Factors Affecting Nursing Ability To Know Acute Coroner Syndrome In Emergency Installation

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ABSTRACT

Background: Coronary heart disease is the most cardiovascular disease that causes death in the world. The ability of nurses to recognize acute coronary syndromes is very necessary as part of the emergency services team.

Purpose : The purpose of this study was to determine the description of the factors that influence the ability of nurses to know acute coronary syndrome in the emergency department of dr. Iskak Tulungagung.

Methods : The design of this research is descriptive analytic with a cross sectional approach with the population of all nurses who work in the Emergency Department of dr. Iskak Tulungagung. The population is 55 nurses. The sample is all of the population, namely 55 respondents with total sampling sampling techniques. The data that has been collected is processed by a statistical test of Multivariate Analysis, Ordinal Regression with significance $\alpha = 0.05$.

Result : The results showed that most of the respondents with D3 education were 33 respondents (60.0%), almost all respondents had never attended ECG training in the amount of 50 respondents (90.9%) and almost half of the respondents had a working period of 2-5 year is 25 respondents (45.5%).

The results of the regression regression analysis showed that the p-value = 0.855 on the education factor which means that H0 was accepted, the p-value = 0.041 in the training factor which means H1 is received, the p-value = 0.003 on the working period, which means that H1 is accepted

Conclusion : Based on research, education does not affect the ability to recognize acute coronary syndrome. The education obtained will develop according to the increase in the work period and the frequent training that is obtained and practiced directly in real situations.

Keywords : Education, Training, Length Of Work, Acute Coronary Syndrome

BACKGROUND

Coronary heart disease is the most cardiovascular disease that causes death in the world, which is 7.2 million per year or 41% of cardiovascular diseases (Word Heart Federation, 2010). WHO data shows that 17 million people die each year from heart and blood vessel disease worldwide. In the United States 1.5 million people have a heart attack and 478,000 people die of coronary heart disease each year (Hediyani, 2012).

Nurses are the most number of health workers in the hospital and most interact with patients, so the ability of nurses who are professional in recognizing acute coronary syndromes is very much needed as part of the emergency services team.

According to data from the Indonesian Ministry of Health, based on the doctor's diagnosis data in 2013, the prevalence of coronary heart disease was 0.5% (around 883,447 people), while based on doctor / symptom diagnosis 1.5% (around 2,650,340 people) with an estimated number most patients with coronary heart disease were in the province of East Java as many as 375,127 people (infodatin kemenkes RI).

In Dr. Iskak Tulungagung, from medical record data since July 2016 until the end of December 2016, there were 149 visits of patients with acute coronary syndrome and thrombolytic therapy was carried out for 55 people in the ED with a 30 minute door to needle target, and 14 Primary PCI therapy therapists. patients with a door to baloon target of 60 minutes. The initial study of researchers on February 1, 2017, from the results of interviews with 5 nurses in the emergency department of Dr. Iskak Tulungagung hospital, obtained only 2 nurses who could mention the signs and symptoms of angina in acute coronary syndrome, 4 nurses could not do simple interpretation of acute coronary syndrome and 2 nurses who can interpret the results of heart markers.

With the number of visits of patients who experienced acute coronary syndrome who went to Dr. Iskak Tulungagung Hospital General Hospital and in line with the 2015 AHA guideline recommendation that the focus of Acute Coronary Syndrome care is emphasized on strengthening pre-hospital services and in the emergency room, the emergency nurse must be truly competent in recognizing acute coronary syndrome, because of an error in detecting the initial symptoms of a heart attack can have fatal consequences, causing permanent death of the heart muscle and death. In addition, from the researchers' preliminary observations starting from mid-December 2016 to mid-January 2017, there were 5 patients with Acute Coronary Syndrome who were supposed to enter a critical room but were put into a semi-critical space which eventually led to delayed management of the right Acute Coronary Syndrome, which of course would reduce successful rescue of heart muscle that has infarction.

Nurse competence is influenced by the characteristics of nurses (Budiharto, 2003). The characteristics in question include; age, gender, education, training and experience (working period). Based on the above characteristics, in the ER the Hospital Dr. Iskak Tulungagung itself has PK 1 nurses, PK 2 nurses, and 3 Pk Nurses who have varied education, training and work experience.

Based on the data above, researchers feel the need to dig further and be interested in proposing research with the title of factors that influence the ability of nurses to know acute coronary syndrome in the Dr. Iskak Tulungagung hospital emergency room in hopes of providing input in the form of accurate and accurate research data. so that it can be one of the reference data in preparing plans and strategies for the service of acute coronary syndrome patients in the emergency department of Dr iskak Tulungagung Hospital.

OBJECTIVE

The purpose of this study was to determine the description of the factors that influence the ability of nurses to know acute coronary syndrome in the emergency department of dr. Iskak Tulungagung.

METHODS

This research is a quantitative research with descriptive analytic research with a cross sectional approach with the population of all nurses who work at the emergency department hospital Dr. Iskak Tulungagung. The population is 55 nurses. The sample is the entire population of 55 respondents.
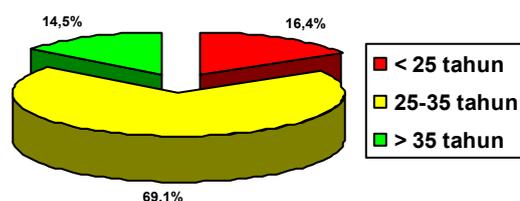
The sampling technique used was total sampling technique. The independent variables used in this study were education, training and tenure.

The location of the study was carried out at the Dr Iskak Hospital Tulungagung Hospital on 12-31 July 2017. The research instruments used were observation sheets and questionnaires..
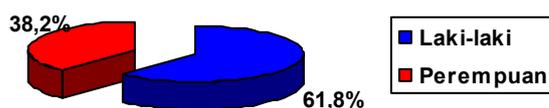
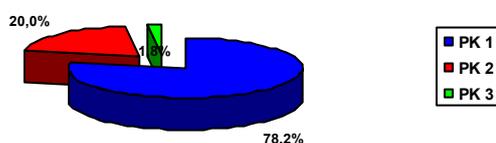## RESULTS

a. Characteristics of Respondents

Age of Respondents

Gender of Respondents

Clinical Nurse Level of Respondents

b. Variable characteristics

Independent Variable:

Respondent Education

Education	Total	Persentase (%)
D3	33	60,0
S1	22	40,0
Total	55	100

Electrocardiogram Training

Course	Total	Persentase (%)
No course	33	90,9
Course	22	9,1
Total	55	100

Respondent's Working Period

Lenght work	Total	Persentase (%)
< 2 years	18	32,7
2-5 years	25	45,5
6-10 years	7	12,7
>10 years	5	9,1
Total	55	100

Dependent variable: Ability to Know Acute Coronary Syndrome

Ability	Total	Persentase (%)
Less	11	20,0
Enough	22	40,0
Moderate	16	29,1
Good	6	10,9
Very good	0	0,0
Total	55	100

The results of the analysis by ordinal regression test obtained the value of Sig. (2-tailed) on the education factor r-square = 0.001, p-value = 0.855> 0.05, then Ho was accepted, the working period factor r-square = 0.221, p-value = 0.003 <0.05, then Ho is rejected and ECG training factor r-square = 0.073, p-value = 0.041 <0.05, so Ho is rejected (the results of the statistical test are attached).

Based on the results of ordinal regression statistical tests it is known that educational factors are factors that do not affect the ability of nurses to recognize the symptoms of acute coronary syndrome. Whereas working period and ECG training factors are factors that influence the ability of nurses to recognize the symptoms of acute coronary syndrome. It is also known that the working period has a p-value = 0.003 which is more significant than the ECG training factor (p-value = 0.041) so that it can be concluded that the working period is the most dominant factor affecting the ability of nurses to recognize the symptoms of acute coronary syndrome in the ED Dr. Iskak Tulungagung hospital

DISCUSSION
Effect of Education on the Ability of Nurses to Know Acute Syndrome in the emergency department of dr. Iskak Tulungagung Hospital.

Based on the results of the study it is known that out of 55 respondents, most of them were D3 educated respondents, namely 33 respondents (60.0%), while those with SI education were 22 respondents (40.0%). Based on the cross tabulation it is known that almost half of the respondents who have D3 education have sufficient ability to recognize acute coronary syndrome, which is 14 respondents (25.5%). Likewise for respondents with SI education, most of them also have sufficient ability to recognize acute syndrome as many as 8 respondents (14.5%). Statistical test was performed using ordinal regression test using SPSS obtained the Sig. (2-tailed) value on the educational factor p-value = 0.855> 0.05, so Ho was accepted.

Ability is a skill that consists of three types of skills to deal with and adjust to new situations quickly and effectively, knowing / using abstract concepts effectively, knowing the relationship and learn quickly (Slameto, 2010). The ability / competence of nurses is the biggest variable affecting the performance of nurses. Nurse competence is influenced by the characteristics of nurses (Budiharto, 2003). The characteristics referred to include education. According to (Notoatmodjo (2009), one's education influences the way he views himself and his environment.

Based on the results of this study it is known that educational factors are factors that do not affect the ability of nurses to recognize acute coronary syndrome. This is actually contrary to Budiharto's theory (2013) which states that nurse education is a factor that influences competence. However, it should also be noted that according to Notoatmojo (Ariwibowo, 2013) that education is a person's process of developing abilities, attitudes, and other forms of behavior in the society in which he lives. Which means that the formal education obtained still needs to be developed and honed by experience so that it will produce different levels of competence for each individual. This has led to levels of education level D3 and SI in this study will not directly make a person proficient in recognizing acute coronary syndrome, due to the knowledge gained during the study in a general nature only and formal course there will be differences when faced with real situations of heart attack which is full of variations in conditions and patient response. So despite the fact that the respondents are highly educated DIII and SI nursing, but because it is possible not yet been trained ECG, and has no experience because his tenure is still a little bit, then this will reduce the ability of nurses, because the ability is one element in maturity with regard to knowledge or skills that can be obtained from education, training and experience. It is why even though the respondents had highly educated nursing DIII and SI but having acute coronary syndrome kemamampuan know less, or it can be said education factor is a factor that does not affect the ability of nurses recognize acute coronary syndrome.

Effect of Training on the Ability of Nurses to Know Acute Syndrome in the emergency department of Iskak Tulungagung Hospital.

Based on the results of the research that has been done, it is known that out of 55 respondents, almost all respondents did not take ECG training, amounting to 50 respondents (90.9%), while those who took ECG training were 5 respondents (9.1%). Based on cross tabulation data it is known that those who did not take ECG training produced varying values, as many as 11 respondents (20%) received less scores, 16 respondents (29.1%) got a moderate score, almost half of the respondents had enough scores, namely 18 respondents (32.7%), and 5 respondents (9.1%) got good grades. Whereas respondents who took ECG training received enough scores as many as 4

respondents (7.3%) and good grades as much as 1 respondent (1.8%). The results of the analysis by ordinal regression test obtained Sig. (2-tailed) value on ECG training factor p-value = 0.041 <0.05, so Ho was rejected, which means that ECG training factor is a factor that influences the ability of nurses to recognize acute coronary syndrome in RSD dr. Iskak Tulungagung.

The ability / competence of nurses is the biggest variable affecting the performance of nurses. Nurse's competence is influenced by the characteristics of nurses. The characteristics in question include; age, gender, education, training and experience / tenure (Budiharto, 2003). Training as a short-term education process that uses systematic and organized methods and procedures (Sumantri 2000: 2). The trainees will learn practical knowledge and skills for specific purposes. While Hariandja (2007: 169) explained that training was emphasized on increasing the ability to do specific work.

Based on the results of the above studies it is known that ECG training factors are factors that influence the ability of nurses to recognize acute coronary syndrome. This is because the symptoms of acute coronary syndrome are emergency conditions that require immediate early detection so that relief can be done immediately before experiencing more severe damage to the heart muscle or death. Training is needed to improve the ability of nurses to recognize acute syndrome in accordance with cardiovascular emergencies that are always developing.

Based on history, physical examination, electrocardiogram (ECG) examination, and examination of cardiac markers, acute coronary syndrome was divided into STEMI, NSTEMI, and UAP. To be able to diagnose and differentiate which STEMI, NSTEMI, and UAP are the most important are from ECG recordings. Therefore, wherever possible, ECG recordings are made within 10 minutes of the arrival of the patient in the emergency room. ECG examination should be repeated every time angina complaints arise again. But unfortunately, based on the results of this study it is known that almost all respondents stated that they had never received EKG training. This is something that is vital and needs to get attention from the hospital management to increase the HR of nurses, especially in the emergency department to hold ECG training so that nurses are able to recognize and detect acute coronary syndrome correctly and quickly.

Effect of Working Period on the Ability of Nurses to Know Acute Syndrome in the emergency department of dr Iskak Tulungagung hospital.

Based on the results of the study, it is known that out of 55 respondents, almost half of the respondents had a working period of 2-5 years, amounting to 25 respondents (45.5%). Based on cross tabulation it is known that almost half of the respondents have sufficient ability to recognize acute coronary syndrome and experienced by respondents who have a working period of 2-5 years, namely 9 respondents (16.4%). While most of the nurses who have a working period of <2 years get less value, namely 7 respondents (12.7%).

Work imposes different demands on actors to use intellectual abilities, meaning that the more demands for information processing in the work, the more intelligence and general verbal abilities needed to be able to complete the work successfully. While physical ability is the ability to carry out tasks that demand stamina, skills, strength and similar characteristics (Slameto, 2010). The ability / competence of nurses is the biggest variable affecting the performance of nurses. Nurse competence is influenced by the characteristics of nurses, including experience / working period (Budiharto, 2003).

Working period is a measure of the length of time or time taken by a person to be able to understand the task of a job and has been carried out properly (Ranupandojo: 2002).

Based on the results of the study obtained results that the working period / experience of nurses affect the ability of nurses to recognize acute coronary syndrome. When viewed from the tabulation, it is known that respondents with a working period of <2 years have abilities that are less familiar with acute coronary syndrome, while respondents who have had work experience for 2-5 years have sufficient ability to recognize acute coronary syndrome. This shows that at a work period of 2 <years, respondents are still relatively new and do not have sufficient ability if they have to be faced with a serious situation of heart attack. Whereas those who have 2-5 years of service can get acquainted with acute coronary syndrome, this is in line with the launching of an acute coronary syndrome network program at RSUD Dr. Iskak Tulungagung as a referral center for cases of acute coronary syndrome that must be supported by competent personnel and able to recognize the symptoms of the syndrome acute coronary therapy so that reperfusion therapy can be done immediately. It also shows that during the 2-5 year work period, nurses are in a developing stage towards better performance, so that they try to compete healthily to show their best ability in recognizing acute coronary syndrome, which eventually will get recognition and can be extended.

Analyze the factors that influence the ability of nurses to recognize acute syndrome in the emergency department of RSUD dr. Iskak Tulungagung.

Statistical test was performed using ordinal regression test using SPSS. The results of the analysis by ordinal regression test obtained the value of Sig. (2-tailed) on the educational factor p-value = 0.855> 0.05, then Ho was accepted, the working period factor p-value = 0.003 <0.05, then Ho was rejected and the factor ECG training p-value = 0.041 <0.05, so Ho is rejected.

Based on the results of ordinal regression statistical tests it is known that educational factors are factors that do not affect the ability of nurses to know acute coronary syndrome. Whereas working period factors and ECG training factors are factors that influence the ability of nurses to recognize acute coronary syndrome. It is also known that the working period has a p-value = 0.003 which is more significant than the ECG training factor (p-value = 0.041) so that it can be concluded that the working period is the most dominant factor affecting the ability of nurses to know acute coronary syndrome in the emergency department of Dr. Iskak Tulungagung .

Coronary heart disease is the most cardiovascular disease that causes death in the world, which is 7.2 million per year or 41% of cardiovascular diseases (Word Heart Federation, 2010). Nurses are the most number of health workers in the hospital and most interact with patients, so the ability of nurses who are professional in recognizing the symptoms of acute coronary syndromes is very much needed as part of the emergency services team (Hediyani, 2012). Nurse competence is influenced by the characteristics of nurses (Budiharto, 2003).

The results of this study indicate that educational factors are factors that do not affect the ability to recognize the symptoms of acute coronary syndromes, long working factors and training factors on ECG are factors that influence the ability of nurses to know acute coronary syndrome in the emergency department of dr. Iskak Tulungagung. It is also known that the working period factor is the most dominant factor that influences the ability

of nurses to know acute coronary syndrome in the emergency department of Dr. Iskak Tulungagung hospital.

ECG training is one of the factors that influence the ability of nurses to recognize acute coronary syndrome, because by following ECG training activities can increase the knowledge of respondents. Coupled with the existence of a work period of 2-5 years which is a period in which respondents have high motivation and morale. This is in accordance with the statement of Nursalam, 2012, which states that past experience influences a person's behavior and actions, so that a person will be motivated because of past experience as a response in behavior patterns. Therefore, in this study, the results of the working period factor is the most dominant factor that influences the ability of nurses to recognize acute coronary syndrome in the emergency department of Dr. Iskak Tulungagung Hospital.

CONCLUSION

There is no influence of education factors on the ability of nurses to recognize the symptoms of acute syndrome in the ED. Iskak Tulungagung Hospital (p-value = 0,855). Working period factors and ECG training factors are factors that influence the ability of nurses to recognize acute coronary syndromes, and working period factors are the most dominant factors influencing them.

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