

# The Patient Safety Model within Decubitus Ulcer Patients in Hospital: Based on the Organizational Citizenship Behavior and Knowledge Management

Tri Johan Agus Yuswanto<sup>1</sup>, Naya Ernawati<sup>1</sup>

<sup>1</sup>Lecturer, Health Polytechnic of Malang, Indonesia

## Abstract

Decubitus ulcer event is an indicator of patient safety in nursing care at the clinic, so a method is needed to reduce the incidence of decubitus ulcer in the patient in hospital. The research aims to create a model for increasing patient safety based on Organizational Citizenship Behavior (OCB) and knowledge management on unexpected events (decubitus ulcer) in achieving the target of patient safety program in Hospital, using cross-sectional design. The subjects were 100 nurses who work in the inpatient room of Surabaya Haji Hospital, selected by purposive sampling. Data collection was done by questionnaire, then analyzed using Partial Least Square (PLS). The model of increasing patient safety based on OCB and knowledge management has proven effective in reducing the incidence of decubitus ulcer in the patient ward. This model is recommended to implement in the hospital to enhance the quality of nursing care.

**Keywords:** patient safety, organizational citizenship behavior, knowledge management, decubitus ulcer

## Introduction

Patient safety has become a global issue since the IOM (Institute of Medicine) report, the United States in 2000 which stated that “to err is human”<sup>(1)</sup>. Patient safety is a top priority in providing services to patients related to the issue of quality and image of the hospital. Safety is a fundamental principle of patient care and a critical component of quality management<sup>(2)</sup>.

Patient safety in hospital includes managing risks, identifying and managing risks to patients, analyzing incidents, learning abilities and following up incidents, and implementing solutions to reduce risk. Nurses are the key to development quality through patient safety<sup>(3)</sup>. The incidence of decubitus ulcer patients is an indicator of patient safety in clinical nursing care. If the patient safety indicator has not reached the specified standard, it will affect the quality of services. As a result of the frequent occurrence of decubitus ulcer patients are at risk

of increasing unexpected events or at risk of occurrence of adverse events.

Basically, the performance of individuals or groups is what ultimately affects the progress of the organization as a whole. Other factors that affect individual performance which ultimately lead to organizational performance are OCB. OCB can be defined as extra behavior related to work outside of routine tasks determined by job descriptions or measured in formal evaluations<sup>(4)</sup>.

OCB is implemented for a long time and by many people it will result in organizational effectiveness<sup>(5)</sup>. The components of OCB are: altruism, conscientiousness, sportsmanship, civic virtue, courtesy.

Knowledge management is used as an effort to maintain, analyze, organize, improve, and share understanding and experience. Such understanding and experience is built on knowledge, both manifested in individuals or inherent in the processes and real applications of an organization. Knowledge management is used by organizations as a new innovation to channel raw data into information and knowledge. Unexpected events occur because nurses commit negligence or errors in handling decubitus ulcer due to various factors

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### Corresponding author:

Tri Johan Agus Yuswanto

E-mail: denbagusjohan@yahoo.co.id

Address: Jl.Ijen-77C, Malang, Indonesia

including burden high work and inpatient room has a high complexity and risk.

Knowledge management according<sup>(6)</sup> is a knowledge management development from the concept of Nonaka and Takeuchi Knowledge management has 7 stages including knowledge identification, knowledge acquisition, knowledge creation, knowledge application, knowledge transfer, knowledge sharing, knowledge documentation. The advantages of the model are that data becomes information processed through collecting, classifying and grouping, processing data so that it changes shape and properties according to its uses, interprets data, stores data, delivers data to users, and uses in supporting the interests of the organization<sup>(6)</sup>.

Efforts to prevent decubitus ulcers based on OCB which is an extra role are expected to make nurses more capable, responsive, alert, empathetic, and responsible in handling decubitus ulcers. Knowledge management approach is a technique to create knowledge harmony so as to achieve optimal performance. The approach of OCB and knowledge management is a combination of two concepts to maximize the role of extra-role and intra nurse roles in managing knowledge that has been obtained to be applied to practice in accordance with the knowledge gained and reflected in the performance of a nurse so decubitus ulcer can be minimized.

**Method**

This research used a quasy-experimental pre post test design with the complete sampling 100 nurses in Haji Hospital Surabaya. Their mean age was 28 years (26-30), and 78 (70.9%) were female, and 22 (20.1%) were male, 40 (40%) had experience of work more than

five years. Path analysis with PLS was used to test the effect of patient safety model based on organizational citizenship behavior and knowledge management toward nurses performance in decrease ulcus decubitus in hospital. The data collection was done by the way the questionnaire and observation. The population to bring up this strategic issue is by giving a survey to evaluate the patient safety implementation that modified factors that influence service quality from Donabedian, which include individual factors, organizational factors, management factors, applying the OCB from Organ and Bateman and knowledge management theory from Nonaka and developed into a modified questionnaire from Kuntarti's previous research on the stages of knowledge management.

**FINDINGS**

It is essential establish the reliability and validity off the latent variables to complete the examination of the structural model. subvariable knowledge, commitment, decision making, culture, monitoring, assessment, intervention, implementation, evaluation, unexpected incidence of decubitus ulcer, the incidence is almost an decubitus ulcer injury is declared valid where the outer loading value is in accordance with the expected criteria >0.5. This shows that indicators in the structure have met the validity test. Whereas for the attitude and leadership type sub variables it is declared invalid where the value of outer loading >0.5.

The composite reliability was >0.7. The cronbach alpha was >0.5. Thus it can be concluded that each variable has fulfilled the reliability test.

**Table 1. The result summary for reflective outer models**

Variables	Indicators	Outer-Loading	Composite-reliability	Cronbach-Alpha
Individual	Knowledge	0.894	0.870	0.702
	Attitude	-0.322		
	Commitment	0.640		
Organization	Decision making	0.965	0.716	0.680
	Leadership	-0.461		
Management	Culture	0.823	0.889	0.757
	Monitoring	0.843		

**Cont... Table 1. The result summary for reflective outer models**

Decubitus Ulcer prevention	Assesment decubitus ulcer prevention	0.724	0.758	0.515
	Intervention decubitus ulcer prevention	0.665		
	Implementation decubitus ulcer prevention	0.670		
	Evaluation decubitus ulcer prevention	0.668		
The incidence of decubitus ulcer	Unexpected incidence of decubitus ulcer	0.905	0.853	0.808
	The incidence is almost an decubitus ulcer injury	0.899		

**Table 2. The path coefficient and t-statistic of inner model**

Variables	Path Coefficient	T Statistic	Remark
Effect of individual factors on the implementation of decubitus ulcer prevention	0.383	2.798	Significant
Effect of organizational factors on the implementation of decubitus ulcer prevention	0.230	2.171	Significant
Effect management factors on implementation of decubitus ulcer prevention.	0.522	3.668	Significant
The effect of implementing ulcus decubitus prevention on events is not expected	0.490	2.735	Significant

The results of the PLS analysis of the influence of individual factors on the implementation of ulcus decubitus prevention obtained path coefficient values of 0.383 and t statistics of 2.798 ( $t > 1.96$ ). These results indicate that there is a significant influence between individual factor variables on the implementation of decubitus ulcer prevention. The positive sign of the coefficient indicates a unidirectional relationship. The same direction can be interpreted that the higher the individual factor, the more the implementation of decubitus ulcer prevention will increase.

The results of PLS analysis of the influence of organizational factors on the implementation of decubitus ulcer prevention obtained path coefficient values 0.230 and t statistics 2.171 ( $t > 1.96$ ). These results indicate that there is a significant influence between organizational

factor variables on the implementation of decubitus ulcer prevention. The positive sign of the coefficient indicates a unidirectional relationship. This unidirectional relationship can be interpreted that the higher the organizational factors, the more the implementation of decubitus ulcer prevention will increase

The PLS analysis of the effect of factor management on the implementation of decubitus ulcer prevention is obtained path coefficient value 0.522 and t statistic 3.668 ( $t > 1.96$ ). This result shows that there is a significant influence between factor management variables on the implementation of ulcus decubitus prevention. in the same direction. This unidirectional relationship can be interpreted that the higher the factor management, the more the implementation of ulcus decubitus prevention will increase. Strategic issues obtained from PLS

analysis are individual factors, organizational factors, and management factors.

The results of the PLS analysis influence the implementation of ulcus decubitus prevention on unexpected events obtained path coefficient value 0.490 and t statistic 2.735 ( $t > 1.96$ ). This result indicates that there is a significant influence between the variables of implementation of ulcus decubitus prevention on unexpected events. show a unidirectional relationship. The same direction can be interpreted that the higher the implementation of ulcus decubitus prevention, the event is not expected to decrease.

The quality of the structural model using R-square of the dependent variables is measured with the stone-Geisser Q-square test for predictive relevance. Based on these figures, the Q-square predictive relevance is calculated as follows:

#### **Q Square predictive relevance**

$$Q^2 = 1 - (1 - R1^2)(1 - R2^2) = 1 - (1 - 0.763)(1 - 0.504) = 0.88 \text{ (88\%)}$$

Since  $Q > 0$ , so the model is stable, and the predictive relevance requirement is satisfied.

### **Discussion**

Sub variables on individual factors include demographics which consist of age, years of service, and level of education, knowledge, attitude. The ability and affordability sub variables are the main factors that influence are the main factors that influence behavior and individuals<sup>(8)</sup>, sub-demographic variables have indirect effects on individual behavior and performance. Demographic characteristics it is also an important thing known by the leader or someone inside motivate and improve its performance.

According to Anvari there are 5 supporting areas for knowledge management, namely human resources, leadership, organization, internal processes and vision. Human resources in this case are nurses which include age, years of service, level of education<sup>(9)</sup>. Age is related to maturity and maturation level, in the sense that increasing age will also increase technical/psychological maturity/maturity, as well as increasingly able to carry out their duties<sup>(10)</sup>. Davis & Newstorm argue that the more age increases the more job satisfaction and achievement. Age can affect one's physical, mental, work ability and responsibility, so that it can be interpreted that the more

mature a person is, the better his performance in safe nursing care<sup>(11)</sup>. Older nurses have maturity in thinking and acting and have the ability to recognize and prevent the danger they get along with the development of age and maturity. This fact will make him more careful and pay close attention. Increasing age and technical and psychological will increase, the more able to make decisions, the more wise and think rationally, so the better performance<sup>(10)</sup>.

Higher the level of education, the greater the desire to use their knowledge and skills. Higher nurse education is easier to understand the task<sup>(12)</sup>. Nurses who have higher education have higher work ability<sup>(13)</sup>. Behavior is based on knowledge will be more lasting than behavior that is not based on knowledge<sup>(14)</sup>.

Knowledge is part of cognitive process which can be improved through education. This is confirmed by Winslow et al in CHSRF and FCRSS which explain that there is a relationship between nursing education and patient needs. Nurses must improve education and training opportunities for all aspects of nursing that have an impact on patient safety and can reduce unexpected events. Knowledge is the main capital to obtain good skills and attitudes, with good knowledge individuals will be motivated to do ulcus decubitus prevention<sup>(14)</sup>. Knowledge is information that has been organized and analyzed to make it understandable and applicable to problem solving or decision making<sup>(15)</sup>. Competency is ability and characteristics possessed by someone with knowledge, skills and attitude behavior required in carrying out his job duties, so that can carry out their duties in a professional, effective and efficient manner and in accordance with the performance standards carried out<sup>(16)</sup>.

Knowledge is a basic element for every employee to change his behavior in implementing something<sup>(17)</sup>. Knowledge can not only be seen as a useful investment at any given time but how knowledge influences nurse performance is important in managing HR. The results of this study support Yulia's research that within the framework of facilitating knowledge transfer, patient safety training programs need to be carried out on an ongoing basis<sup>(18)</sup>.

Nurses have a positive attitude and commitment in preventing ulcus decubitus. Individual needs will arise if the individual feels there is an imbalance between hope and reality, so that an impulse will emerge to meet

expectations.

Organizations are consciously coordinated social units, which are composed of two or more people who function on a relatively continuous basis to achieve a common goal or set of goals<sup>(19)</sup>. Organizational variables that influence a person's behavior and performance, namely resources, leadership, reward, structure and job design<sup>(8)</sup>. According to Swanborg in Molina, one of the functions of management is to lead the process of delegation, supervision, coordination, and control of the implementation of organizational plans. The focus is to guide and increase motivation with the efforts made, namely by creating a reward system, providing positive feedback, integrating organizational goals with staff/individuals, reducing job dissatisfaction, supporting resources. Nurse performance is influenced by various factors including individual factors and the environment/organization. Organizations have a large role to plan, move and evaluate the goals to be achieved. The organizational structure shows a way group assignments, lines of communication and authority relations and manufacture decision<sup>(20)</sup>.

On the subvariables of organizational factors: leadership, leadership is one of the main factors that influence staff performance because leadership is a driver for all existing resources within an organization. The success of human resources in achieving organizational goals is also inseparable from the influence and behavior of leaders in developing their employees. The effectiveness of employees in carrying out their work depends on the influence received from their leaders. Leadership in nursing is the ability and skill of a nurse leader in influencing other nurses under his supervision to carry out their duties and responsibilities in providing care and nursing care so that the goals of nursing are achieved. Leadership influences organisational citizenship behaviour<sup>(21)</sup>, particularly through trust<sup>(22)</sup>.

Organizational structure is the way a group is formed, communication lines and authority relations and decision making<sup>(20)</sup>. This means that with a good organizational structure, staff will be more obedient in carrying out their work, especially in implementing prevention of ulcus decubitus. The intended organizational structure contains a command line and a good communication system to provide information to each other regarding the task fields of each section. Organizational structure is a factor that is closely related to nurse compliance in implementing patient safety. Quality and safety of

nurses associated with various factors in the system, organization and work environment are things that affect patient quality and safety<sup>(3)</sup>.

OCB in health care are encouraged, employees and organisations are more likely to be more productive and flourish<sup>(23)</sup>. The final results of the implementation of knowledge management will be reflected in someone's performance<sup>(24)</sup>. Knowledge management consists of knowledge identification (acquisition and creation), knowledge application, knowledge sharing and transfer, the knowledge repository is a way or tool for an organization to build a knowledge, where knowledge will later be used by organization to develop itself<sup>(7)</sup>. A knowledge-sharing culture and organisational learning were found to be core factors affecting nursing performance<sup>(25)</sup>.

## Conclusion

Prevention of decubitus ulcer based on OCB and knowledge management is an approach method as an effort to prevent the occurrence of decubitus ulcer.

**Ethical Clearance-** Yes

**Source of Funding-** Author

**Conflict of Interest-** No

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