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Analysis of the Influence of Nurse Competence, Teamwork, and Supervision Techniques in Patient-Centered Care Implementation at RSUD Dradjat Prawiranegara

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Abstract
Patient-focused care is a comprehensive, responsive, and integrated health service approach, aiming to meet the diverse needs of patients and their families. This approach emphasizes the importance of the role of health workers, especially nurses, in providing services that are not only oriented towards medical actions but also towards patient preferences, values, and expectations. This study aims to analyze the influence of nurse competence and teamwork on patient-focused care, with supervision techniques as a mediating variable, at Dr. Dradjat Prawiranegara Regional General Hospital, Serang Regency, Banten. The type of research used is quantitative with a descriptive analytical design. Data collection was carried out through questionnaires. Data analysis includes descriptive analysis using the three-box method approach, as well as inferential analysis using Structural Equation Modeling–Partial Least Square (SEM-PLS). Population and Sample: The study population was all nurses working in the inpatient ward of Dr. Dradjat Prawiranegara Regional General Hospital, Serang, with a sample size of 250 nurses. The study shows that nurse competence and teamwork have a significant effect on supervision techniques. Furthermore, nurse competence, teamwork, and supervision techniques had both partial and simultaneous effects on the implementation of patient-centered care. The R-square test results also confirmed that these three independent variables simultaneously made a strong contribution to achieving patient-centered care in hospitals.
Keywords*: Patient-Focused Care, Competencies, Teamwork, Supervision Techniques*

Introduction

Patient-centered care (ABP) places patients' needs, preferences, and values at the center of clinical decision-making, so that the quality of interaction, communication, and patient experience becomes the main benchmark for service improvement (Abid et al., 2024; Lachaume, 2023). The patient and family engagement framework expands the focus from clinical adherence to care partnerships, encouraging more responsive interventions and policies (Santana et al., 2019). Nurses' clinical competence, communication, and empathy are the foundations of consistent ABP implementation; improved competence has been shown to be related to the quality of therapeutic interactions and patient satisfaction (Ahn & Eun, 2021). Health literacy and nurse communication competence also affect the ability to provide truly patient-centered care (Kim & Cha, 2021; Yang, 2022).

The effectiveness of ABP is strongly influenced by cross-professional teamwork—clear collaboration, neat coordination, and complementary roles impact patient safety, information continuity, and experience (Reeves, Xyrichis, & Zwarenstein, 2018). Cutting-edge evidence confirms that good teamwork is positively correlated with patient-centered care behaviors (Baek et al., 2023; Sanyal & Hisam, 2018). Structured clinical supervision (direct observation, coaching, and feedback) strengthens the consistency of ABP practice, as well as serving as a mechanism for fostering competence and a quality culture in the service line (Mokhtari et al., 2022). In the

context of Indonesian nursing, the style and effectiveness of head of room supervision affect the performance of the implementing nurses and the quality of care delivery (Defriani et al., 2022; Panduwinata, Nasution, & Girsang, 2023).

Strengthening ABP aligns with a service quality framework that emphasizes structure-process-output as well as measurable patient experience performance indicators (Santana et al., 2019). National regulations on professional career paths and standards for the nursing profession also provide a foundation for human resource governance and nursing practices that support ABP (Start et al., 2024). At the practice level, the role of nurses in charge of care (PPJA) is a key strategy to ensure the continuity and coordination of care (Wulandari & Wihardja, 2021; Putra et al., 2021; Talahatu & Tasijawa, 2021). Although the concept and regulatory framework are strengthening, preliminary findings in the field still show gaps in competence, professionalism, and feedback utilization, indicating the need for targeted interventions on competencies, teamwork, and supervision systems to optimize the implementation of ABP in the inpatient setting (Gonzalo et al., 2022; Ominyi & Alabi, 2025).

Previous studies have highlighted the importance of competence and teamwork in supporting the implementation of patient-centered care (ABP) (Baek et al., 2023; Gantayet-Mathur et al., 2022; Zoukar et al., 2025). For instance, Ahn & Eun (2021) found that nurses' clinical competence and empathy significantly improved therapeutic interactions and patient satisfaction, but their study did not deeply address the role of structured supervision as a mediating factor. Similarly, Baek et al. (2023) confirmed that interprofessional teamwork positively influences patient-centered behaviors, yet the research focused more on collaboration across professions rather than on the supervisory mechanisms that ensure consistent ABP practices among nurses. This study fills the gap by integrating the dimensions of competence, teamwork, and clinical supervision within the context of Indonesian inpatient services, where regulatory frameworks exist but practical implementation often shows inconsistencies. Therefore, this research aims to analyze the effect of first-line manager supervision on nurse competence and teamwork in implementing ABP, with the expected benefit of providing both empirical evidence and practical recommendations to improve service quality, patient safety, and satisfaction in hospital care settings.

Research Method

This study uses a quantitative approach with a descriptive-analytical design. Data collection was carried out once (cut-off) through the distribution of questionnaires to inpatient room nurses at dr. Dradjat Prawiranegara Hospital, Serang Regency, Banten. This design was chosen to assess the relationship between nurse competency constructs, teamwork, supervision techniques, and patient-focused care (ABP) in the context of nursing services in inpatient units. The population is all nurses who are on duty in the inpatient room of dr. Dradjat Prawiranegara Hospital. A total of 250 questionnaires were distributed and all returned (N = 250; response rate = 100%). With this scope, this study practically applied total sampling (census) to inpatient nurses who met the participation criteria (actively on duty when collecting data and willing to fill out questionnaires). Non-nursing staff are not included.

Research Variables and Operational Definitions

1. Nurse Competency (KP): clinical, communication, and professional attitudes relevant to patient-focused care in the inpatient setting.
2. Teamwork (KT): cross-role collaboration within the unit, including coordination, mutual trust, role clarity, and effective communication.
3. Supervisory Techniques (TS): structured clinical supervision practices (direct observation, coaching, and feedback) that encourage practice consistency and performance improvement.
4. Patient-Focused Care (ABP): a service behavior that places the patient's values, preferences, and experiences at the center of clinical decisions, including communication/education, emotional support, coordination, care transitions, and access to services.

The four constructs were measured as a reflective latent variable with a number of indicators on a structured questionnaire. The answer scale uses a 5-level Likert (1 = strongly disagree to 5 = strongly agree). (If the original instrument has different redactions/levels, the adjustment of the term follows the original item without changing the meaning. The instrument was in the form of a printed questionnaire that was distributed directly to nurses in the inpatient room. The research team conducts a completeness screening immediately after the return so that no incomplete questionnaires enter the analysis stage. Furthermore, the data is entered into a worksheet and prepared for descriptive and inferential analysis.

The analysis is carried out at two levels:

1. Descriptive Analysis
   a. Respondent characteristics (age, gender, working age, career path, education) were summarized as frequency and percentage.
   b. To facilitate the interpretation of the level of perception, a three-box method approach is used to map scores into low-medium-high categories based on the scale range.
2. Inferential Analysis (SEM-PLS)
   a. Structural modeling was carried out with Structural Equation Modeling–Partial Least Squares (SEM-PLS) using SmartPLS 4.
   b. Evaluation of the measurement model (reflective) includes:
      1. Indicator reliability (outer loading) with a practical reference of ≥ 0.70;
      2. Internal reliability uses Composite Reliability (CR) with a limit of ≥ 0.70;
      3. Convergent validity using Average Variance Extracted (AVE) with a limit of ≥ 0.50;
      4. Discriminant validity was evaluated using Fornell–Larcker criteria and HTMT ratios (suggested < 0.85–0.90).
   c. Structural model evaluation includes:
      1. Collinearity test (VIF recommended < 5),
      2. Path coefficient and significance via bootstrapping (two-tailed, $\alpha = 0.05$),
      3. Determination coefficient (R^2) to assess the explanatory strength of the model,
      4. (Optional if calculated) The size effect (f^2) for predictor contribution, as well as Q^2 (blindfolding) for predictive relevance.
   d. Hypothesis testing includes the direct influence of KP→ABP, KT→ABP, TS→ABP; the influence of KP→TS and KT→TS; as well as TS mediation on the relationship between KP→ABP and KT→ABP.
   e. The summary results of the empirical testing of the data show all significant major influences and the mediation of TS is confirmed, in line with the summary of findings reported in the results section.

Filling out the questionnaire is done voluntarily after explaining the purpose of the research;

The confidentiality of respondents' identities is maintained and only aggregate data is reported. The data collection process follows the principles of research ethics (maintaining autonomy, confidentiality, and non-maleficence) that apply in the hospital environment and study programs. Processing and modeling using SmartPLS version 4 for SEM-PLS analysis. Descriptive tabulation is performed on a statistical worksheet (spreadsheet) before being imported into SmartPLS.

Results and Discussion

The stages of the instrument used in this study were in the form of a questionnaire that was given directly to the respondents, namely nurses in the Inpatient Installation at dr. Dradjat Prawinegara Serang Hospital. The total questionnaires distributed in this study amounted to 250 questionnaires. Of the 250 (100%) questionnaires distributed, 250 (100%) questionnaires were re-received. Measure the outer Partial Least Square (PLS) model to analyze the validity and reliability of indicators that measure latent variables. The validity test criteria in a study refers to the amount of outer loading of each indicator against its latent variable. The researcher used SmartPLS 4 to process data on the results of this study where the data collected has gone through screening so that there are no questionnaire results that have a missing value of filling out outside the predetermined measurement scale.

Table 1. Statistics Description of Research Respondents

Description	Frequency	Percentage
Age:		
21 – 25 years	49	19.6%
25 years 1 day – 35 years	156	62.4%
35 years 1 day – 45 years	45	18.0%
Total	250	100%
Gender:		
Male	67	26.8%
Female	183	73.2%
Total	250	100%
Length of Work:		
1 – 5 years	50	20.0%
5 years 1 day – 10 years	165	66.0%
> 10 years	35	14.0%
Total	250	100%
Career Level:		
PK1	64	25.6%
PK2	167	66.8%
PK3	19	7.6%
Total	250	100%
Last Education:		
Diploma (D3)	70	28.0%
Bachelor (S1)	40	16.0%
Professional Nurse (Ners)	140	56.0%
Total	250	100%

Based on the characteristics of the respondents, it can be concluded that the majority of nurses are in the young adult age group. In terms of gender, more respondents were female than men. Judging from the working period, most nurses have had a long enough experience so that it can be said that they understand the conditions and environment of the hospital well, when viewed from the career level, the majority of respondents occupy a medium career level (Pk2).

Meanwhile, from the educational aspect, most nurses have completed the nurse professional education, which shows that they have adequate academic and professional qualifications to carry out duties in hospitals.

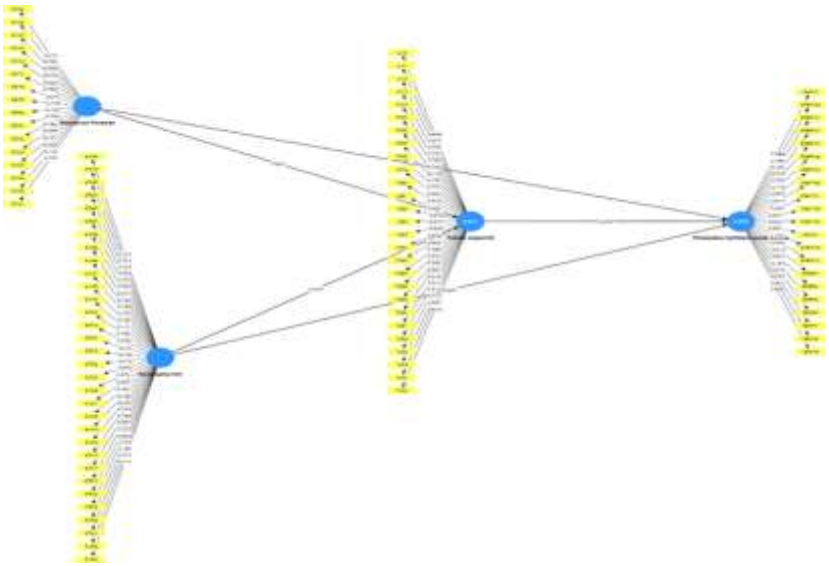

Figure 1. Outer Display Model SEM-PLS

Based on the results of this study, the display of the output image above is known that the highest coefficient value for the nurse competency variable is in the KP35 construct which is 0.845 and the lowest KP32 construct is 0.770. This shows that KP35 is the construct that has the strongest correlation among other constructs in forming the nurse competency variable. The second variable of teamwork was the strongest construct, KT64 of 0.822, and the construct with the lowest value, KT39 of 0.720. The third variable is supervision techniques. Of this variable, the strongest construct is TS86, which is 0.845. While the weakest construct is TS70 which is 0.716. Next, the patient-focused care variable with the strongest construct was PBPP6 of 0.853, while the weakest was PBPP14 of 0.718. Based on the image below, it is known that the highest value of bootstrapping results is the KT65 construct for teamwork, which is 34,969. Meanwhile, the lowest value is the TS70 construct for supervision techniques with a coefficient of 13.205. Overall the results obtained from this test are positive, this shows that all the effects that occur are positive.

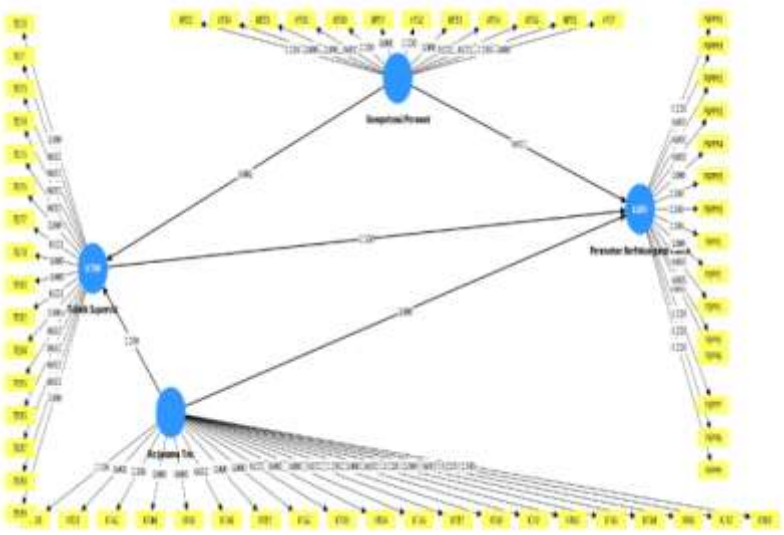

Figure 2. Outer Boostraping SEM-PLS Display

Based on the overall calculation, the influence of nurse competence and teamwork on supervision techniques, as well as the influence of nurse competence, teamwork, and supervision techniques on patient-focused care can be explained as follows:

1) First Hypothesis Testing: The first hypothesis suggests that the competence of the implementing nurse, teamwork and supervise techniques have a simultaneous effect on patient-focused care. The results of the R-square test showed that the competence of the implementing nurse, teamwork and supervise techniques had a simultaneous effect on patient-focused care, with a variable significance value of 0.000, which was smaller than the probability value (0.05).
2) Second Hypothesis Testing: The second hypothesis posits that nurse competence has a direct influence on patient-focused care. The results of the pathway coefficient test in substructure 2 show that nurse competence has a significant direct effect on patient-focused care. This is reflected in the value of the significance of the variable of 0.000 which is smaller than the probability value (0.05).
3) Testing the Third Hypothesis: The third hypothesis states that teamwork has a direct effect on patient-focused care. The results of the path coefficient analysis in substructure 2 show that teamwork has a positive and significant influence directly on patient-focused care. The significance value of the variable is 0.000 which is smaller than the probability value (0.05).
4) Testing the Fourth Hypothesis: The fourth hypothesis states that supervision techniques have a direct effect on patient-focused care. From the results of the pathway coefficient test in substructure 2, it was found that the supervision technique also had a positive and significant effect directly on patient-focused care, with a variable significance value of 0.000 which was smaller than the probability value (0.05).
5) Testing the Fifth Hypothesis: The fifth hypothesis states that supervisory techniques may mediate the influence of nurse competence on patient-focused care. Based on the results of the test of the pathway coefficient in substructure 1 and substructure 2, it was found that the competence of the nurse affected the supervision technique, so that the supervision technique functioned as a mediator in the influence between the competence of the nurse and the patient-focused care with a variable significance value of 0.026 which was smaller than the probability value (0.05).
6) Testing the Sixth Hypothesis: The sixth hypothesis states that supervisory techniques mediate the influence of teamwork on patient-focused care. The results of the path coefficient test in substructure 1 and substructure 2 showed that teamwork had an effect on supervision techniques, so that supervision techniques also played a mediator in the influence of teamwork on patient-focused care with a variable significance value of 0.000 which was smaller than the probability value (0.05).
7) Testing the Seventh Hypothesis: The seventh hypothesis confirms that nurse competence has a direct effect on supervisory techniques. Based on the results of the path coefficient test on substructure 1, it was found that nurse competence had a positive and significant effect directly on supervision techniques, with a variable significance value of 0.002 which was smaller than the probability value (0.05).
8) Testing the Eighth Hypothesis: The eighth hypothesis suggests that teamwork has a direct effect on supervision techniques. The results of the path coefficient test in substructure 1

showed that teamwork had a significant effect directly on the supervision technique, with a variable significance value of 0.000, which is smaller than the probability value (0.05).

Conclusion

A study of 250 inpatient room nurses at dr. Dradjat Prawiranegara Hospital demonstrated that nurse competence, teamwork, and supervision techniques significantly and jointly contribute to the effective implementation of patient-centered care (ABP), as confirmed by a strong R-square and simultaneous model significance (p = 0.000). Each factor individually impacted ABP positively (p = 0.000), highlighting that enhancing nurses' knowledge, skills, and professionalism; improving interprofessional communication and coordination; and maintaining consistent clinical supervision improve the quality of ABP practice. Supervision techniques were identified as a key mediator, bridging the influence of nurse competence (p = 0.026) and teamwork (p = 0.000) on ABP, thereby maximizing the impact of team competence and collaboration when paired with ongoing, effective supervision. Additionally, nurse competence and teamwork directly reinforced supervisory practices (p = 0.002 and p = 0.000), suggesting a reciprocal relationship among human resource quality, collaborative culture, and clinical coaching governance. Future research could explore longitudinal impacts of targeted supervision training programs on sustaining improvements in ABP implementation and patient outcomes over time.

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