DEVELOPMENT OF NURSE PERFORMANCE MODEL BASED ON KNOWLEDGE MANAGEMENT: SECI WITH CARING APPROACH TO QUALITY OF NURSING SERVICES IN HOSPITAL

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ABSTRACT

Health services in hospitals still receive many complaints from the public, including the quality of nursing services. The purpose of this study is to develop a nurse performance model based on knowledge management: SECI with a caring approach to quality of nursing services in hospitals The research design carried out was quantitative with cross sectional design to identify organizational factors, nurse factors, occupational factors, opportunities for knowledge management-based nurse performance: SECI with caring approach. Sample of nurses was 120 respondents and data analysis used SEM-PLS. The hypothesis analysis showed significant result only for working factors variable (T value = 2,658, p = 0.008), because the statistical T-value >1.64 (two-tiled) or >1.96 (one-tiled) and probability value (P value) < 0.05. It can show that

organizational factors, nurse factor variables and opportunity variables do not affect nurse performance, while working factor variables can. Working factors improve nurse performance, which includes objective performance, feedback, correction, form of work, while other factors do not affect nurse performance.

Keywords: Caring, Knowledge Management, Nurse Performance

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INTRODUCTION

Health services in hospitals still receive many complaints from the public, including the quality of nursing services (1), as can be seen from t many media (2). The low quality of nursing services depends on various factors, one of which is the nurse's performance (3). Nurses' performance in achieving patient safety goals and in providing nursing care with caring value requires effective knowledge management (4). Knowledge management with the SECI (Socialization, Externalization, Combination, Internalization) model (Nonaka and Takeuchi, 1995) has been widely used to improve performance in organizations (5). However, improvement in the performance of nurses based on knowledge management with the SECI model with caring value has not been done and its effect on the quality of nursing services has not been proven.

Patient safety is a high profile concern to the health service providers and directly reflects the quality of service (2), One of the indicators of unsafe service is shown by the presence of an adverse event (AE) (6). The World Health Organization estimates that 1 in 10 patients experience adverse incidents while in hospital care (7,8). The prevalence of AEs in Indonesia was obtained in 2007 in the eight provinces of which the highest was Central Java, 15.9%, with the number of KTD incidents in hospitals 249 out of 532 cases in 2006-2011 (6,9). The cause of the emergence of AE is ineffective communication / handovers by 60-70%, and inaccuracy in treatment by 10%. The inaccuracy of the procedure, the location of the operation, and the patient at surgery for six months obtained procedure errors of 14%, side errors of 59%, marking 23%, and patients 5% (10,11). Reduction in infection risk is estimated at 1 in 31 hospital patients experiencing HAIs / nosocomial infections, or 3% of patients undergoing treatment having one or more HAIs (12). The incidence of falls experienced by patients undergoing treatment is 3-20% and 30-50% of them cause injury (13).

An effort to improve quality is by improving the performance of nurses based on knowledge management: SECI (Socialization, Externalization, Combination, Internalization) with a caring approach (Maintaining beliefs, Knowing, Being with, Doing for, Enablings) (14). Knowledge management has often been used by industry and has begun to be used for health or nursing in hospitals (15). Caring is a dynamic approach that becomes the benchmark in providing nursing services to increase awareness of clients, as the main approach of nurse practice (16,17). The purpose of this study is to develop a nurse performance model based on knowledge Management: SECI with a caring approach to quality of nursing services in hospitals

METHODS

Health services in hospitals still receive many complaints from the public, including the quality of nursing services (1), as can be seen from t many media (2). The low quality of nursing services depends on various factors, one of which is the nurse's performance (3). Nurses' performance in achieving patient safety goals and in providing nursing care with caring value requires effective knowledge management (4). Knowledge management with the SECI (Socialization, Externalization, Combination, Internalization) model (Nonaka and Takeuchi, 1995) has been widely used to improve performance in organizations (5). However, improvement in the performance of nurses based on knowledge management with the SECI model with caring value has not been done and its effect on the quality of nursing services has not been proven.

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RESULTS
Characteristics of Respondents
The respondents of this study were nurses; the characteristics of respondents are shown in Table 1. The table explains mostly respondents were female (89/120, 74.2%) and the age was 20 – 29 years (40/120, 33.3%). The predominant educational background of nursing was bachelor (60/120, 50.0%), with the highest level specialist (8/120, 6.7%). The employee status of nursing was permanent employees (93/120, 77.5%) and they were mostly from Javanese ethnics (57/120, 47.4%).

Table 1. The Characteristics of Respondents

Respondents' Characteristics	N	%
Age		
20 – 29 years	40	33.3
30 – 39 years	31	25.8
40 – 49 years	27	22.5
≥ 50 years	22	18.4
Gender		
Male	31	25.8
Female	89	74.2
Educational Background		
Diploma	47	39.2
Bachelor	60	50.0
Master	5	4.2
Specialist	8	6.7
Employee Status		
Permanent	93	77.5
Contract	27	22.5
Duration of Working		
1 – 2 years	18	15.0
2 – 5 years	36	30.0
> 5 years	66	55.0
Ethnicity		
Aceh	2	1.7
Ambon	1	0.8
Balinese	3	2.5
Bataknese	7	5.8
Betawi	7	5.8
Bima	2	1.7
Dayak	1	0.8
Jakarta	1	0.8
Javanese	57	47.5
Makassar	1	0.8
Melayu	7	5.8
Minang	6	5.0
Padang	3	2.5
Serawai	1	0.8
Sumatera	1	0.8
Sunda	20	16.7

Nurse Performance
Nurses' performance in knowledge management-based patient safety targets: SECI with a caring approach includes patient identification, effective communication, drug safety,

accuracy of surgery, reduction in risk of infection, and risk of falling patients (International Patients Safety Goals).

Table 2 explains the excellent understanding of respondents was in all categories, which includes patient

identification (90/120, 75%), effective communication (86/120, 71.7%), drug safety (95/120, 79.2%), accuracy of surgery (74/120, 61.7%), reduction in risk of infection (64/120, 53, 3%), and the patient's risk of falling (97/120, 80.8%).

Development of Nurse Performance Model Based on Knowledge Management
Data processing techniques using SEM method based on partial least squares (PLS) require two steps to assess the fitness of a research model, which includes assessing the outer model or measurement model and testing the structural model (inner model). Evaluation of the estimation of significance aims to answer the hypothesis submitted, whether accepted or rejected.

Inner Model Structure Development of Nurse Performance Model Based on Knowledge Management
The hypothesis analysis showed a significant result only for working factors variable (T value = 2.658, p = 0.008), with the statistical T-value >1.64 (two-tiled) or >1.96 (one-tiled) and probability value (P value) < 0.05. It can show that organizational factors, nurse factor variables and opportunity variables do not affect nurse performance, while working factor variables can.

The nurse performance model structure developed has the highest effect on nurse performance. From the structural model, we found that the others factors, such as organizational factors, nurse factor and opportunity variables, did not affect nurse performance.

Table 2. Frequency Distribution of Nurse Performance

Nurse performance	N	%
Nurse performance		
Lack of understanding	47	39.2
Excellent	73	60.8
Patient Identity		
Lack of understanding	30	25
Excellent	90	75
Effective Communication		
Lack of understanding	34	28.3
Excellent	86	71.7
Medicine Safety		
Lack of understanding	25	20.8
Excellent	95	79.2
The accuracy of the operation		
Lack of understanding	46	38.3
Excellent	74	61.7
The accuracy of the surgery		
Lack of understanding	56	46.7
Excellent	64	53.3
Risk of fall risk		
Lack of understanding	23	19.2
Excellent	97	80.8

Table 3. The Effect of Factors on Nurse Performance

|	Original Sample	Sample Mean	Standard Deviation	T Statistics	P Values	Significance
rganization Factors (X1) -> Nurse performance (Y1)	0.078	0.085	0.072	1.080	0.2771	Not Significant
Nursing Factors (X2) -> Nurse performance	0.082	0.086	0.091	0.877	0.381	Not Significant
Working Factors (X3) -> Nurse performance	**0.338**	**0.340**	**0.128**	**2.658**	**0.008**	**Significant**
Opportunity (X4) -> Nurse performance	0.124	0.122	0.114	1.148	0.252	Not Significant
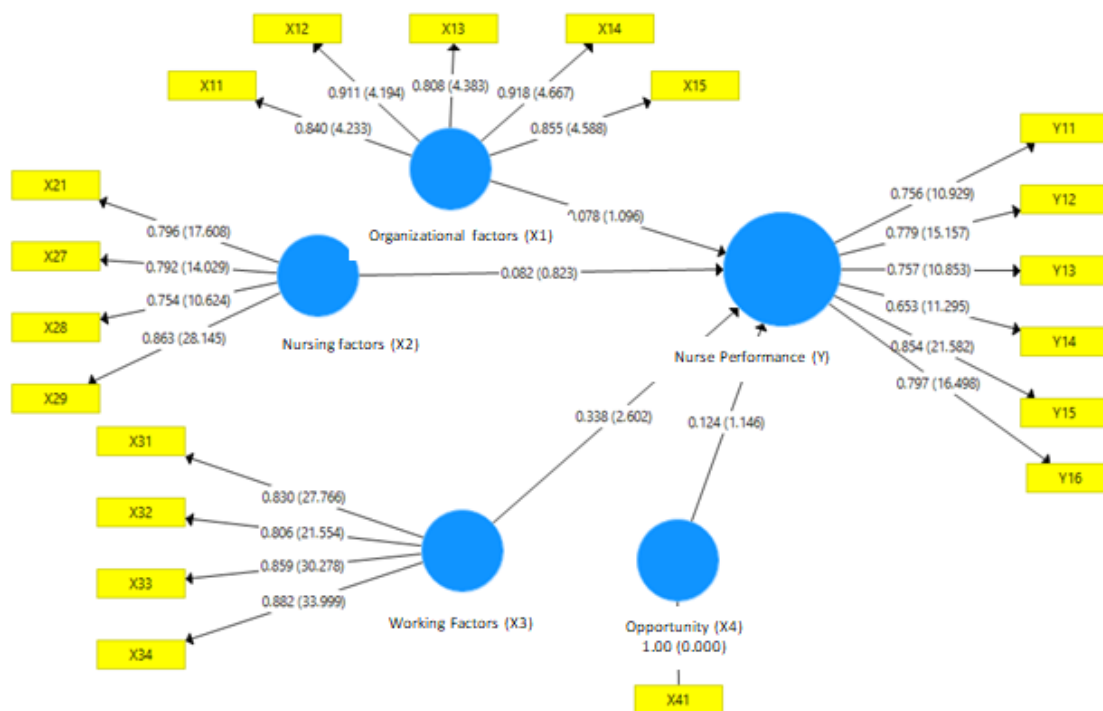
Figure 1. Model Structure Development of Nurse Performance Model Based on Knowledge Management

DISCUSSION

Working factors variable gives the highest effect on nurse performance. It is the main factor influencing the performance of nurses because the level of workload can determine the performance of nurses themselves. Development of nurse performance models in knowledge management patient-based safety: SECI based on caring values showed that the main factor contributing was working factors. Working factors are divided into objective performance, feedback, correction and job form (19). Nurse performance is closely related to the objective views of others on the services provided by nurses. Nurses at work who pay attention to the quality of t performance will do work in accordance with procedures, have a high enthusiasm for work and produce something productive (15). Nurses' performance will also increase along with constructive feedback and correction from seniors or superiors (1,5). A nurse will give a very good performance if the work done is also recognized by others, thus fostering motivation in the care to continue to improve nursing services to patients.

Development of nurse performance models in knowledge management patient-based safety: SECI based on caring shows the differentiation from the original model. The original model stated the factors contributing to increase nurse performance were working factors, organizational factors, nurse factor and opportunity (20). From this study, it was found just working factors had an effect on nurse performance, and the others did not. In other study it was found organizational factors can improve nurse performance, internal condition of organization will define the satisfaction of nursing, self-actualization, different opinion and others. It Research also showed that the individual characteristic of nursing also affects services given (21).

The intervention conducted in the hospital and the indicator of the goals of the model development include patient identification, effective communication, drug safety, accuracy of operations, reduction of risk of infection, and risk of patient falls (11). The SECI concept combined with the Caring Swanson value is elaborated at the socialization

stage through the values of caring for belief, knowing and being with, the externalization stage through the value of caring for and doing for, the combination stage through the value of caring for, doing for and enabling, and the internalization stage through the value of caring, enabling and maintaining belief (22). According to Gibson (1994), nurse and patient satisfaction (organizational effectiveness of nurses and patient satisfaction) suggests that effectiveness in the context of organizational behavior is the relationship between production, quality, efficiency, flexibility, satisfaction, the nature of excellence and development. Satisfaction is a feeling of pleasure someone derives from the comparison between the pleasure of the activities of a product with expectations (23). Customer satisfaction is the result felt by buyers who experience the performance of a company that is in line with their expectations.

Performance is an organizational behavior that is directly related to the production of goods or the delivery of services. Performance in organizations is the answer to the success or failure of organizational goals that have been set. Nurse performance is an achievement in the form of nurses' work, both in quality and quantity achieved by nurses in carrying out their duties in accordance with the responsibilities given to nurses. The responsibilities given in this study focus more on performance evaluation indicators, namely patient safety.

CONCLUSION

Developing a model of improving nurse performance is supported by working factors, which are the main factors that influence the performance of nurses by objective performance, feedback, correction and job form.

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