|-------|-------|----------|
| Career path | 0.739-0.904 | 0.879 | 0.913 | 0.678 | - |
| Education-training | 0.868-0.904 | 0.931 | 0.948 | 0.785 | - |
| Work motivation | 0.737-0.890 | 0.890 | 0.920 | 0.698 | 0.754 |
| Nurse performance | 0.819-0.922 | 0.923 | 0.942 | 0.765 | 0.638 |
| Q2 predictive relevance | - | - | - | - | 0.911 |

Source: Processed Research Data, 2026

Hypothesis Testing and Mediation

Table 4. Direct and Indirect Effect Testing

| Effect path | Coefficient | t-statistics | p-values | Decision |
|---------------------------------------|-------------|--------------|----------|-------------|
| Career path -> Work motivation | 0.211 | 2.420 | 0.016 | Significant |
| Education-training -> Work motivation | 0.701 | 8.684 | 0.000 | Significant |

| | | | | |
|--|-------|-------|-------|-----------------|
| Work motivation -> Nurse performance | 0.645 | 4.768 | 0.000 | Significant |
| Career path -> Nurse performance | 0.024 | 0.255 | 0.799 | Not significant |
| Education-training -> Nurse performance | 0.154 | 1.079 | 0.281 | Not significant |
| Career path -> Work motivation -> Nurse performance | 0.136 | 2.231 | 0.026 | Significant |
| Education-training -> Work motivation -> Nurse performance | 0.452 | 3.965 | 0.000 | Significant |

Source: Processed Research Data, 2026

Discussion

Career path had a positive and significant effect on work motivation. Clarity of career levels, competence development opportunities, organizational support, increased roles and responsibilities, and promotion transparency can strengthen nurses' work drive. This finding is consistent with the view that organizational career management can support nurse career growth and psychological needs (Ni et al., 2025). However, the direct effect of career path on performance was not significant, indicating that the career system does not automatically improve performance when it is still perceived mainly as an administrative process.

Education-training had a positive and significant effect on work motivation and showed the strongest coefficient in the model. Training relevant to patient safety, eye care services, documentation, and emergency care makes nurses feel more prepared, capable, and confident. Nevertheless, the direct effect of education-training on performance was not significant. Training requires learning transfer, opportunities for application, supervision, and motivation before it affects performance.

Work motivation had a positive and significant effect on nurse performance. This finding

indicates that nurse performance cannot be sufficiently explained by career systems or training as structural factors alone; it also requires internal willingness to be disciplined, responsible, quality-oriented, consistent in documentation, and cooperative with the team. The specific indirect effects show that work motivation fully mediates the effect of career path and education-training on performance. Therefore, career and training programs will be more effective when they generate appreciation, development opportunities, and professional commitment.

Triangulation strengthens the PLS-SEM findings. Interviews indicate that the functional position system, SKP, credit points, and SIKePO have been implemented, but technical assistance, equitable training access, and stronger recognition still need improvement. Observation shows that discipline, SOP compliance, teamwork, and application of training outcomes were generally good; however, daily activity documentation, credit-point evidence, and time management in busy units need strengthening. Aggregate SKP data show performance achievement in the good category, with an average of 80.00%.

Table 5. Summary of Triangulated Findings

| Data source | Main finding | Meaning for research results |
|-----------------------|--|--|
| Questionnaire/PLS-SEM | Career path and education-training affected motivation; motivation affected performance; full mediation was confirmed. | Performance improves when career and training policies generate work motivation. |
| Interviews | The career system, SKP, credit points, and training had been | This explains why the direct effects of career path and training |

| | | |
|---------------|--|--|
| | implemented, but technical assistance and equitable access were still needed. | on performance were not significant. |
| Observation | Discipline, SOP compliance, teamwork, and training application were good; documentation, credit-point evidence, and service time needed strengthening. | Motivation, supervision, and organizational support are needed to make performance more measurable. |
| Aggregate SKP | SKP achievement was in the good category, with an average of 80.00%. | Administrative performance was good, but consistent input, evidence, and career coaching still need improvement. |

Source: Processed Research Data, 2026

CONCLUSION

This study concludes that career path has a positive and significant effect on the work motivation of civil-servant nurses. Education-training also has a positive and significant effect on work motivation and is the strongest predictor in the model. Furthermore, work motivation has a positive and significant effect on nurse performance. In contrast, the direct effects of career path and education-training on performance were not significant.

Work motivation is proven to be a full mediator in the relationships between career path, education-training, and nurse performance. This means that career systems and training programs produce meaningful effects on performance when they first improve work motivation. Management should strengthen organizational support, competence development opportunities, credit-point coaching, position formation mapping, equitable training access, formal appreciation, performance feedback, SIKePO input discipline, documentation, and cross-unit coordination.

This study was limited to one specialized eye hospital owned by a local government and involved only civil-servant nurses; therefore, generalization to general hospitals or non-civil-servant nurses should be made cautiously. Future research is recommended to test this model in general hospitals, private hospitals, or non-civil-servant nursing staff and to add variables such as leadership, workload, organizational culture, and job satisfaction.

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