

# The Effects of Implementing Profesional Nursing Practice Model on Quality of Nursing Care in the Hospital in Indonesia

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## Abstract

Until now the quality of nursing care in the hospital still low, even though nursing higher education already started in 1983. In order to improve the quality of nursing care in the hospital it was needed restructuring, reengineering, and redesigning of nursing care delivery system through the implementation of Professional Nursing Practice Model (PNPM). The study was aimed to evaluate the effect of PNPM on the quality of nursing care in the hospital. The design used was quasi experiment pre and post test with control group. The statistic used was chi-square and t-test. The result showed that in the intervention group, the improvement of patient and family satisfaction with nursing care (OR=114.28) was higher than in the control group (OR=3.78). It was also found that the compliance of nurses to standard was higher in the intervention group (OR=235.5), compare to control group (OR=0). The study concluded that the implementation of PNPM could improve the quality of nursing care in the hospital. Based on this result, in order to challenge the implementation of PNPM in the hospital it was suggested that the implementation of PNPM becomes an evaluation criteria for hospital accreditation specifically for nursing service

**Key words :** PNPM, quality of nursing care ,patient satisfaction, compliance of nurses

## 1. Introduction

The improvement of nursing as a profession in Indonesia started in 1983 through the development of nursing higher education. In spite of that, until now the educational development had not yet improved the quality of nursing care in the hospital. These showed by the result of the study about the quality of nursing care at two hospitals in Jakarta. Patient and family satisfaction with nursing care with good category ( 16,9 %) and the compliance of nurses to standard, which was evaluated based on nursing documentation were good category ( 0.35% ),(Sitorus, 2002).

There are several factors that causes low quality of nursing care which could be looked from structure and process of nursing care delivery system ( Donabedian 1980 ). In the structure that main factor was the number and kind of nurses manpower, that could not be competent to provide the professional nursing care. In fact that nursing manpower in nursing services with Bachelor of Nursing only 0,24% and others some are diploma in nursing and nurses aids. In this condition the method in delivering nursing care are functional or team method which, could not in line with professional nursing care.

If there was no changes in structure and process of nursing care delivery system, it was difficult to improve the quality of nursing care, especially in facing globalization, nursing service would have a competition and quality problem became a central of health care. To improve the quality of nursing care it was needed restructuring, reengineering, and redesigning of nursing care delivery system through the implementation of Professional Nursing Practice Model ( PNPM ). PNPM is a system ( structure, process and professional values ) that enable the professional nurses to manage the delivery of nursing care ( Hoffart& Wood 1996 ). The America Nursing credentialing center states that the PNPM should promote the role of professional nurse, support quality patient outcomes and provide supportive work environment for nurses( Storey, Linden, Fisher, 2008).

The study about the implementation of PNPM in the hospital indicated that the compliance of nurses to standard higher 26.4% in the intervention group compare to control group. ( Pearson& Baker 1992 ). Zelauskas & Howes( 1992 ) also evaluate the effect of PNPM, in John Hopkins Hospital, that nurses in the intervention group had positive perception about nurses satisfaction and turnover rate was lower. In implementation of PNPM, it was also found that PNPM enhances professional practice environment and support nurses to function at he highest scope of clinical practice and to work effectively in an interdisciplinary team of caregiver (Walker, Middleton, Rolley & Duff, 2010). PNPM is inline with Magnet Recognition Programme, which was developed and is administered by the American Nurses Credentialing Center (ANCC). In Magnet Recognition Programme, the organization created an environment that supports nursing practice and focusses on professional autonomy, decision making at the bedside, nursing involvment in determining the nursing work envirotnment, professional education, career development and nursing leadership. The implementation of Magnet Recognition Programme also has succesfully in enhanced nurse and patient satisfaction, excellence in the delivery of nursing service and improve outcome (Grant, Colello, Riehle & Dende, 2010., Swanson & Tidwell, 2011).

Based on the assessment about nursing in Indonesia , PNPM that suits to condition of nursing in Indonesia and also using the experiences of many countries it was decided to redesign the structure and process of delivering nursing care. The Model consists of four characteristics in structure: the number of nurses in the ward is decided based on the acuity system, the kind of nurses consists of primary nurse and associate nurse and using standard nursing care plan , in process using modified primary nursing method in providing nursing care.

## 2. Aim

The aim of the study was to evaluate the effect of professional nursing practice model on quality of nursing care.

## 3. Methods

The study design was a quasi experiment pre test- post test with control group. For intervention group, which were wards which implementing PNPM, and control groups were ward which usual condition. The study were done in two goverments hospitals in Jakarta. The wards used were medical Surgical nursing ward which were seven wards for intervention and seven wards for control. The population were patients at both hospitals. Sampling technique used convenience sample with inclusion criteria hospitalized for  $\geq 3$ days. The number of sample was set based on mean difference for two population equation(  $N1=N2=283$ ). The instrument used were questionnaire about patient and family satisfaction and the instrument related to compliance of nurses to standard based on nursing process documentation.

Data was entered and analyzed using the Statistical Program of Statistical Package of Social Sciences (SPSS) version 15. The effect of PNPM on patient satisfaction and on nurses complience to standard were analyzed using Chi-Square. P value  $< 0,05$  was considered significant.

## 4. Results

Based on comparison test, respondents in intervention and control group were equal, in terms of age and education.

Table 1: The effect of PNPM on patient satisfaction

The effect of PNPM on patient satisfaction found that in the intervention group patient satisfaction with nursing care before PNPM were good category ( 15% ), moderate category ( 44.1% ) and low category ( 40.9% ). After PNPM were good category ( 73.9% ), moderate category ( 25.3% ) and low category ( 1.7% ). Based on Chi-square test, patient satisfaction before and after PNPM was differ significantly (  $p<0.05$ ). The effect of PNPM could be seen from OR ( 114.28 ). It means after PNPM, patient satisfaction with good category was higher 114.28 compare to patient satisfaction before PNPM.

In the control group, patient satisfaction with nursing care with good category ( 7.7% ), moderate category ( 70.6% ) and low category ( 21.7% ). After PNPM patient satisfaction with good category ( 16.4% ), moderate category ( 71.4% ) and low category ( 12.2% ). Based on Chi-square test patient satisfaction with nursing Care before and after PNPM was different significantly (  $p < 0.05$  ). The difference of patient satisfaction between pre and post test in the intervention group could be seen in OR ( 3.78 ). In the intervention group ( OR= 114.28 ) higher than in the control group ( OR= 3.78 ), as an effect of PNPM.

Table 2: The effect of PNPM on the compliance of nurses to standard.

The effect of PNPM on the compliance of nurses to standard could be seen that, in the intervention group, the compliance of nurses to standard before PNPM were good category ( 0.7% ), moderate category ( 44.4% ) and low category ( 54.9% ). After PNPM, the compliance of nurses to standard were good category ( 69.8% ), moderate category ( 6.95 ) and low category ( 23.3% ). Based on Chi- Square test the compliance of nurses to standard before and after PNPM was different Significantly (  $p < 0.05$  ). The effect of PNPM could be seen from OR ( 235.5 ). It means after PNPM the compliance of nurses to standard with good category was higher 235.5 compare to the compliance of nurses to standard before PNPM. In the control group, the compliance of nurses to standard in pretest were good category ( 0% ), moderate category ( 33.9% ) and low category ( 66.1% ). In post test, the compliance of nurses to standard were good category ( 0% ), moderate category ( 38.3% ) and low category ( 61.7% ). The compliance of nurses to standard at pretest and post test was not change 0%. It means there were no improving. Based on this result, it was known that in the intervention group the compliance of nurses to standard with good category were increasing 235.5 times. The improvement was the effect of PNPM.

## 5. Discussion

The implementation of PNPM could improve patient satisfaction with nursing care. The result was in line with the study by Clifford & Horvath ( 1990 ), Aiken et al ( 2008 ), Ondrejka & Barnard ( 2011 ). In PNPM there was a caring relationship between, patient and the nurse. The caring relationship between patient and nurses, was reflected by nurses behavior, that were good listener, so the patients felt care by the nurses. A nurse- patient relationship is very important because patient and family are the reason we exist. Hoffart & Woods ( 1996 ) also conclude that the effect of PNPM on improving patient and family satisfaction. In implementing PNPM, the cause of improving patient and family satisfaction was there was a primary nurse who is responsible for the provision of all nursing care during the patient stay in the ward. The primary nurse start the relationship, which could improve patient and family satisfaction. Primary nursing or modified primary nursing is the most method of care used In PNPM where the level of autonomy given to individual professional nurse ( Flynn & Mc.Carthy, 2008 )

The implementation of PNPM also could improve the compliance of nurses to standard. The result was in line with the study done by Pearson & Baker ( 1992 ), that PNPM could improve the compliance of nurses to standard. The improvement of the compliance of nurses to standard, showed that nurses did not work routinely but using problem solving approach in meeting the needs of patients. The improvement of quality of nursing care through the implementation of PNPM, was happened as in PNPM, there was an environment that facilitate nurses to manage the delivery of nursing care. The improvement of quality of nursing care, could improve the quality of the over all health care. ( Lin 1996 ). Measuring and improving levels of satisfaction with healthcare is important for several reasons. First, patient satisfaction can be viewed as a positive outcome of the healthcare provided. Second, patient satisfaction measures provide healthcare managers with usefull informations about structure, process and outcome of care. Third, patient satisfaction can be viewed as indicator of the overall quality of care institution provides ( Chaaya, Rahal, Morou & Kaiss, 2003 ).

The implementation of PNPM is one strategy to enable the hospital to improve the quality of nursing care. Based on several discussion in the implementation of PNPM, it was suggested to include the implementation of PNPM become a criteria for hospital accreditation in Indonesia. It is expected that in the future there will be a

mechanism to create magnet status in Indonesia that indicate excellence in nursing service, development of a professional milieu & growth and development of nursing staff (ANCC,2005)

## 6. Conclusion

The development of PNPM, become one strategy by many countries in order to improve the quality of nursing care in hospitals. In Indonesia, PNPM had developed based on the experience of several countries and based on the stage of development of nursing in Indonesia. The PNPM developed could improve quality of nursing care, in term of patient and family satisfaction which was 114.28 times higher and the compliance of nurses to standard which was 235.5 times higher. By implementing PNPM, the primary nurse had an autonomy to create work environment that foster patient and nurses satisfaction. The patient and family who might not otherwise realize the scope of a nurses' responsibilities, now have a greater appreciation for the profession. Based on this result, in order to challenge the implementation of PNPM, it was recommended, that the implementation of PNPM, become a criteria for hospital accreditation in relation to nursing service. Until now PNPM has implemented in several hospital in Indonesia and become a national program of Ministry of Health.

## 7.

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**Tabel 1 Distribution of patient satisfaction in intervention and control group**

Group	Patient satisfaction			value		OR
	good	moderate	Low	X2	P	95% CI
				227,16	0,000	
Intervention	43	126	117			Good
Pre PNPM	15%	44,1%	40,9%			114,28(44,05-296,46)
Post PNPM	210 (72.9%)	73 (25.3%)	5 (1.7%)			Moderate 8,43 (5.45-13.05)
Control					0,000	
Pre PNPM	22 (7.7%)	202 (70.6%)	62 (21.7%)			Good 3.78 (1.96-7.28)
Post PNPM	47 (16.4%)	205 (71.4%)	35 (12.25%)			Moderate 2.11 (1.22-3.62)

**Tabel 2 Distribution on nurses compliance on standard in intervention and control group**

Group	Compliance of nurses			value		OR
	good	moderate	Low	X2	P	95% CI
				309,12	0,000	
Intervention	2	127	157			Good
Pre PNPM	(0.7%)	( 44.4%)	(54.9%)			235,5(56,82-976,09)
Post PNPM	201 (69.8%)	20 (6.9%)	67 (23.3%)			Moderate 638,17(146,67-2776,76)
Control					0,000	
Pre PNPM	0 (0%)	97 (33.9%)	189 (66.1%)			Good
Post PNPM	0 (0%)	110 (38.3%)	177 (61.7%)			Moderate 1,21(0,86-1,7)