

Effectiveness of the INPRO Nursing Services Clinical Governance Model for Enhancing Job Satisfaction and Performance of Nurses in Primary Health Center

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INTRODUCTION

Nurse performance reflects the achievement of their professional duties and responsibilities. Nurses play a crucial role in enhancing the quality and success of healthcare services provided by Primary Health Centers (PHCs) (Harmiyati et al., 2016). Studies on the achievement of nurse performance in providing nursing care for vulnerable families, groups, communities, and self-care empowerment in primary health centers show that performance levels remain below 50% (Susanto et al., 2019). The other Research by Santoni & Mardijanto (Santoni &

Abstract

Objective: This study aimed to evaluate the effectiveness of the Inpro clinical governance model in improving job satisfaction and performance among nurses in primary health care settings.

Method: A quasi-experimental study with a pre-test and post-test control group design was conducted. A total of 56 nurses participated, divided equally into intervention and control groups. The intervention group received implementation of the Inpro clinical governance model, while the control group continued with standard practices. Data on job satisfaction and performance were collected before and after the intervention using validated instruments. Statistical analysis was used to compare changes between the two groups.

Results: The findings indicated a significant improvement in both job satisfaction and performance among nurses in the intervention group after the application of the Inpro clinical governance model. In contrast, the control group showed no meaningful changes. The increase in average scores in the intervention group was statistically significant, demonstrating the model's effectiveness in enhancing nursing outcomes.

Conclusion: The Inpro clinical governance model proved to be an effective strategy for increasing nurse job satisfaction and performance in primary health centers. It offers a structured approach to improving nursing service quality and can be adopted in similar healthcare settings to support professional development and service excellence.

Keywords: Job satisfaction, nursing services, performance, Primary health centers

Mardjanto, 2018) concluded that 87% of nurses have category of poor performance. Similarly, (Hendrian et al., 2019) reported that approximately 42.5% of nurses exhibited suboptimal performance. There was 663 primary health centers (PHCs), representing 0.07% of the 9,655 PHCs across 27 out of 33 provinces, have implemented nursing care programs in accordance with established guidelines. Subsequent studies describe nurse performance as being limited to initial screening, education and medical therapy activities (Findyartini et al., 2019; Owens & Zwilling, 2020; Wahyudi, 2020). The other

studies regarding nursing activities in primary health centers (PHCs) include establishing medical diagnoses, prescribing medications, administering treatments, managing patient registration, providing health insurance services (Agustanti, 2016; Rizcarachmakurnia et al., 2017; Rusli et al., 2013; Yeni et al., 2010) and being assigned to both outpatient and inpatient care by the same nurses (Sarda et al., 2018).

(Nasution et al., 2019) described nurse performance in PHCs related to the implementation of the Community Health Program (Perkesmas), achieving approximately 70% of program targets, which still fell short of set goals. Similarly, the study by (Yenni, 2016) found that 60.3% of nurses performed poorly in the Perkesmas Program. The suboptimal implementation of Perkesmas activities was also evident in the study by (Rachma et al., 2019) which showed that only about 65% of families visited were provided with interventions, and not all families in the database received follow-up care.

This phenomenon of suboptimal nurse performance is linked to nurse job satisfaction. (Ismainar et al., 2021) stated that job satisfaction directly affects nurse performance. The Health Workforce Research Report revealed that job satisfaction levels among healthcare workers in PHCs were categorized as low (Hasugian et al., 2020). (Ully & Retnowati, 2019) found that 50.1% of nurses and midwives reported dissatisfaction with their jobs. (Kurniawan & Prasetyo, 2017) noted that the majority of nurses fell into the moderate job satisfaction category (63%). Job dissatisfaction tends to result in nurses merely fulfilling their duties without striving to deliver high-quality services (Suliman & Aljezawi, 2018). Job satisfaction among nurses, linked to their inherent roles and functions, reflects their autonomy as a professional identity (Kristoffersen, 2021).

Nurses in primary health centers also have dual roles, including performing non-nursing tasks. Some non-nursing tasks include administrative duties such as record-keeping and reporting, assignments as treasurers and secretaries, and serving as ambulance drivers (Rizcarachmakurnia et al., 2017). The findings of this study indicate that the roles and functions of nurses are further burdened by

non-nursing tasks, which can consume the time needed to provide care services. Although some delegated tasks are incorporated into their job descriptions, nurses often lack the time and motivation to perform their independent duties, namely nursing care. As a result, they are unable to deliver nursing services optimally.

In carrying out their roles and functions, nurses must be guided by professional values inherent to the nursing profession (Kozier, 2008). Nurses who fail to perform their roles and functions appropriately may be unable to manage and make clinical decisions independently and confidently in addressing client issues. Demonstrating professionalism in fulfilling their professional duties is crucial for nurses, as it significantly contributes to improving service quality and patient satisfaction (Poghosyan et al., 2014; Woo et al., 2017).

This situation need the strengthening and empowerment of the nursing profession to become more professional and contribute effectively to the healthcare system. Nurses who consistently uphold the autonomy of their profession when providing care are expected to deliver high-quality nursing services. Efforts to optimize nursing services in primary health centers (PHCs) should focus on developing a nursing service governance model.

Nursing service governance can serve as an approach to improve nurse job satisfaction and performance. It involves organizing and mobilizing nursing resources to achieve high-quality care. The development of the Integrative Professional (INPRO) nursing service governance model integrates aspects of nurse autonomy, leadership, and professional relationships into a comprehensive nursing care model for PHCs. The aim of this study is to identify the effectiveness of the INPRO nursing service clinical governance model in improving job satisfaction and nurse performance.

METHODS

This study is a quantitative research utilizing a quasi-experimental design with a control group. A total of 56 respondents participated, consisting of 28 subjects for the intervention group and 28 subjects for the control group.

The research was conducted at primary health centers (PHCs) in Garut Regency. Eighteen PHCs were selected to represent urban/dense population areas and rural areas, with nine PHCs assigned to the intervention group and nine PHCs to the control group. The study period lasted for four months, from January to April 2024.

Data on job satisfaction were measured using an instrument adapted from the Minnesota Satisfaction Questionnaire. Nurse performance data were measured using an adapted version of the Six-Dimension Nursing Performance Scale. Analysis was performed using the General Linear Model Repeated Measures (GLM-RM) test to assess differences in the variables measured repeatedly, focusing on job satisfaction and nurse performance. The researcher applied ethical principles in this

study, including beneficence, respect for human dignity, and justice.

RESULT

Differences in Respondent Characteristics Between the Intervention and Control Groups
This section examines the differences in characteristics between the respondents in the intervention group and the control group. These characteristics include demographic factors such as age, gender, employment status and work experience. The analysis of these differences helps ensure that any observed effects on job satisfaction and nurse performance are not due to pre-existing disparities between the two groups but are a result of the intervention itself

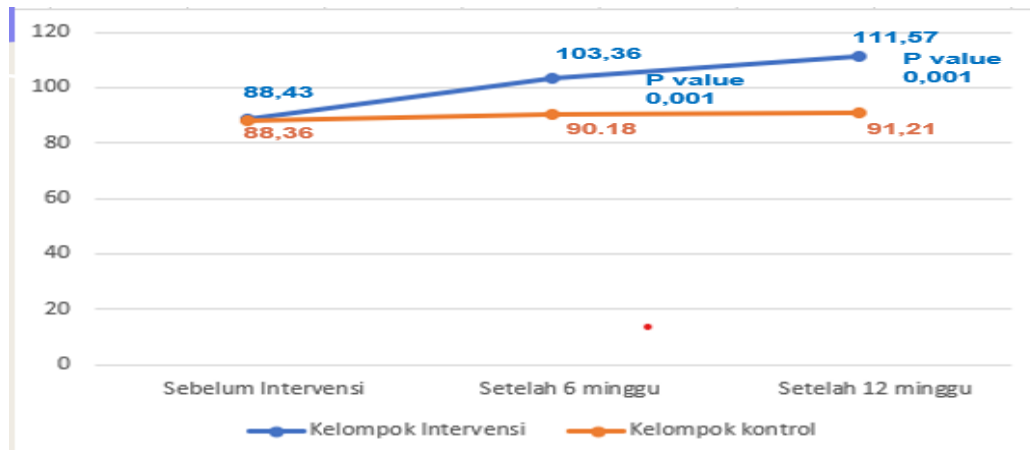
Table 1 Differences in Respondent Characteristics Between the Intervention and Control Groups (n=56)

Variabel	Intervention groups (n=28)		Control groups (n=28)		p-value
	f	%	f	%	
Sex					
Male	9	32,1	8	28,6	1,00
Female	19	67,9	20	71,4	
Employment status					
Civil servant	20	71,4	20	71,4	1,00
Non- civil servant	8	28,6	8	28,6	
	Mean (SD)	Min-Max	Mean (SD)	Min-Max	
Age	38,75 (8,39)	26-56	36,43 (6,88)	26-56	0,263
length of working	14,64 (7,27)	3-32	12,68 (5,57)	28-57	0,262

Based on Table 1, the statistical analysis results show no significant differences in respondent characteristics (gender, age, length of employment, and employment status) between the intervention group and the control group.

Difference in the Mean Job Satisfaction Before and After Intervention in the Intervention and Control Groups

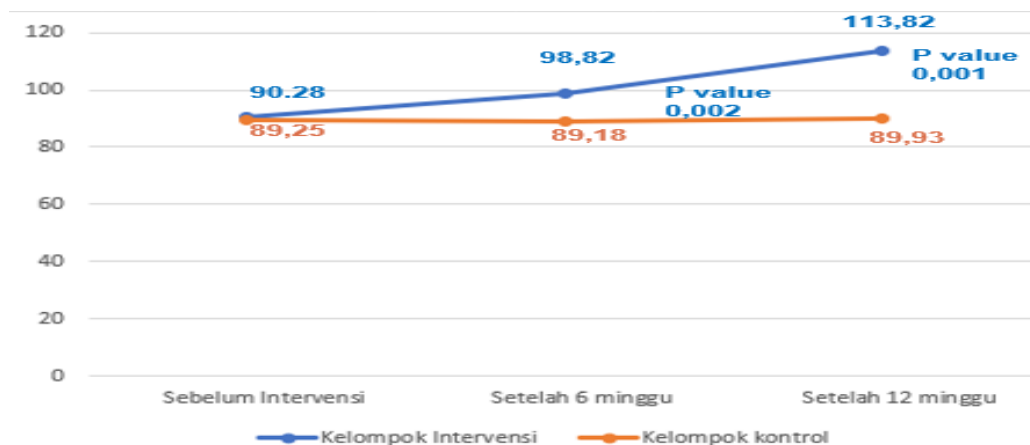
The difference in the mean job satisfaction between the intervention and control groups is presented in the following Graph 1



Graph 1: Difference in Mean Job Satisfaction Scores by Measurement Time (GLRM)

Graph 1 shows an increase in the mean job satisfaction scores for the intervention group in weeks 6 and 12. The mean job satisfaction scores for the control group did not show any significant improvement and tended to remain stable. The results of the statistical test for job satisfaction in both groups indicated a significant difference between the intervention and control groups (p -value = 0.001).

Difference in Mean Nurse Performance Before and After Intervention
The difference in the mean nurse performance scores between the intervention and control groups is shown in the following Graph 2



Graph 2: Difference in Mean Performance Scores by Measurement Time (GLRM)

Table 2 shows an increase in the mean performance scores for the intervention group in weeks 6 and 12. The mean performance scores for the control group did not show any significant improvement. The results of the statistical test for nurse performance in both groups indicated a significant difference between the intervention and control groups (p -value = 0.001).

Effectiveness of the INPRO Clinical Governance Model for Nursing Services on Nurse Job Satisfaction in Primary Health Centers

Tabel 2 Effectiveness of the INPRO Clinical Governance Model for Nursing Services on Nurse Job Satisfaction in Primary Health Centers

Variabel	Parameter	B	SE	Sig	95% CI	
					Lower	Upper
Job Satisfaction	Intercept	88,432	0,991	0,222	86,386	90,471

Before Intervention	Intervention grups	0,065				
	Control grups	D ^a				
Job Satisfaction After 6 weeks	Intercept	103,363	1,28	0,001	100,71	105,99
	Intervention grups	13,181				
	Control grups	D ^a				
Job Satisfaction After 12 weeks	Intercept	111.57	1,47	0,001	108,55	114,59
	Intervention grups	20,361				
	Control grups	D ^a				

The results in Table 3 show an interaction effect between the intervention group at the 2nd and 3rd measurements, after controlling for factors such as age, length of employment, gender, and employment status. At the pre-intervention measurement, no significant difference in job satisfaction was found, with a p-value of 0.222. A significant change in the mean job satisfaction score occurred at the 2nd measurement (after 6 weeks), with an effect size that increased the difference in mean job satisfaction by 13.18, and a p-value < 0.05. At the 3rd measurement, a significant change in the mean job satisfaction score was observed, with an effect size increasing the difference in mean job satisfaction by 20.361, and a p-value < 0.05.

Effectiveness of the INPRO Clinical Governance Model for Nursing Services on Nurse performance in Primary Health Centers

Table 3 Effectiveness of the INPRO Clinical Governance Model for Nursing Services on Nurse performance in Primary Health Centers

Variabel	parameter	B	SE	Sig	95% CI	
					Lower	Upper
Nurse performance Before Intervention	Intercept	90,285	1,35	0,187	88,234	91,345
	Intervention grups	1,029				
	Control grups	D ^a				
Nurse performance After 6 weeks	Intercept	98,824	1,37	0,002	96,722	100,27
	Intervention grups	9,640				
	Control grups	D ^a				
Nurse performance After 12 weeka	Intercept	113,822	1,29	0,001	110,221	117,67
	Intervention grups	23,886				
	Control grups	D ^a				

The results in Table 3 show an interaction effect between the intervention group at the 2nd and 3rd measurements, after controlling for factors such as age, length of employment, gender, and employment status. At the pre-intervention measurement, no significant difference in performance was found, with a p-value of 0.187. A significant change in the mean performance score occurred at the 2nd measurement (after 6 weeks), with an effect size that increased the difference in mean performance by 9.640, and a p-value < 0.05. At

the 3rd measurement, a significant change in the mean performance score was observed, with an effect size increasing the difference in mean performance by 23.886, and a p-value < 0.05.

DISCUSSION

The organization of nursing services through this model provides clear and structured guidance, enabling nurses to work more efficiently and productively. One study states that the quantity and quality of healthcare

services heavily depend on the role of healthcare personnel involved, and this is a key factor in the success of services provided in primary health centers (PHCs) (Shofiah et al., 2019).

The implementation of this model can support the health transformation program launched by the government. Health transformation in Indonesia is an effort to comprehensively improve the healthcare system to enhance access, quality, and efficiency of healthcare services for all citizens (Kementerian Kesehatan Republik Indonesia, 2023). The implementation of the clinical governance model for nursing services in primary health centers serves as a reinforcing factor in this transformation process, particularly in the first pillar of primary care transformation and the fifth pillar of healthcare workforce transformation.

In the first pillar, which focuses on primary care networks, including primary health centers (PHCs), efforts are directed toward health promotion, addressing stunting, expanding immunization coverage, and preventing tuberculosis (TB). Nurses play a vital role and have essential duties and functions within this pillar by contributing to primary care networks through health promotion activities in the services they provide.

Health promotion efforts carried out by nurses at PHCs contribute to disease prevention, increased health awareness, and improved community quality of life. Strengthened health promotion efforts within healthcare services reflect an enhanced professional identity for healthcare workers (van Heteren et al., 2024).

In the fifth pillar, the Ministry of Health has programmed an increase in the number of healthcare workers, equitable distribution of healthcare personnel, and improvement in the quality of healthcare professionals. The implementation of the clinical governance model for nursing services supports this fifth pillar by advancing health transformation through enhancing the quality, capacity, and competence of healthcare professionals, particularly nurses, ensuring that services provided are of high quality and consistent. Enhancing nurses' professional capacity can

lead to greater satisfaction and better quality of care delivered (Torabizadeh et al., 2019).

Strengthening Primary Health Care (PHC) is one of the pillars in the transformation of the national health system. One approach to strengthening PHC is the establishment of a quality improvement framework through the accreditation process. The goal of PHC accreditation, as outlined in the Indonesian Ministry of Health Regulation No. 165, is to foster and continuously improve service quality and ensure patient and community safety (Permenkes, 2022). Nurses who demonstrate professional capacity have a significant impact on service quality (30).

The analysis of mean scores based on components of job satisfaction in the intervention group revealed an increase both after 6 weeks and after 12 weeks of intervention. This model has enhanced and expanded the professional capacity of PHC nurses. This aligns with previous research indicating that the development of nursing human resources related to job roles and functions (tupoksi) can increase job satisfaction (Sarıköse & Göktepe, 2022). Another study concluded that training activities attended by nurses resulted in significant differences in job satisfaction between the intervention and control groups (Niskala et al., 2020). This increase in job satisfaction not only has a positive impact on nurses personally but also improves the quality of care provided to patients.

The implementation of this model offers clear and structured job guidelines, helping nurses better understand expectations and responsibilities. This is evident in the improved performance element related to the provision of nursing care, which has shown the greatest increase, thereby enhancing overall performance and service quality for patients. Successful autonomy in nursing care is achieved by fostering independence in work, ensuring adequate competence, decision-making abilities, and teamwork (Pursio et al., 2023).

The study results also improved interpersonal relationships. Nurse performance is closely linked to interpersonal relationships between nurses and other healthcare professionals. The role of nurses in interprofessional relationships is crucial for achieving service

objectives (Jeon & Park, 2020). Positive interpersonal relationships significantly influence nurse performance (Hegazy et al., 2021).

Effective communication is essential for nurses in building interpersonal relationships. The model also positively impacted nurses' communication, which improved significantly. Communication emerged as the most prominent aspect of performance in the context of nurses' interpersonal relationships. Effective communication is vital in the nursing care process and directly affects the quality of patient care (Wafa'a et al., 2024).

Nurses with effective communication skills, strong teamwork, and positive relationships with patients foster a supportive work environment, leading to higher-quality patient care and improved performance. This finding aligns with previous studies indicating that a supportive work environment that empowers nurses' roles and functions can enhance their performance (Ayalew et al., 2019; Wafa'a et al., 2020).

Job satisfaction reflects the emotional response to the assessment of work or job experiences (Both-Nwabuwe et al., 2020). Increased job satisfaction suggests that nurses are fulfilling their professional duties consistently, which is consistent with previous research (Simonetti & Sáez, 2023). Job satisfaction is a key factor associated with work efficiency, influencing professional commitment and the effectiveness of performing nursing duties (Dziedzic et al., 2023). The improvement in job satisfaction observed among nurses after the implementation of this model stems from a clearer understanding of job roles and responsibilities, better coordination with other professionals, and the establishment of a well-defined work system. Nurse job satisfaction significantly impacts not only the nurses themselves but also the patients and the healthcare centers (*Puskesmas*). Satisfied nurses are more likely to provide better care. Nurses who are content with their work tend to offer services that are more compassionate, empathetic, and patient-centered.

The implementation of the clinical governance model for nursing services has contributed to improving nurses' knowledge and skills in delivering care. This aligns with the findings of

(Cox et al., 2023), which indicate that nurse performance improves when supported by a conducive environment and clear job descriptions aligned with the nursing profession. A work atmosphere that fosters skill development, nursing leadership, effective collaboration among healthcare professionals, and opportunities for nurse participation in decision-making enhances patient care quality, job satisfaction, and nurse performance (Abdulla Almadani, 2023).

Nurse performance at *Puskesmas* is a critical component of Indonesia's healthcare system. It can be measured through various aspects, including service quality, efficiency, patient satisfaction, and the ability to manage diverse medical situations (Paguio & Yu, 2020). The improvement in nurse performance following the model's implementation can be attributed to the presence of a structured framework that helps nurses clearly understand their roles and responsibilities. This clarity strengthens the professional identity of nurses.

A nurse's professional identity reflects the integration of skills, knowledge, and values that shape how they fulfill their roles and functions as nurses (Rodríguez et al., 2024). Consistent implementation of the clinical governance model for nursing services, along with clear role definitions, standardized practices, and ongoing professional development, enhances nurse performance and the quality of nursing care services.

CONCLUSION

The INPRO clinical governance model for nursing services has proven effective in enhancing both nurse's job satisfaction and performance in primary health care. Regular monitoring and supervision are required for nurses to effectively implement this model during patient care activities. Head of community health center should reevaluate the assignment of nurses' core duties, prioritizing the implementation of service activities grounded in their professional roles and functions as nurses. Further research is needed to explore the factors influencing nurses' compliance with implementing this model, including monitoring their job satisfaction and performance levels.

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Conflict of Interest

The authors declare no conflict of interest related to this research.

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