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The Role of Leadership Style of Head of Ward, Electronic Documenting, and Nurses' Performance in Service Innovation in Meuraxa Hospital

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THE ROLE OF LEADERSHIP STYLE OF HEAD OF WARD, ELECTRONIC DOCUMENTING, AND NURSES' PERFORMANCE IN SERVICE INNOVATION IN MEURAXA HOSPITAL

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Between 74 and 85% of health documentation in advanced countries is conducted by internet, and 80% of customers use those data to seek information related to health service. The research reported in the present paper is aimed at finding out the influence of leadership style of head of ward, electronic documenting, and nurse performance on service innovation in Meuraxa Hospital in 2017. This study is a cross-sectional; survey of 100 nurses at Meuraxa Hospital who were doing electronic documentation. Structural equation modelling (SEM) showed that the respondents' perception of the leadership style of the head of the ward is agree and strongly agree where the average is 4.22. The respondents' perception on the use of electronic documentation is agree and strongly agree where the average index is 4.20; and most of respondents' perception on the innovation on nursing service is agree and strongly agree where the average index is 4.23. All the indices are in the cutoff value range. The result of this study shows a positive correlation: there is an influence of head of ward leadership style on the performance of nurse; the electronic documentation has an effect on the performance of the nurses; the performance of nurses has an effect on the innovation of nursing service; The leadership style of head of ward affects the innovation of nursing service. the electronic documentation can influence the improvement of nursing service innovation. There is an indirect influence of head of ward leadership style, electronic documentation, nurse perfomance on nursing on service innovation through nurse performance. The alternative hypotheses are accepted and fit model test is good. It is hoped that all head of wards and nurses can improve their service by doing documentation comprehensively.

Keywords: Leadership style, Documentation, Electronic, Nurse, Innovation

Abstract

Pendokumentasian data kesehatan menggunakan internet 74% sampai 85% di negara-negara maju, dan 80% konsumen menggunakan data ini untuk mencari informasi tentang pelayanan kesehatan. Penelitian ini adalah penelitian berbentuk korelasi yang bertujuan untuk melihat penga-

Abstrak

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ruh gaya kepemimpinan Kepala ruang, penggunaan dokumentasi elektronik, kinerja perawat terhadap inovasi pelayanan keperawatan di RSU Meuraxa tahun 2017. Desain penelitian berbentuk crossectional study yaitu melakukan pengumpulan data (survey) pada perawat yang melakukan dokumentasi elektronik pada satu waktu. Populasi penelitian ini adalah seluruh perawat di Rumah Sakit Umum Meuraxa Banda Aceh. Jumlah sampel adalah 100 orang. Analisis data menggunakan pendekatan kuantitatif dengan statistik Structural Equation modeling (SEM). Hasil penelitian didapatkan bahwa persepsi responden tentang gaya kepemimpinan Kepala ruang sebagian besar responden memilih setuju dan sangat setuju dengan nilai rerata 4.22, Persepsi responden tentang dokumentasi elektronik memilih setuju dan sangat setuju dengan nilai rerata 4.48, Persepsi kinerja perawat sebagian besar responden mengatakan setuju dan sangat setuju dengan nilai rerata 4.20 dan persepsi tentang inovasi pelayanan keperawatan sebagian besar responden memilih setuju dan sangat setuju dengan nilai rerata 4.23. Semua nilai berada dalam rentang nilai yang diharapkan (Cut of Value range). Hasil penelitian ini menunjukkan ada hubungan positif yaitu; gaya kepemimpinan kepala ruang rawat mempunyai pengaruh terhadap kinerja perawat, dokumentasi elektronik memiliki pengaruh pada kinerja perawat, kinerja perawat memiliki pengaruh pada inovasi pelayanan keperawatan, gaya kepemimpinan kepala ruang rawat mempengaruhi inovasi layanan keperawatan, dokumentasi elektronik mempengaruhi peningkatan inovasi pelayanan keperawatan. Ada pengaruh tidak langsung gaya kepemimpinan kepala ruang, dokumentasi elektronik, kinerja perawat terhadap inovasi layanan keperawatan melalui kinerja perawat. Uji hipotesis diterima dan uji kalayakan model baik. Diharapkan kepada Keapala ruang dan perawat pelaksana agar meningkatkan lagi mutu pelayanan dengan melakukan dokumentasi secara lengkap.

Kata kunci: Gaya Kepemimpinan, Dokumentasi, Elektronik, Perawat, Inovasi

Innovation of nursing services can be developed using computer aids document nursing care. Increased availability of Electronic Health Records (EHR) for documenting patient disease provides an opportunity for hospitals to create models of service mapping using electronics (Aiken, Sloane, Clarke, Poghosyan, Cho, You, & Aungsuroch, 2011; Amrita, Garg, & Khera, 2014). One of the development of nursing services in Indonesia is the use of computers. The use of computer can overcome the problems of nursing services including health service documentation (Barros, Werner, Thomson & Varkevisser, 2015). This computer technology is needed because consumers are keep growing and they may differ from the aspect of education, demands, rights and law, and demands increasingly critical (Campos & Gillard, 2010).

Nursing services in hospitals require appropriate programs and analysis in organizing management systems (Dunbar, Watson, Boudreau, 2007; Cunha, 2004). Healthcare information management systems can reduce retention of health information management systems which is beneficial for managers in the preparation of reports, and may be adopted by consumers who need data (Crevani, Palm, & Schilling, 20I1).

About 74 to 85% of patient health data in developed countries are documented using the internet, and 80% of patients seek information about health services (Hoffman, Volk, Saarimaki, Stirling, Li, Härte, Kamath, & Thomas, (2013). In general, patients seek information

through the internet related to the decisions that will be made regarding treatment of the disease with which they have been diagnosed. The dominant service data documented (80%) was gathered by the nurses, as 80% of the patient care staff in the hospital were nurses (Kane, 2007; Westbrook, Duffield, Ling & Creswick, 2011). In addition, nurses provide almost 90% of all services to patients (Pollak & Lorch, 2001).

Research results show the there was increase in health care output in the United States is 7.5% since the early 1990s due to improper leadership and minimal health care facilities (Davis, 2007). This situation contributes to trauma for patients, decreased quality of care and increased costs which is estimated about $ 500 billion per year (Davis, 2007). This figure is equivalent to 30% of all health care costs in America (Donner, 2004). It means that leadership style and health care facilities play important role in reducing costs for health care.

Strong leadership is the driving force behind the innovation of care services and changing culture (Crevani, Palm, & Schilling, 20I1). Nursing leadership requires self-changing and be able to make positive steps to improve workplace conditions and the use of appropriate technology (Jones, 2014). The use of computerization as a clinical decision support system can improve diagnosis sustainability, chronic disease management, reduce stress, and improve nursing skills (Fentianah, 2012). However, there are limitations on nurses' ability to realize these potentials of computer assistance in care because of inadequacies in the computer software (Hernández, Hurtig, Dahlblom & Sebastian, 2015).

Experts estimate that 100,000 deaths can be prevented by professional recording (Hsiao, Hing, Socey, & Cai, 2011). Electronic documentation program will make it easier for the executing nurse, low level manager (head of the room), middle level manager (head of care), and top level manager (Director) to conduct supervision (Jones, 2014). Statistically, the causes of inefficiency of care and less than optimal care services include financial factors, technology, time and autonomy changes (Kowitlawakul, Chan, Pulcini, Wang, 2015). The United States Department of Health and Human Services could save up to $140 billion annually with the use of Electronic Health Record Systems (HER) technology (Hsiao, Hing, Socey & Cai, 2011).

The cost of care services can be cut more than 60% and the quality of service can be improved if the documentation system used in hospitals is supported by operational standards (SOP), information technology, and good management quality by the head of the ward (Peisl, Reger, & Schmied, 2009; Stevenson, Nilsson, Petersson & Johansson, 2010

In the practical development of professional nursing, the role and function of the head of ward is very important; therefore, leadership and management competence are absolutely necessary. The head of ward becomes the role model for nursing care documentation using computers (Hernández, Hurtig, Dahlblom & Sebastian, 2015).

Some hospitals have developed services according to the needs of patients. However, there are some problems faced by the organization of the hospital such as the service innovation team lacking support, while the nurses must meet service needs according to the demands of the patients. Most of the hospitals in Banda Aceh are still using handwritten rather than computerized documentation of services and patient information. The problems mentioned above have impacts on the results of patient examinations are not recorded completely in the computer (hospital which medical records)

The objective of this research is to assess the influence of the leadership style of the head of ward, the use of electronic documentation, and nurse performance on nursing service innovation at Meuraxa Hospital in Banda Aceh, Indonesia. The novelty of this research is that it presents the that effect of electronic documentation and leadership style, nurse performance, and also service innovation influence each other reciprocally (Peisl, Reger, & Schmied, 2009; P.zweifel, Breyer & Kifmann, 2009; Kraft, 2012; Hernández, Hurtig, Dahlblom & Sebastian, 2015; Aldossary, Melinda & Khana, 2017).

LITERATURE REVIEW

The global need for professional nursing services is increasingly urgent and requires tools to facilitate and support nurse performance for innovative nursing practice and to make it easier for nurses to perform their duties. Nowdays, the use of innovative tools and technology-based nursing services is increasingly encouraged. This is necessary to reduce errors and

improve the quality of health services to patients (Hsiao, Hing, Socey, & Cai, 2011). The implementation of innovation is maximally beneficial when the most up-to-date technology is available, along with effective planning and management of the hospital (Hernández, Hurtig, Dahlblom & Sebastian, 2015).

Healthcare innovation uses Evidence-based Practice (EBP) as an approach to improving service quality. There are challenges to achieving EBP such as institutional level and ability to maintain aspects of practice professionally. The head of ward can play an important role in improving the success of service innovations by promoting the acceptance of EBP. Successful implementation of EBP is strongly influenced by EBP performance in organizations, leadership policy and also the obstacles found by hospital service practitioners (Tannan, 2012). EBP acceptance is influenced by several factors: 1) quality and coherency of policy, 2) key people leading change, 3) manager-clinician relations, 4) cooperative inter-organizational networks, 5) supportive organisation. culture, 6) nursing practice support 7) simplicity and clarity of goals, and 9) environmental pressure (Stetler, Ritchie, Malone, Schultz, & Charns, 2009).

Leadership style of the head of ward can have a positive impact not only on job satisfaction but also on organizational commitment. Research has shown that a positive work environment is one of the factors that influence employees to build strength in nursing serving dealing with Evidence Based Practice (Barros, Werner, Thomson, Varkevisser, 2015). Lead nurses are

challenged to provide guidance and assist their fellow nurses in improving the quality of their services and performance (Koné & Wodchis, 2013). Nurse leaders should employ a leadership style that is appropriate to local ethics and culture in performing their duties (Kunic & Jackson, 2013). An approach that can be used by the manager to allow a broader understanding of concrete management practices is creating a culturally appropriate and humane work atmosphere. The dynamics of organization can generate social capital (ethical work). The EBP service can influence on organizational design and managerial activity (Larajeira, 2012).

Research has found that there is a correlation between transformational leadership and job satisfaction, productivity improvement, organizational commitment and decreased patient mortality (Crevani, Palm, & Schilling 20I1). The retention of services is one of the crucial components in hospitals related to service quality. It should be improved, and the roles and vision of transformational leaders or managers is central to that. Nursing leaders must work together and build a long-term care culture that supports the development of a good working team (Barros, Werner, Thomson, Varkevisser, 2015). Other studies have shown a significant relationship between the nurse manager's leadership style and nursing staff satisfaction (p = 0.34) (Davis, Bagozzi, Warshaw, 1989).

There are four aspects that should be considered for innovation development in hospital organizations These are: structural, human resources, policies and symbols used in serving pa-

tients (Koné & Wodchis, 2013). The development of nursing services using information technology in the health field (medical records) is very useful, as information can be accessed not only by nurses and heads of ward but also by all related managers. Profesional service performed by nurses should be supported by the leader (top level manager). Top level managers should provide good facilities required by nurses in performing their services, including documenting all medical treatment for patients (Peisl, Reger, & Schmied, 2009). Implementation of a professional nursing service model is one effort to improve the quality of service in hospitals. Implementation of a nursing service documentation model can be done by empowering nurses as executors of nursing directives and also involving various related elements in developing the model. Development of documentation procedures in nursing care can be done using appropriate nursing information technology with computer programs. Information technology in the field of nursing integrates the science of nursing and computer and information technology (Dubois, Amour, Tchouaket, Rivard, Clarke, & Blais, 2012; Aldossary, Melinda, Khana, 2017). It aims to manage and communicate data useful in nursing practice (Peisl, Reger, & Schmied, 2009).

Nurse performance is the result of job function or nurse activity of a nurse or group of nurses in a hospital organization that aims to reach the organization's goal of hospital in certain period of time in the form of nursing service including nursing diagnosis assessment, planning, implementation and evaluation of service activities con-

ducted by nurse using a structured format based on the concept of nursing ((Stetler, Ritchie, Malone, Schultz, & Charns, 2009). Measuring performance is an ongoing effort to improve quality and ensure excellence in hospitals. The more patients recognize satisfaction the more measurable of hospital performance can be proven. In addition to provide a unique perspective on hospital performance, patient satisfaction is also considered as a predictor of patients' willingness to follow treatment, to return for service, or to recommend services to others (Wakefield, 2013).

In the framework of direct hospital management strategy, Koné and Wodchis (2013) claim eight factors that influence satisfaction related to performance, those are: 1) Financial viability, 2) Capital, 2) Human resources, 3) Professional development and learning, 4) Use of information technology, 5) Use and dissemination of information for clinical decision-making, 6) Patient safety and 7) Reconciling medications across the continuum of care.

RESEARCH METHOD

This research is a quantitative research. It tries to explain and describe the condition of each variable in detail and see the relationship among these variables (Hair, Black, Babin, Anderson, Tatham, 2006). The research aims to see the influence of leadership style of the head of the ward, the use of electronic documentation, nurse performance on nursing service innovation. To observe the leadership style of the head of the ward, the use of documentation, and the performance of nurses on the innovation of nursing service at Meuraxa Hospital Banda Aceh, the

researcher conducted a crossectional design. The data were collected from the nurses who performed the nursing care documentation at one time.

The population of this study is all nurses in Meuraxa Hospital Banda Aceh. The sample size is 100 people. According to Hair , Black, Babin, Anderson & Tatham, 2006; (2006) and Ferdinand (2006), the minimum sample for 4 variables requires at least of 100 participants. Similarly, the use of SEM analysis requires 100-200 responden.

In the research proposals the number of samples is the total sampling of 226 people. However the researcher have to reduce the sample size due to some reasons. First, it was difficult to meet nurses during the ICU, ICCU, NICU, and operating room. The researcher cannot meet nurses at all times for interviews and observation because it harms patient (Nasokomial infection). Another reason, some nurses were taking furlough or absence. Thus, the researcher only involved 100 nurses as the sample of this research. The sample was selected using *non-probability sampling* called *accidental sampling* (Ferdinand, 2006). Data collection techniques used in this study is Questionnaire. Quantitative approach with Structural Equation modeling (SEM) statistic with AMOS 22 program is used to analyse the data (Hair , Black, Babin, Anderson & Tatham, 2006; Ferdinand, 2006).

RESULT AND DISCUSSION

1. *Confirmatory Factor Analysis*

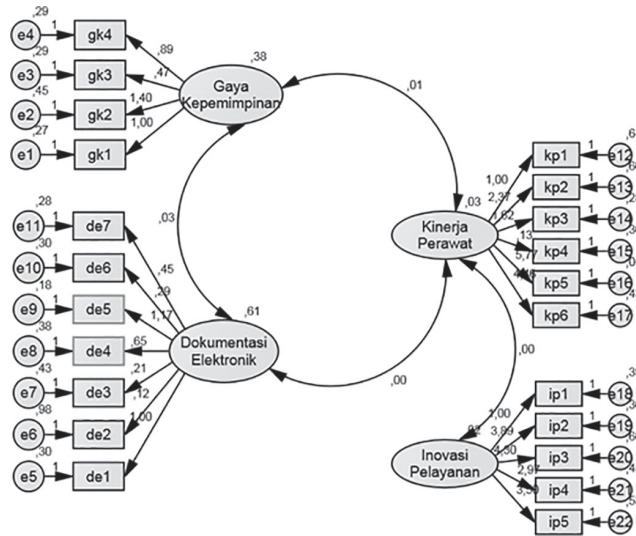The latent variables or constructs used in this research model consist of

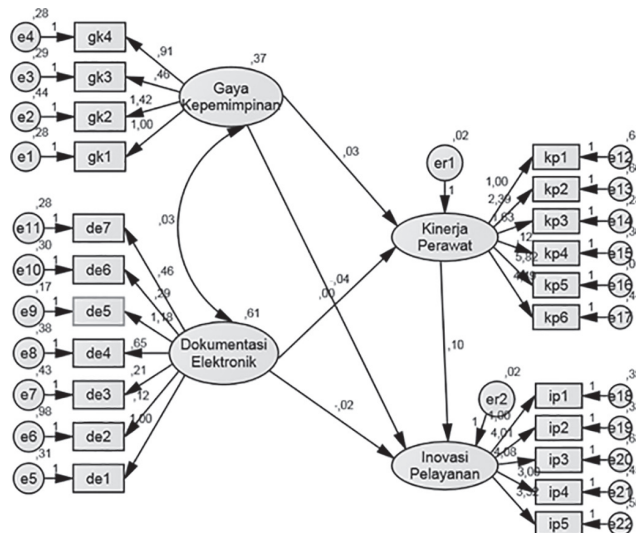Figure 1. Confirmatory Factor Analysis of Research Construct

Figure 2. Test Results of Structural Equation Model (SEM)

2 exogenous variables and 2 endogenous variables with total number of dimensions is 22. The purpose of the confirmatory factor analysis is to test the unidimensionality of the constituent dimensions of each latent variable. Next, the results of confirmatory factor analysis of each model will be discussed. The latent variables in this confirmatory model consist of head of the ward leadership style, electronic documentation, nurse performance and nursing service innovation.

2. *Confirmatory factor analysis of research variable construct (SEM)*

The results of data processing analysis showed that all constructs used to form a research model, in the process of confirmatory factor analysis has met the predetermined goodness of fit criteria. Using feasibility tests this model has qualified as a good model.

Based on Figure 2, it can be explained the influence of each variable that is the leadership style of the head of the

Table 1. Goodness of Fit Index Overall Model

Goodness of Fit Index	Cut of Value	Analysis Result	Evaluation Model
x^2- Chi Square	expected small	379.86	Good
Significancy Probability	≥ 0.05	0.000	Good
RMSEA	≤ 0.08	0,093	Good
GFI	≥ 0.70	0.748	Good
AGFI	≥ 0.90	0.689	Good enough
CMIN/DF	≤ 2.00	1.853	Good
TLI	≥ 0.95	0.685	Good enough
CFI $A=\pi r^2$	≥ 0.95	0.721	Good enough

Table 2. Regression Weight Structural Equational Model

			Estimate	S.E.	C.R.	P
Nurse_Perfomance	←	Leadership_Style	0.462	0.112	4.115	***
Nurse_Performance	←	Electronic_Documentation	0.905	0.144	6.273	***
Service_Innovation	←	Leadership_Style	0.285	0.078	3.657	***
Service_Innovation	←	Electronic_Documentation	0.457	0.082	5.606	***
Service_Innovation	←	Nurse_Performance	0.652	0.100	6.535	***

ward and electronic documentation affects the performance of nurses and indirectly it also has effect on nursing service innovation through the performance of nurses.

The test of the feasibility of the full SEM model is tested using Chi-square, GFI, CFI, TLI, CMIN / DF and RMSEA are within the expected range of values (Ferdinand, 2006), although AGFI is accepted marginally as in table 1.

3. Goodness of Fit Index Overall Model

The results show that the model used is acceptable with a significance level of 0,000 indicating a good structural equation model. The measurement index of TLI, CFI, CMIN / DF and RMSEA are within the expected value range although the value of x^2 - Chi Square is greater than Cut of Value and the significancy probability is smaller than Cut of Value which has been set (Ferdinand, 2006).

HYPOTHESES TESTING

After all the assumptions can be met, then hypothesis testing can be made. Testing of 6 hypotheses of this research is based on Critical Ratio (CR) value of a causality relationship from SEM processing result as in table 2.

1. The Influence of Head of Ward Leadership Style on the Performance of Nurses

The practice of transformational leadership style can increase job satisfaction for employees because of higher employee needs such as self-esteem and self-actualization will affect to employee performance in work (Mathieu & Zajac, 1990). Other research on leadership to the performance gained a positive effect on the performance of nurses, where Hypothesis can be accepted. The result shows that the value of t-test for leadership variables is 11.208 with a probability of 0.000. At a significant level of 5% obtained probability value is smaller than 0.05 (Mieronkoski, Azimi, Rahmani, & Aantaa, 2017).

Nurses believe they should be given the opportunity to participate in discussions on patient issues, be involved in decision-making in their units and collaborate and communicate with nursing leaders, doctors, and other members of the nursing service team to provide quality care services. The role of organizational commitment and nurse work sati

sfaction is very important in quality nursing care and in accordance with the development of health care systems that use computers (Dunbar, Watson, & Boudreau, 2007).

The leadership style of the head of ward should consider nurse needs in order to improve nurse satisfaction and to fulfil organizational commitment. Head of ward as a low level manager need to make positive change and positive steps to improve themselves *(Atambo, Otundo & Nyamwamu, 2012)*. The the head of the ward should be a qualified person for leadership in the nursing unit to achieve success and patient satisfaction. Improvement of nurse performance based on leadership style variable of the head of the ward can be seen from nurse who always show caring attitude to every patient complaint, doing nursing action according to patient need, doing evaluation on every action and writing documentation on patient status. The the head of the ward who use transformational leadership style and emphasize the learning process in each nursing activity on the patient continuously in team method can improve the performance of the nurse.

In this study the researcher found that the the head of the ward used varied leadership styles to influence nurse

staff in performing electronic documentation based on nursing care for each patient. The the head of ward plays a vital role in improving the nurses' performance through motivating, supervision and evaluation based on patient documentation and the results achieved from nursing actions for each service shift.

2. *The effect of electronic documentation on nurse performance*

The electronic documentation owned by Meuraxa Hospital in Banda Aceh has an effect on the performance of the nurses. This indicates that improving electronic documentation will improve the performance of nurses.

Cho, Kim, Choi, and Staggers (2016) assessed nurses' performance at six hospitals in Korea using a patient care scenario validated through a protocol . The time to complete a specific task was measured, and qualitative performance data were converted into efficiency (relevance), proficiency (accuracy), and competency indices by using a scoring scheme. Six nurse managers completed the assessment of available functions and examined the components of the computerized nursing process including the linkage between outcomes. The results were as follows: For usability tests, the average efficiency score of the participants was 94.2% (95% CI, 91.4-96.9%). Language skill was 60.6% (95% CI, 54.3-66.8%), and the average competency index was 59.5% (95% CI, 52.9-66.0). The efficiency values differ significantly on Electronic Nursing Records (ENRs) such as the time to complete the task, ranging from 226.3 to 457.2 s (2=12.3, P=0.031; 2=11.2, P=0.048).

The research findings show that most documentation systems have functions that support basic nursing processes, but identification of results most often does not work normally. Extensive documentation focusing on nursing diagnoses and treatment plans affects outcomes in patients because care plans are seldom documented in clinical settings. The nursing care plan is made into an evidence-based decision support system (Evidence Based Practice) in an integrated form called Electronik Health Record (HER) where access is specific. The function of the treatment plan is available in the system and supports the selection of the use of problems, objectives, and activity plans in the form of a list. The nurse can easily include a care maintenance plan in the system, which allows linkage with a pre-existing intervention-targeted plan (Hernández, Hurtig, Dahlblom & Sebastian, 2015).

Electronic documentation conducted by nurses in terms of assessment, confirming the diagnosis of nursing care, setting the plan, performing the implementation and evaluating can improve nurses' performance. Nurses' performance can be continuously monitored by the head of the ward. In addition, electronic documentation reduces the risk of loss of data, as paper records can easily be damaged, whereas electronic records can be securely backed up. This documentation gives benefits for nurses in performing nursing service based on Evidence-based. Patients also can use these data if needed for future nursing development records.

3. **The Influence of Nursing Performance on Nursing Service Innova-tion**

We hypothesized that a higher level of nursing performance would result in improved innovation of nursing service at Meuraxa Hospital Banda Aceh. Structural equation modeling was conducted to test the hypothesis and determine the casual relationships between variables and identify the best-fitting model. This model consists of five constructions; electronic haealth records for nursing education (EHRNE) self-efficacy, perceived usefulness, perceived ease of use, attitudes toward use, and intent to use all hypotheses accepted and supported by the significance coefficients (p-value 0.01). EHRNE self-efficacy has a significant effect on perceived usefulness and perceived ease of use (β=0.26, 0.55 respectively, and pb 0.01), and explains 29% of variance in perceived usefulness and 30% in perceived ease of use (Hayes, Banner, & Pryor, 2010).

The results of research on electronic documentation variables indicate that the media is an integral part in the life of every employee in an organization, especially in patient care. Computer-based nursing information systems can improve service to patients and make nursing services more meaningful, as it reduces paperless work and improves communication and saves nurse time, improves patient safety. The focus is on effective information management with computers due to rapid technological developments and higher computer capabilities and lower cost.

Nursing and health information systems have been developed in various countries. The development of health information systems has also been

conducted in Jordan. Scotland also has developed a portal to support the improvement of health information since 2009. Indonesia itself has legally been established through the policy of Presidential Instruction of the Republic of Indonesia number 3 of 2003 on National Policy and Strategy of e-Government Development and government policy especially Inpres No.1 Year 2006 on Development of Telematics Utility in Indonesia.

Nurse activities in nursing care is the main indicator of the nurse's performance in maintaining patients. Indirectly, nursing actions undertaken require nurses to innovate their services according to the patients' needs and expectations. The actions performed are documented in the computer that can be monitored by the head of the ward as the low-level manager and also by director. Modification of actions in nursing care with computer-assisted is one of service innovation.

4. *The influence of head of ward leadership style on nursing service innovation*

The leadership style of the head of the ward affects the innovation of nursing service and indicates that the better head of ward leadership style will have a positive impact on the improvement of nursing service innovation. The practice of a transformational leadership style was able to bring more fundamental changes such as values, objectives, and employee needs. Those changes had an impact on increasing employee satisfaction due to the fulfillment in performing their duties. Transformational leadership has a positive relationship to employee job satisfaction because employees feel valued

for their existence (Hayes, Banner, & Pryor 2010; Kunic, & Jackson, 2013)

High performing organizations are beginning to build their competitive strategy on data-based insights which in turn will produce impressive business results. They identify analysis as the key to superior performance through advanced quantitative and statistical analysis as well as predictive modeling. put forward a holistic definition of business innovation as "the creation of substantial new value for customers and companies and implicitly and creatively (Kone & Wotchis, 2013). Searching for new values is confirmed and Value innovation requires the company or hospitals to direct the entire system to increase value for services.

The compatibility between perseverance and motivation of head of ward and leadership style can raise nurses' interest and motivation in performing appropriate and systematic nursing care to patients and their families. Actions performed by the nurse can be directly observed and given input and also modified by the head of ward together with other medical teams to improve nursing service (team model in nursing service).

5. *Effect of Electronic Documentation on Innovation of Nursing Services*

The electronic documentation owned by can influence the improvement of nursing service innovation. Research conducted by Hernández, Hurtig, Dahlblom & Sebastian, 2015), Data analysis shows six thematic domains of action that support the performance of nurses in the treatment ward: Com-

munication and average coordination (4.17), tools for job orientation (4.32), organizational support and climate (4.56), motivation, recognition by leaders and teamwork (4.15), the development of Profession and skills (4.29). The direct influence is greater than the indirect influence of mediating variables, namely the leadership style of the head of the ward and the electronic documentation, then the leadership style of the head of the ward and the electronic documentation is also called the partial intervening variable. It is said partial intervening, because this variable has not been able to enlarge the influence of independent variables to the dependent variable (Fentianah, 2012).

Several health institutions that implement computer systems show that each nurse can save about 20-30 minutes of time spent on nursing documentation and increased accuracy in nursing documentation (Arnold, Colletti, & Stilwell, 2009; Westbrook, Duffield, Ling & Creswick, 2011). Then, the results of research at Kyorin Hospital in Japan presented data that 83% of respondents stated that reporting incidents of medical error with database administration (Electronics Health Record) can save time and easy to analyze the structure of nursing care (McInnes, Solomon, Boukhor, Asch, Ross, Nazi & Gifford, 2011). Finland Mikkeli Hospital since 2003 to 2004 developed information system of nursing documentation and the result is very helpful for nursing care process (Johnston, Kaelber, Pan, Bu Shah, , Hook, & Middleton . 2007)

Many researches have been conducted related to the use of electronic documentation. Indonesian government gives support through regulation has been set. However, nursing information system with computer-based is still lack. It is like something rare issue. It takes longer time to socialize the benefits and the simplicity of this system for those related such as the user, management team, assessor, programmers and operator. The use this information system especially for user and managers can improve nursing information system.

The use of computers in nursing services is a new thing that should be encouraged. This condition raises curiosity and willingness of learning for nurses in order they can perform the right action related to nursing documentation. Moreover, it can be seen that the discussion among head of ward and nurse team become more active in using computer for nursing documentation. In general, good service documentation can save operational funds, maintain actions more professional and the documentation can be archived in the long term and can be used for measuring and evaluating nurse performance.

6. *Indirect influence of head of ward leadership style, electronic documentation, nurse perfomance on nursing service innovation through nurse performance*

The results of this test indicates that the indirect influence of leadership style conducted by the head of ward in supporting the use of electronic documentation by nurses can improve the performance of nurses in performing nursing actions on patients treated. This influence can be observed in a regular service innovation, action based on patient needs, and proper ac-

tion modification. The results can be measured from the number of nursing diagnoses, actions performed on the patient, and the evaluation of the action either independently or in collaboration. The application of electronic documentation is very useful for continuous service innovation. The most promising application of this technology is needed by Indonesia because Nursing requires tools to support the safety and quality of patient care.

The most promising application of advanced technology in Indonesia on Nursing field is the ability to support the safety and quality of patient care. To ensure quality, safety and value in health care, clinical decisions need to be supported by accurate, time efficiency, and up-to-date clinical tools. Nursing informatics as "science and practice integrates nursing, information and knowledge, with information management and communication technologies to promote human, family, and community health worldwide (Jones, 2014).

A meta-analysis by Karsten, (2012) found the computer as *self-efficacy* significantly correlated with perceptions of ease of use, usability, attitudes, and other constructs. TAM with self-efficacy computers have been used as a broad conceptual framework in the public sector, education, and healthcare settings. Research that uses an expanded TAM with self-efficacy computer build domain in the field of health education especially in the field of computer self- efficacy be an important area for research education (Hsiao, Hing, Socey & Cai , 2011).

There is a need to strengthen nursing

procedures on the basic requirements of nursing care. On the other hand, the latest equipment can be upgraded to transfer and process data efficiently and effectively. Modern technology can be utilized to overcome some of the basic nursing care challenges in hospitals. Primary nursing care is influenced by nursing staff satisfaction, work environment issues, impractical physical care environment and difficulty in identifying patient needs.

Indirectly there is an influence between leadership style of head of ward, electronic documentation, and nursing service innovation conducted by nurses to patients. It can be seen that proper leadership style and the modification in the use of leadership style used by the head of ward toward the nurse will create a harmonious and mutually supportive atmosphere with each other. These conditions increase their motivation and responsibility for their performance (nursing actions) and also results better nursing documentation.

MANAGERIAL IMPLICATION

Managerial implication of this study shows that the style of leadership ideally suits the needs, time, and based on the goals of the organization. The head of ward is a low-level manager in nursing services in hospitals. In performing his task, he requires a leadership style that can adapt to the needs of nurses and the patient. It is necessary to carry out autocratic leadership styles When patient is in critical situation. In normal situation, low-level manager may adopt charismatic leadership styles or other leadership styles. The use of appropriate leadership styles in care services can support electronic documentation. It also can

improve nurse performance and the expected outcome is evidence-based service innovation.

THEORETICAL IMPLICATION

The role of head of ward in nursing management is more emphasized on the implementation of nursing care to patients. This statement is related to what has been stated by Gillies (1994) that head of ward plays important role in these following issue:

1) Establishing work standards that is in accordance with the standards of nursing care, 2) Organizing team and patient distribution, 3) Providing opportunities for team leaders to develop their leadership, 4) as an informant for team leaders, 5) Orienting new nursing staff on methods or team model in performing nursing care, 6) Providing guidance to all activities in his ward, 7) Conducting supervision of all activities took place in the ward, 8) Facilitating team collaboration between other health team members 9) Conducting audit care and nursing care and giving feed back, 10) Motivating his staff to improve their skill through nursing research, 11) Creating an open communication climate with all staff.

One of limitation of this research was the sample size where it only involved 100 samples. Further researchers need to continue conducting emperical research to ascertain other variables that can be influenced by electronic documentation related to nursing service including health care facilities, standard operational (SOP) and also can be enlarged in term of nursing serving for all departments in hospital, not only in government hospital but also in private hospital. The researcher expects that the result of the study will enrich theoretical references related to electronic documentation in hospital.

CONCLUSION

The result of the test on influence of head of ward leadership style toward nurse performance shows that leadership style of head of ward influence nurse performance. In the second test of the effect of electronic documentation on the performance of nurses, which indicates that the electronic documentation owned by Meuraxa Banda Aceh General Hospital has an effect on the performance of nurses.

Testing on the effect of nurse's performance on nursing service innovation shows that the nurse performance had an effect on the nursing service innovation on the patient. Further testing on the influence of leadership style of the head of ward toward the innovation of nursing service showed leadership style of head of ward influence the innovation of nursing service. Estimates for the influence of communication testing on nursing service innovation showed that electronic documentation owned by the Meuraxa Hospital of Banda Aceh can influence the improvement of nursing service innovation.

The test results show that the leadership style and the electronic documentation influence the innovation of nursing service through performance. Performance is an intervening variable that influences innovation due to several factors of leadership style and the support of electronic documentation working simultaneously.

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QUESTIONNAIRE

Appendix

Fill the column provided based on your personal data!

Respondent No : …………… (Filled by resercher).

I. The Characteristic of Respondents

1. Age of Respondents
   a. < 20 years old
   b. 20 – 29 years old
   c. 30 - 39 years old
   d. 40 - 49 years old
   e. > 50 years old

2. Marital Status
   a. Single
   b. Married
   c. Widow/widower

3. Last Education
   a. Senior High School
   b. Diploma III of Nursing
   c. Nursing Scholar
   d. Bachelor of Public Health
   e. Magister of Nursing

4. Monthly Income
   a. < Rp. 2.000.000,-
   b. Rp. 2.000.000 - 2.999.999,-
   c. Rp. 3.000.000 - 3.999.999,-
   d. Rp. 4.000.000 - 4.999.999,-
   e. Rp. 5.000.000 - 5.499.999,-
   f. > Rp. 6.000.000,-

II. Research Variables

Put a cross (X) on one of the available columns on the right of the statement with regard to the description of the numbers below:
1. Strongly Disagree
2. Disagree
3. Less agree
4. Agree
5. Strongly Agree

	1	2	3	4	5

A. Leadership Style of Head of Ward

1. The level of knowledge of the head of the wards on the duties and functions of the nurse is adequate

2. Head of ward shows caring attitude toward his subordinates nurses

3. Head of ward has good skill in finishing all duties

4. Head of ward always or motivates staff in documenting on nursing service

	1	2	3	4	5

B. Electronic Documentation

1. The format / program on electronic documentation is appropriate to the case and the requirements of the nurse □ □ □ □ □

2. Electronic documentation can be printed in every nursing room and can work properly □ □ □ □ □

3. The standard level of documentation content has met the required documentation requirements for nursing development (Assessment, Nursing Diagnosis, Action, and Evaluation) □ □ □ □ □

4. The accuracy level of the documentation content meets the specified quality standards □ □ □ □ □

5. The e-documentation reliability level can be accessed in any room easily by all nurses. □ □ □ □ □

6. The nurse's ability in documenting nursing care is good □ □ □ □ □

7. Nurses always show attitudes of patient interest rather than personal interests □ □ □ □ □

C. Nurse Performance

1. Head of ward and nurse perform nursing care using Team Method □ □ □ □ □

2. Nurses are able to conduct nursing assessments before performing nursing actions □ □ □ □ □

3. The Ability to do nursing diagnoses performed by the nurse is correct □ □ □ □ □

4. Documentation Nursing planning / execution done by nurses manually □ □ □ □ □

5. Nurses are able to implement each activity as that has been set before □ □ □ □ □

6. Nurses are always required to evaluate every maintenance activity that has been done □ □ □ □ □

D. Nursing Service Innovation

1. The level of operational ease of documentation can be easily accessed by nurses □ □ □ □ □

2. The suitability of the documents with the facts in each patient is correct □ □ □ □ □

3. The reliability of nursing service innovation can be proven back by the results of the documentation in accordance with the facts of the patient □ □ □ □ □

4. Nursing care uses a computer system is integrated with the leadership system □ □ □ □ □

5. The level of low cost that each patient should charge becomes more affordable □ □ □ □ □