Influence of Health Education on Pulmonary Cardiac Resuscitation Guidelines Based on the American Heart Association(AHA) 2010 to Increased Cognitive Ability of Nurses in Abepura Hospital

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Abstract: *Introduction; World Health Organization (WHO) recorded more than 7 million people died of Acute Coronary Syndrome (SKA) around the world in 2002. This figure is estimated to rise up to 11 million people in the year 2020. Did Antman et al, (2004). SKA is a coronary heart disease that is the leading cause of death in the world, where there are more than 4.5 million people died because it contains the SKA, SKA is: ST Elevation Myocardial (STEMI), Non ST Elevation Myocardial (NSTEMI) and the Unstable Angina Pectoris (UAP). A Prevalence disease of the heart and blood vessels (Cardiovascular) in Indonesia keeps increasing the number of event. Method; This research uses descriptive observational design with the design of One Group pretest posttest, namely the draft research where there were no comparison groups (control), but most are not already done the first observation (Pretest) allowing researchers can test the changes that occurred after the experiments. Result; There is the influence of health education on pulmonary cardiac resuscitation based on guidelines the American Heart Association (AHA) year 2010 to increased cognitive ability, then performed the analysis using statistical test of chi square and obtained by the p-value = 0.000 < 5%, thus the alternative hypothesis (H_1) received, which means there is the influence of illumination cardiac pulmonary resuscitation of health based on the guidelines the American Heart Association. Discussion; The Professional Nursing Care, then a nurse must show the ability of the developed skills and knowledge on an ongoing basis. On improving the quality of nursing services, particularly in the action of heart lung resuscitation treatment in an effort to stop the heart (cardiac arrest), nurses are expected to start implementing a wide range of skills and his knowledge directly on clients who are hospitalized and strive to provide a quality Professional Nursing Care.*

Keywords: Health Education, Pulmonary Cardiac Resuscitation, Cognitive ability

1. Introduction

World Health Organization (WHO) recorded more than 7 million people died of Acute Coronary Syndrome (SKA) around the world in 2002. This figure is estimated to rise up to 11 million people in the year 2020. Antman et al, (2004). SKA is a coronary heart disease that is the leading cause of death in the world, where there are more than 4.5 million people died because it contains the SKA, SKA is: ST Elevation Myocardial (STEMI), Non ST Elevation Myocardial (NSTEMI) and the Unstable Angina Pectoris (UAP). A Prevalence disease of the heart and blood vessels (Cardiovascular) in Indonesia keeps increasing the number of events. From Household Health Survey results (SKRT) Health Department 2006 cardiac diseases mortality reaches 25%. In the year 2008 of the total number of patients coming into the ERRS National Heart Centre Harapan Kita (PJNHK) obtained a number of patients at diagnosis SKA was 26.9%

And any 3-4 months patients come to Emergency units in the heart condition is not pulsing (death on arrival). Even if survivors after lung heart resuscitation attempts are unsuccessful, the patient is already experiencing damage to the heart and various other organs. Cases like this of course may be reduced if the patient's heart attack quickly got help and fast right before arriving to the hospital soon the triase quickly in the hospital treatment for reperfusion.

Complications that can occur in the SKA are ceasing heart ventricular fibrillation induced by incidence (VF) or ventricular flutter (VT) without a pulse. For these nurses to increase knowledge and skills in the management of patients with good SKA has not experienced complications or who have experienced complications. Basic Living assistance (BHD)/Life Support is an attempt being made to sustain life at the time the sufferer experiencing life-threatening circumstances. When relief efforts life is done without wearing liquid intravenous drug or electric shocks, and then known as Basic Life Assistance (*Basic Life Support*). On the contrary when living assistance is carried out using medication known as Advanced Life Aid (*Advanced Life Support*).

The American Heart Association (*American Heart Association/AHA*), using the 4 Access rescue chain is to illustrate that the time is very important in the rescue of survivors, especially at sufferers with VF or SKA. Three of the 4 chains are also relevant for sufferers with non-stop

breath of the heart. A chain of rescue or the so-called "*Chain of Survival*" as follows: 1). Quick contact SPGDT, 2). quickly perform CPR. Immediate CPR can provide opportunities two or three times the sufferer with VF or SKA may be saved, 3). Fast do Defibrillation: CPR and Defibrillation on sufferers can increase the level of rescue (45%-75%), and quickly provide relief to life.

Heart lung resuscitation based on action *guidelines the American Heart Association (AHA)* in 2010 using algorithms CAB (circulation/compression, airway, breathing), where the first step is to ascertain whether a patient experience non-stop heart by examining the pulse (circulation), further ensure the airway (airway) patents, and respiratory (breathing) adequately. The next step, namely providing compression and ventilation with 30:2 ratios for five cycles.

Based on the results of the interviews to some nurses at Installation Emergencies regional Abepura General Hospital of cardiac pulmonary resuscitation treatment that most nurses are still doing CPR with the algorithms of the ABC (airway, breathing, circulation), which refers to the *guidelines the American Heart Association (AHA)* of the year 2005. But there are also some nurses who are already doing CPR with algorithm CAB (airway, breathing, circulation), which refers to the *guidelines the American Heart Association (AHA)* year 2010.

In order for the service of cardiovascular emergency can be improved especially in the installation of Emergency Regional Abepura General Hospital, then researchers looked at the need to research about "the effect of health education about cardiac resuscitation pulmonary *guidelines* based on the *American heart association (AHA)* year 2010 to increased cognitive ability of nurses in Abepura Hospital ".

2. Purpose of Study

Knowing the influence of health education on pulmonary cardiac resuscitation *guidelines* based on the *American Heart Association (AHA)* 2010 to increased cognitive ability of nurses in HOSPITALS Abepura

3. Method

3.1 Research Design

This research uses descriptive observational design with the design of *One Group pretest posttest,* namely the draft research where there were no comparison groups (control), but most are not already done the first observation (Pretest) allowing researchers can test the changes that occurred after the experiments (Notoadmodjo, 2012).

O1	X	O2

Description:
O1: knowledge before the extension
X: Administering health outreach
O2: knowledge after extension

3.2 Population and sampling

The population in this study are all the nurses in Emergency Hospital Abepura in June 2015 totally 15 nurses. The sample is a portion of the subject is taken from the population. Sample research said if we mean to generalize or lift the summary research of population (Arikunto, 2002:117). The sample used is the entire amount of population. 15 respondents / nurses. Sampling using is a sampling technique (Sugiyono, 2007:62). The sampling techniques used in this research are the *Total Sampling or Sampling of saturated. Sampling of saturated* a sample assignment techniques by taking all members of the population being sampled. How this is done when the members of a small population (Alimul, 2007:74).

4. Result

In this chapter will be outlined the results of the research that has been done on the Abepura PROVINCIAL HOSPITAL. The data obtained will be presented in the form of narration, and tables. At the presentation of the results is divided in two parts, namely the analysis of univariate analysis and bivariate. The result of the univariate test discusses about the evaluation results before and after health education. While the results of the test deals with the influence of bivariatee health counseling about resuscitation pulmonary heart based on *guidelines the American Heart Association* (AHA) year 2010 to increased cognitive ability of nurses HOSPITALS Abepura.

A. Univariate Analysis
1. The results of the evaluation of the Learning Lab
Table 4.1: Analysis of frequency distribution and percentage Results evaluation of the cognitive ability of nurses before health counseling about Pulmonary Heart Resuscitation guidelines based on AHA 2010 November 2015
(n = 36)

Variables	The frequency of the	%
1. Enough	27	75
2. Good	8	22.2
3. Very good	1	2.8

Table 4.1 shows the distribution of the results of the evaluation of the cognitive ability of nurses before health counseling about Resuscitation Pulmonary Heart based on AHA 2010 guidelines generally quite 75%.

2. The Results Of The Evaluation Of The Clinical Practice Of Medical Surgical Nursing II.
Table 4.2: Analysis of frequency distribution and percentage Results evaluation of the cognitive ability of nurses after health counseling about Pulmonary Heart Resuscitation guidelines based on AHA 2010 November 2015
(n = 36)

Variables	The frequency of the	%
1. Less	1	2.8
2. Enough	9	25
3. Good	24	66.7
4. Very good	2	5.6

Table 4.2 shows the distribution of the results of the evaluation of the cognitive ability of nurses after health counseling about Resuscitation Pulmonary Heart based on AHA 2010 *guidelines* generally good 66.7%.

B. Bivariate Analysis

Bivariate analysis in this research is the influence of health education on pulmonary cardiac resuscitation based on *guidelines the American Heart Association* (AHA) year 2010 to increased cognitive ability of nurses HOSPITALS Abepura.

Table 4.4: Analysis of the influence of Health Education On Pulmonary Cardiac Resuscitation based on *Guidelines the American Heart Association* (AHA) Year 2010 to increased cognitive ability of nurses HOSPITALS Abepura November the year 2015, (n = 36)

The Results of the Post Test	Less		Enough		Good		Very Good		Total		p-value
The Results of the Pre Test	F	%	f	%	F	%	F	%	f	%	
Enough	0	0	4	11.1	22	61.1	1	2.8	27	75	
Good	1	2.8	5	13.9	2	5.6	0	0	8	22.2	0.000
Very Good	0	0	0	0	0	0	1	2.8	1	2.8	
Total	1	2.8	9	25	24	66.7	2	5.6	36	100	
N = 36											

Based on table 4.4, shows from 36 respondents who examined there were 27 respondents (75%) have the evaluation results after counseling health category with just 4 respondents (11.1%), the category of either 22 respondents (61.1%), and the category of very good 1 respondents (2.8%), the second 8 respondents (22.2%) have the evaluation results after counseling health category with 1 less respondents (2.8%) category 5 respondents (13.9%), and category 2 both respondents (5.6%). Subsequently obtained 1 respondent (2.8%) which have evaluation results before and after health education (pretest-posttest) very well.

To find out if there is the influence of health education on pulmonary cardiac resuscitation based on *guidelines the American Heart Association* (AHA) year 2010 to increased cognitive ability, then performed the analysis using statistical test of *chi square* and obtained by the p-value = 0.000 < 5%, thus the alternative hypothesis ($H_{1)}$) received, which means there is the influence of illumination cardiac pulmonary resuscitation of health based on the *guidelines the American Heart Association* (AHA) in 2010 to increased cognitive ability of nurses in HOSPITALS Abepura.

5. Discussion

In this chapter deals with the interpretation of the research results which consist of univariate analysis and analysis of the influence about the bivariate extension health about resuscitation pulmonary heart *guidelines based on the American Heart Association* (AHA) in 2010 to increased cognitive ability of nurses in HOSPITALS Abepura.

A. Cognitive ability of nurses before the extension

Based on the results of data collection, it brings that out of the 36 respondents to the evaluation results most of the cognitive ability of nurses before given guidance health is 75% is good enough. Evaluation is an integral part of the educational process to find out how far the learning process and learning has reached its intended purpose (Suparman, 1994)

According to Mudhafir (1991), specifically describes the student assessment including an evaluation of the product. The evaluation of the product is the evaluation of the results obtained after following student teaching and learning, focusing on the product in accordance with the objectives of instructional is supposed to achieve.

Results of the study showed most of the psychomotor ability evaluation of nursing health education is given before 75% is good enough, this is due to the majority of nurses have never followed a training cardiac pulmonary resuscitation. There is also who have been exposed to information about cardiac pulmonary resuscitation based on *guidelines the American Heart Association* (AHA) year 2005 but have yet to find out the year 2010 AHA guidelines. Most nurses who have been following the heart lung resuscitation training based on the *guidelines the American Heart Association* (AHA) in 2005 and the year 2010, not yet fully mastered the technique of CPR treatment.

B. The cognitive ability of nurses after extension

Based on the results of research, showed that of the 36 respondents most (66.7%) has the cognitive ability of nurses evaluation results after the extension is good. (Notoatmodjo 2003), States that knowledge is a domain that is very important for the formation of the behavior and actions of a person, because of the experience and research it turns out that behavior based on the knowledge of more lasting than behavior that is not based on knowledge.

Next Health (2001), suggested that a good knowledge will support the attainment of good behavior anyway. The higher the level of education of the nurse then the better anyway in any action that will be performed.

The results of this research in line with the above theory showed that psychomotor ability evaluation results the nurse after health counseling about pulmonary heart resuscitation *guidelines* based on AHA 2010 (66.7%) was good. This is due to the nurse at the Abepura General Hospital area, particularly in the Emergency Installation spaces (IGD) and the Intensive Care Unit (ICU), has been getting information back through the guidance provided by the research team Risbinakes Poltekkes Kemenkes Jayapura year 2015 about resuscitation pulmonary heart based on *guidelines the American Heart Association* (AHA) 2010. One of the obstacles that are still present in the Abepura HOSPITALS providing standard operational procedure (SOP) about the action of Heart Lung Resuscitation (CPR) based on the *guidelines the American Heart Association* (AHA) 2010. In this case, nurses need to continue to train the skill related to the competence, since it still seems the existence of actions

taken have not been perfect, so still need for guidance from instructors clinic hospital.

C. Influence of Health Education on Pulmonary Cardiac Resuscitation Guidelines based on AHA 2010 year to increased cognitive ability of nurses in HOSPITALS Abepura

Based on the results of the test statistics "on the influence of health education on cardiac pulmonary resuscitation *guidelines* based on AHA 2010 year to increased cognitive ability of nurses in HOSPITALS Abepura, the p-value shows the value 0000 < 0.05. That means health counseling about pulmonary heart resuscitation guidelines based on AHA 2010 year has impact on psychomotor ability improvement of nurses in HOSPITALS Abepura. Likewise, the results of the cross-tabulations (crosstab), the majority of the nurses showed the results of the evaluation before extension (pretest) have enough categories that generate value evaluation after the extension (posttest) by category good (61.1%).

According to the General Dictionary Indonesian Language skills means the ability to do something well and that can be seen in the appearance of one's work.

Standard size or interpreted as an agreed benchmark, while competence refers to the ability of someone who can observe covers over the knowledge, skills and attitude in completing a job or task by the standards of performance (performance) set out (DEPDIKBUD, 1994).

In providing Professional Nursing Care, nurses use the theoretical knowledge that steady and sturdy from different disciplines related to nursing, besides a wide range of basic sciences such as biology, physics, biomedicine, behavior and social as a foundation in conducting the study, formulation nursing diagnoses, the preparation of planning and carrying out the evaluation and nursing actions (Jannah, 1997).

Related to the importance of administering the Professional Nursing Care, then a nurse must show the ability of the developed skills and knowledge on an ongoing basis. On improving the quality of nursing services, particularly in the action of heart lung resuscitation treatment in an effort to stop the heart (cardiac arrest), nurses are expected to start implementing a wide range of skills and his knowledge directly on clients who are hospitalized and strive to provide a quality Professional Nursing Care.

Based on the results of the test statistics, that the need for an increase in quality both in terms of cognitive or psychomotor treatment of basic living assistance (BHD), having an impact or influence on the success of the rescue of patients while experiencing the condition of stopping the heart. Improved quality of these competencies can be realized by facilitating the nurse to continuously to follow the heart lung resuscitation training with reference to the progress information (*information update*).

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