EFFECTIVENESS OF DEVELOPMENT ANDRA'S NURSING INFORMATIC SYSTEM APPLICATION (ANNISA) TOWARDS NURSING DOCUMENTATION COMPLETENESS

Candra Saputra[1], Yulastri Arif[2], Fitra Yeni[2]
[1]Program Studi S1 Keperawatan STIKes Payung Negeri Pekanbaru,
Email Corespondensi: candra.saputra@payungnegeri.ac.id
[2]Fakultas Keperawatan, Universitas Andalas
Email: yulastri.arif@gmail.com

ABSTRACT

Nurses have an important role in improving the completeness of nursing documentation. Increasing the completeness of nursing documentation can be done through changing paper-based documentation to electronic-based with the development of ANNISA applications. The ANNISA application developed is oriented to NNN Linkage nomenclature. The purpose of this study was to determine the effectiveness of ANNISA development on the completeness of nursing documentation. This study conducted using a quantitative research with a quasy experimental design and a Time Series Non Equevalent Control Group Design approach. The sampling technique used was proportional random sampling with a total sample of 96 nurses in health center Pekanbaru City. The results showed that there were differences in the measurement Completeness of nursing documentation between pretest and postest measurement in the intervention group (p Value = 0,000 <α = 0.05) and there were differences in completeness of nursing documentation between the intervention group and the control group in the pretest, postest-1 and postest-2 measurement (p Value = 0,000 <α = 0.05). there was an increase in differences Completeness of nursing documentation from pretest , posttest-1 and postest-2 measurements after ANNISA model development in the intervention group and the control group (p Value = 0,000 <α = 0.05). It is expected that the health center can use the ANNISA application as an alternative in solving the problem of completing nursing documentation carried out by nurses in the Health Center Pekanbaru City.

Keywords: ANNISA, Nursing Documentation, Completeness

INTRODUCTION

The role of nurses in implementing nursing care documentation is very large. That role is related to nurses' competence in carrying out complete nursing documentation. Data in Europe shows the average documentation carried out by nurses, which is above 50%, namely 51.6% in Ethiopia and 58.5% in Spain (Abebe *et al*., 2014; [1] states that the knowledge possessed by a nurse will have a major influence on nursing records and completeness of nursing documentation. [2]

Nursing documentation must have information that is valid and in line with established standards [3]. Efforts to improve the completeness of nursing documentation can be done through changes to paper-based documentation.

The change is the documentation process carried out by using computerized electronics[4]. Certainly these changes must adjust to the standards of nursing care set. One important aspect in implementing standard nursing care is the application of forms of nursing documentation. The form of nursing documentation consists of paper-based and computerized based documentation. Paper-based and computerized based documentation includes focus data formats, nursing diagnoses, identification of objectives, implementation of actions and nursing evaluations [5]. electronic-based documentation makes it easier for nurses to document than paper-based[6]. Data shows 90% of paper-based documentation tends to experience incomplete records and often records are lost.

The model of the nursing information system at this time has developed a lot. The nursing information system in the health center order developed is ANNISA. ANNISA stands for Andra's Nursing Informatic System Application, which is a model of nursing information system that is used as a form of nursing documentation instrument in the form of community nursing practice oriented to NNN Linkage nomenclature. This development was used at all stages of nursing care documentation. Aspects of nursing care documentation include: assessment, diagnosis, intervention, implementation based on five community nursing intervention and evaluation strategies [7].

Data obtained at health centers Pekanbaru City indicate that there is no nursing care documentation at the health center. Data shows 9 out of 10 nurses expressed inability to carry out nursing care documentation. In line with this, the head of the Pekanbaru City Health Office also revealed that the health center also did not yet have a nursing care documentation report. The application of electronic-based nursing care documentation in the work area of the Pekanbaru City Health Office also does not yet exist. All health center in Pekanbaru are carried out using paper notes. Of course this will cause incomplete records and tend to experience errors in recording.

The main challenge is to make changes in the form of paper-based documentation to computerized based documentation. The effort is the focus of researchers to be able to develop an information system by prioritizing existing nursing care standards in primary services in accordance with the duties of public health nurses. Of course if the problem can be achieved, the development of an integrated nursing information system is the main strategy in facilitating nurses in carrying out nursing care documentation. The problems described in detail, became the basis of the authors to conduct research with the research title "Effectiveness of ANNISA Development on Completeness of Nursing Documentation in Health Center, Pekanbaru City "

METHOD

The type of research conducted is quantative research using research design is Quasi Experimental. The approach used

in this research is to use the Time Series Non Equivalent Control Group Design research design, namely the design that aims for subjects to be randomly placed into groups and exposed as independent variables given sequential post-test[8].. This research was conducted in all health centers Pekanbaru city on November 24, 2018 to March 12, 2019. The sampling technique used in this study was proportional random sampling. The sample in this study were nurses working in health centers throughout the city of Pekanbaru with a sample of 96 nurses who were divided into control groups and intervention groups. The data collection tool in this study used a closed question questionnaire on each variable. The data analysis technique used was univariate data analysis to describe variable distribution, bivariate analysis using pair t test and independent t test and multivariate analysis using GLM-RM statistical tests (Generalized Linear Models-Repeated Measure)

RESULT

Tabel 1 . Distribution of respondents characteristics in the intervention group and the control group in Health Center, Pekanbaru City (n=96)

Characteristics of Respondents	Intervention		Control	
	f	%	f	%
Nurse Age				
a. Early Adult (26 – 35 years old)	23	47,9	26	54,2
b. Late Adult (36 – 45 years old)	12	25,0	12	25,0
c. Middle Age (46 – 59 years old)	13	27,1	10	20,8
Gender				
a. Male	21	43,8	23	47,9
b. Female	27	56,3	25	52,1
Education				
a. Diploma 3	22	45,8	24	50,0
b. Bachelor	26	54,2	24	50,0
Length of Work				
a. < 5 Years	22	45,8	21	43,8
b. > 5 Years	26	54,2	27	56,3

KarakteristikResponden	Eksperimen		Kontrol	
	f	%	f	%
Umur Perawat				
d. DewasaAwal (26 – 35 tahun)	23	47,9	26	54,2
e. DewasaAkhir (36 – 45 tahun)	12	25,0	12	25,0
f. UsiaPertengahan (46 – 59 tahun)	13	27,1	10	20,8
Jenis Kelamin				
c. Laki-Laki	21	43,8	23	47,9
d. Perempuan	27	56,3	25	52,1
Pendidikan				
c. D.3	22	45,8	24	50,0
d. S1	26	54,2	24	50,0
Masa Kerja				
c. < 5 Tahun	22	45,8	21	43,8
d. > 5 Tahun	26	54,2	27	56,3

Tabel 2. Average difference of Completeness in nursing documentation between pretest, postest-1 and postest-2 of experimental group and control group (n=96)

Completeness of Nursing Documentation	N	Mean	SD	95 % CI	p Value
Intervention group					
Pretest-Postest-1	48	15,4	15,1	19,8-11,0	0,000
Postest-1 – Postest-2	48	12,0	17,2	17,0-7,07	0,000
Control group					
Pretest-Postest-1	48	3,50	9,24	6,18-0,81	0,012
Postest-1 – Postest-2	48	4,02	12,1	7,53-0,50	0,026

Tabel 3. Average of Completeness in nursing documentation between the intervention group and the control group on Pretest, Postest-1 and Postest-2 after ANNISA model development in Health center, Pekanbaru City (n=96)

Measurement	Group	n	Mean	SD	CI 95%	P Value
Pretest	Intervention	48	48,9	10,3	4,09-3,92	0,967
	Control	48	49,0	9,37		
Postest-1	Intervention	48	74,7	15,6	17,0-27,4	0,000
	Control	48	52,5	9,28		
Postest-2	Intervention	48	86,8	13,8	25,3-35,2	0,000
	Control	48	56,5	10,1		

Tabel 4. Multivariate Analysis Completeness of Nursing Documentation in Intervention and Control Groups after ANNISA Model Development in Health Center, Pekanbaru City (N = 96)

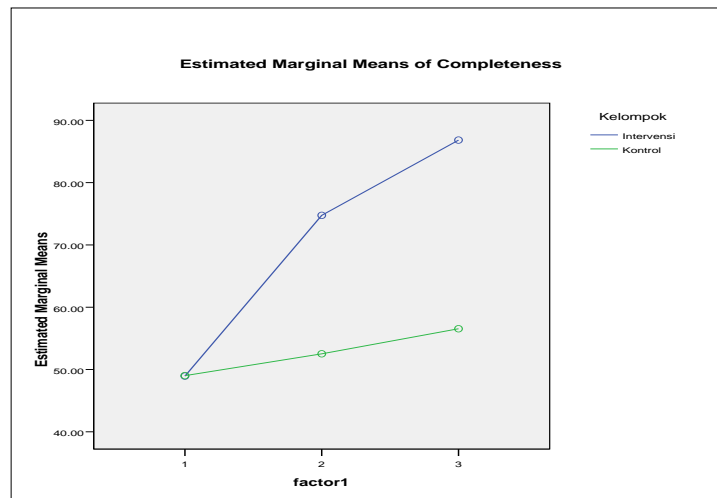| Variable	Group	N	Mean	SD	p Value
Pretest	Intervention	48	48,9	9,84	
	Control	48			
Postest-1	Intervention	48	63,6	16,9	0,000
	Control	48			
Postest-2	Intervention	48	71,6	19,4	
	Control	48			

Figure 1 : Increase Graph of Completeness in Nursing Documentation based on Pretest, Postest-1 and Postest-2 measurements after intervention (n=96)

Table 1 shows that the characteristics of respondents consisted of the age distribution of nurses in the experimental group of nearly half the early adults (26-35 years), which were 23 people (47.9%) while the age of nurses in the control group was mostly early adults (26 -35 years) as many as 26 people (54.2%). The sex in the experimental group was mostly women, namely as many as 27 people (56.3%) while the sex in the control group was also mostly women as well as 25 people (52.1%). Education in the experimental group was mostly in the S.1 level, which was 26 people (54.2%) while the sex in the control group was half the D.3 level, 24 people (50.0%). The working period in the experimental group is mostly> 5 years, which is 26 people (54, 2%) while the working period in the control group is mostly> 5 years as many as 27 people (56.3%).

Table 2 shows that the difference in nursing documentation completeness measurements in the intervention group before the intervention with postest-1 measurement was obtained p value = $0{,}000 < \alpha = 0.05$ means that Ho is rejected so that there are differences in nursing documentation between before and after postest-1 measurement ANNISA model intervention and post-1 nursing documentation complete with postest-2 scores p value = $0{,}000 << \alpha = 0.05$ means that Ho is rejected so there is a difference in completeness of nursing documentation after post-1 measurement with postest-2 measurements after ANNISA model intervention. While the difference in the measurement of nursing documentation in the control group before and after the posttest-1 measurement p value = $0.012 < \alpha = 0.05$ means that Ho is rejected so that there are differences in completeness of nursing documentation between before and after measurements in the control group, and posttest 1 with postest-2 the value of p Value = $0.026 < \alpha = 0.05$ means that Ho is rejected so that there is a difference in completeness of nursing documentation between posttest-1 measurements with

posttest-2 measurements in the control group.

Table 3 shows that the differences in the measurement of Completeness of the pretest nursing documentation found that the p value = 0.967> α = 0.05 means that Ho failed to be rejected so there was no difference in nursing documentation between the intervention group and the control group before the model development intervention was carried out. ANNISA in Health Center, Pekanbaru City. Completeness measurement of post-1 nursing documentation was obtained p value = 0,000 <α = 0.05 means that Ho was rejected so there was a difference in Completeness of nursing documentation between the intervention group and the control group before ANNISA model development intervention in Health Center, Pekanbaru City . Completeness measurement of posttest-2 nursing documentation obtained p value = 0,000 <α = 0.05 means that Ho was rejected so that there was a difference in Completeness between the intervention group and the control group before ANNISA model development intervention was conducted in Health Center, Pekanbaru City.

Table 4 shows the results of GLM-RM statistical test found that the value of p Value = 0,000 means that Ho is rejected so that it can be concluded there is an increase in differences in nursing documentation from pretest measurements, posttest-1 measurements and postest-2 measurements after ANNISA model development on intervention group and control group.

Figure 1 shows that there is a difference in the Nursing Documentation Completeness score after being given an ANNISA application model intervention on posttest-1 measurements and a return on posttest-2 measurements. This shows that the effect on the Nursing Documentation Completeness score was clearly seen in the second measurement and the third measurement in the intervention group and the control group. while seen from the effect changes it can be seen that the intervention group changes faster than the control group that is not given an intervention so it can be concluded that the development of the ANNISA model is very influential on the Completeness of Nursing Documentation of nurses compared to those not given the intervention (control group).

CONCLUSION

There are differences in the completeness of nursing documentation before, post-1 and post-2 after the use of ANNISA applications in the Health Center, Pekanbaru City. Furthermore, there are differences in the completeness of nursing documentation before, post-1 and post-2 after the ANNISA application was used in the intervention group and the control group in Health Center, Pekanbaru City. After multivariate analysis, it was found that there was an increase in nursing documentation completeness significantly from the pretest measurement, posttest-1 measurement and posttest-2 measurement in the Health Center, Pekanbaru City.

THANK YOU NOTE

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