



RELATIONSHIP OF NURSES TO THE LEVEL OF KNOWLEDGE ABOUT BASIC TRAUMA CARDIAC LIFE SUPPORT IN HANDLING OF PRIMARY SURVEY

Andi Bintang¹, Sumarni^{1*}

Nursing D-III Study Program, Akademi Keperawatan Lapatau Bone, Jl. M H Thamrin No 5 Kab. Bone, South Sulawesi 92715, Indonesia

*sumarnimangiri1@gmail.com

ABSTRACT

The Emergency Room (IGD) is included in the service unit in a hospital, where the emergency room is a place in a hospital that has a work team with special abilities and equipment, which provides emergency services. The aim of this research is to know the relationship between level of knowledge of nurses about BTCLS (Basic Trauma Cardiac Life Support) with the handling of the Primary Survey in the emergency department. Thereseearch conducted in the emergency departement General Hospital tourism university of East Indonesia in West Sulawesi Selatan. The research used the quantitative with a correlative analytic, using cross sectional design. The samples of the research used a total sampling technique of sixteen respondents. The data of the research were analyzed by using the statistical analysis of Chi Square. The result of the research shows that 50% of the nurses have a good knowledge category with skilled Primary. Survey handling, and the rest 50% have a less knowledge category with skilled Primary Survey handling. The value of p is 0,046 which is smaller than 0,05. This indicates that Ha is verifed meaning that there is not any correlationbetween the nurses' level of knowledge on BTCLS with the handling of the Primary Survey. The level of nurses knowledge about BTCLS is related to the handling of the Primary Survey. Therefore, hospital in general and emergency installations in particular are expected to conduct training, weekshop and seminars to improve the skills and knowledge of nursing in handling of critical nursing emergency.

Keywords: basic trauma cardiac life support; nurses; primary survey handling

First Received 10 December 2021	Revised 18 January 2021	Accepted 29 January 2022
Final Proof Received 22 February 2022		Published 28 February 2022
How to cite (in APA style) Bintang, A., Sumarni, S., & Efendi, S. (2022). Relationship of Nurses to the Level of Knowledge about Basic Trauma Cardiac Life Support in Handling of Primary Survey. <i>Indonesian Journal of Global Health Research</i> , 4(1), 233-240. https://doi.org/10.37287/ijghr.v4i1.1338 .		

INTRODUCTION

The Emergency Room (IGD) is included in the service unit in a hospital, where the emergency room is a place in a hospital that has a work team with special skills and equipment, which provides emergency services. Nurses in emergency departments must be able to provide nursing care that requires the ability to adjust to critical situations with speed and accuracy that is not always needed in other nursing situations. Emergency Room). (K. Rosyidi, 2013).

Basic Trauma Cardiac Life Support (BTCLS) is an action to provide assistance to victims of a disaster or emergency in order to prevent death or organ damage so that productivity can be maintained on par before a disaster or emergency occurs. In BTCLS activities there are six phases, namely: the detection phase, the suppression phase, the pre-hospital phase, the hospital phase and the rehabilitation phase. The detection phase can be predicted about the frequency of events, causes, victims, vulnerable places, quality of events and their impact. For example, related to traffic accidents, the frequency of traffic accidents can be predicted, the

poor quality of motorcycle helmets used, the infrequency of people wearing safety belts, the most frequent incidents on congested highways and so on. It is in this context that the BTCLS certificate is a requirement for health workers, especially nurses, in entering the world of work in the MEA era. (INCT Team, 2014).

Cases of death and disability due to wrong or slow help in patients, especially in the Emergency Room (ER) often occur. The emergency room is a place that can prevent death and disability in patients, and to achieve this goal, a certain effort is needed so that this is related to the function of the emergency room. (Emergency. P, 2011). According to the World Health Organization (WHO) (2012) there are several diseases that are considered emergency diseases and the largest contributor to death in the world, including ischemic heart disease 7.4 million (13.2%), stroke 76.7 million (11.9%) , chronic obstructive pulmonary disease 3.1 million (5.6%), lower respiratory infections 3.1 million (5.5%), and cancer 1.6 million (2.9%), accident cases give the death rate reached 1.2 million. The large number of patients with emergency cases who enter the hospital need immediate help to prevent disability and death. The emergency of the disease is a problem throughout the world, including the Asean countries.

In 2007, data on patient visits to the Emergency Room (ER) throughout Indonesia reached 4,402,205 (13.3% of the total visits to the RSU) with 12% of visits to the IGD. This significant number then requires considerable attention with emergency patient services (Kepmenkes, 2009). According to (Kepmenkes, 2009) regulates in writing the standardization of handling emergency departments in hospitals according to hospital class, the larger the hospital class, the more complete human resources and equipment because the patient cases received are increasingly complex. Treatment at the Emergency Room does not use queues but uses a triage system, namely conducting primary and secondary assessments in a focused, systematic and accurate manner. Emergency nursing is a comprehensive nursing service provided to patients with acute injuries or life-threatening illness. As an emergency nurse specialist, you must relate knowledge and skills to handle patient responses to resuscitation, shock, trauma and other life-threatening emergencies, and one of the places for emergency patients is the Emergency Room (IGD). (Krisanty, P. , Manurung, S., Wartonah, D., Suratun, Sumartini, 2009).

The Primary Survey is a treatment approach to patients so that patients can be immediately identified and treated effectively. The primary survey examination is based on the A-B-C-D-E standard, with airway (A: airway), breathing (B: breathing), circulation (C: circulation), disability (D: disability), exposure (E: application). (Krisanty, P., Manurung, S., Wartonah, D., Suratun, Sumartini, 2009). Based on the American Health Association (AHA, 2015), CPR is performed in the order C-A-B where circulation management is the main focus. Primary Survey knowledge is obtained by nurses through formal nursing education as part of the nursing education curriculum from the SPK level, Diploma III in nursing, Diploma IV in Nursing, and SI in Nursing. Apart from formal education, BLS knowledge and competencies can also be obtained through BLS (Basic Life Support) training, including training in Emergency Sufferers (PPGD), Basic Cardio Life Support (BCLS), and Basic Trauma Life Support (BTLS) training. (Al-Ftlawy, 2014)

Efforts to save as many patients as possible in a short time in the emergency room really need the knowledge and attitude of health workers. This is associated with clinical decision making so that errors do not occur. The nurse's knowledge related to the science that underlies the action in handling emergency patients is very important, because fast and accurate action depends on the knowledge possessed by health workers in the ER. (Laoh & Rako, 2014).

Nurse knowledge and skills are needed, especially in clinical decision making in the emergency room. Nurse skills are important in the initial assessment to prioritize patient care on the basis of making the right decision. To support this, special knowledge and skills are needed in separating the types and severity of patients in triage, so that patient management is more optimal and directed. (Oman, 2008). The results of the study entitled the relationship between the level of knowledge of nurses about the Initial Assessment and the implementation of the Primary Survey in the Emergency Room, the results showed a positive correlation value from the results of the correlation test conducted. It was found that the significant value indicated was 0.000 or <0.05 with a coefficient value of 0.743 . Which means that the higher the nurse's knowledge about the initial assessment, the better it will be in implementing the Primary Survey. (Antonio & Conceição, 2017).

The results of the study entitled the relationship between the knowledge of nurses about Basic Life Support (BLS) and the behavior of nurses in the implementation of the Primary Survey in the ER, the results show that based on the results of the chi-square test there is a relationship between the knowledge of nurses about Basic Life Support (BLS) and the behavior of nurses in the implementation of the Primary Survey , it is known that the significant value (α) = 0.05 and $df = 1$ obtained from the calculation of p (0.028) <0.05 , then H_0 is rejected and H_a is accepted. So in conclusion there is a relationship between nurses' knowledge about Basic Life Support (BLS) and the implementation of the Primary Survey. (Kaban & Rani, 2018).

Based on a preliminary study conducted by researchers at the Emergency Room at the East Indonesia University General Hospital, it was found that patient data arriving at the East Indonesia University General Hospital in South Sulawesi found that the number of patients in the Emergency Room in the first 2 months of 2020 (September-October) was 1,277 patients, with DOA (Death On Arrival) patients, 17 of whom were emergency patients who needed treatment from the Primary Survey. The results of interviews with the head of the Emergency Room regarding the handling of the Primary Survey showed that the nurses here had received BLS (Basic Life Support) training, in the form of BTCLS (Basic Trauma Cardiac Life Support) and PPGD (Emergency First Treatment) training, where the training was able to treating patients with emergencies. In the SOP for handling the Primary Survey in the ER, they still use the A-B-C method to treat patients who are experiencing an emergency. Meanwhile, the results of observations regarding knowledge of handling the Primary Survey for three nurses in handling emergency patients were different from the training conducted in the BTCLS (Basic Trauma Cardiac Life Support) training. At the time of administering the questionnaire for the preliminary study, the results obtained from 4 nurses in the knowledge level of 50% of nurses were only able to answer questions according to knowledge based on what they knew.

METHOD

This type of research used a quantitative research type with a cross-sectional design which was carried out at the UIT Makassar General Hospital for 1 month starting from data collection to data analysis. The population in this study were 20 people who worked in the emergency room at the UIT Makassar General Hospital. Sampling used a total sampling technique with inclusion criteria: Emergency Nurses who work at UIT Makassar General Hospital, Emergency Nurses who have BTCLS certificates. The study used a questionnaire consisting of 25 question items and observation sheets based on SOPs and questions that had been tested for validity and reliability. The target respondents were nurses working in the emergency room at the UIT Makassar General Hospital. The researcher first asked for the

consent of the respondents through signed informed consent, then the questionnaires were distributed to be filled out by the respondents, after which they were inputted using a computer program and processed using statistical analysis software. Data analysis used the Chi square test.

RESULTS

Table 1.
Characteristics of Respondents (n=20)

Characteristics	f	%
Gender		
Female	12	60.0
Male	8	40.0
Age		
<25 Years	7	35.0
26-35 Years	13	65.0
Education		
DIII	12	60.0
S1	2	10.0
Nurse	6	30.0
Length of work		
<3 years	7	35.0
4-6 years	9	45.0
7-10 years	4	20.0

Based on the results of the research that was conducted in the IGD General Hospital UIT Makassar, totaling 20 respondents, the results obtained from table 5.1 show that the majority of nurses in the IGD are male, totaling 12 people (60.0%) due to taking action in the IGD room requires a lot of energy, for example in carrying out heart massage resuscitation actions require strong and maximum energy to achieve good results. The age category used in this study is the category according to the Ministry of Health (2016) where ages <25 years are included in the late adolescent category, ages between 26-35 years are included in the early adult category. Most of the majority of respondents had DIII degree in Nursing (60%). Length of work <3 years totaled 7 people (35%), 4-6 years totaled 9 people (45%), while respondents who had worked for 7-10 years totaled 4 people (20%).

Table 2.
Knowledge Level (n=20)

BTCLS knowledge	f	%
Well	10	50.0
Not enough	10	50.0

Based on the results of this study, it can be concluded that many factors influence nurses' knowledge, including motivation, with motivation both from within and outside of oneself can spur a person to develop his abilities and capacities to get good results.

Table 3.
Primary Handling Surveys (n=20)

Primary Handling Surveys	f	%
Skilled	10	50.0
Unskilled	10	50.0

The provision of the primary survey is the same between skilled and unskilled, namely 50%.

Table 3.
The relationship between nurses' knowledge about BTCLS (Basic Trauma Cardiac Life Support) and the handling of the Primary Survey

Knowledge BTCLS	Penanganan Primary Survey				OR	P Value
	Skilled		Unskilled			
	f	%	f	%		
Well	7	35	3	15	9,000	0,046
Not enough	3	15	7	35		

Based on the results of bivariate analysis it was found that there was a relationship between the level of knowledge of nurses about Basic Trauma Cardiac Life Support and the handling of the Primary Survey with a value of $\alpha = 0.046$.

DISCUSSION

Based on the results of research that has been done by researchers, this shows that most of those who work in the emergency room are mostly aged between 26-35 years, namely early adults in the emergency and critical nursing area. Where in the productive age to create the best results in skills and knowledge. This is because the ED requires experienced nurses who are physically young and have a youthful spirit, so that the proportion of inexperienced nurses has a smaller proportion. Because the ER requires experienced nurses and must have adequate knowledge and professional skills to obtain good results. Age has a person's grasp and mindset. The older a person is, the more his comprehension and mindset will develop so that the knowledge obtained will be better (Notoatmodjo, 2007). Based on the 2006 Ministry of Health, that the qualifications of health workers working in the emergency room must have adequate knowledge, have the appropriate skills.

However, in carrying out permanent duties professionally as a nurse without distinguishing gender. This was stated by Siagian (2004) who stated that male emergency room health workers were physically stronger than women, but in terms of knowledge and handling of the Primary Survey there was no difference from female health workers. Raffa et al., (2021) suggests that men and women have differences in social communication with their surroundings, causing different knowledge. The duration of work has a positive effect on the performance of nurses in handling the Primary Survey. This is in line with what was stated by (Mifta Septarina, 2017) which says length of work has a positive effect on employee performance. Length of service can bring an experience in learning that is developed to provide professional knowledge and skills. The duration of work has an impact on someone to get a lot of experience. Someone who has experience will have good knowledge when compared to someone who has no experience in any aspect. Experience can be obtained from yourself or others. Experience will affect the increase in one's knowledge because the more a person hears, sees and performs these actions, the more his knowledge of the subject increases. This is done by repeating the experience gained to teach oneself to correct past mistakes. This was also stated by (Al-Ftlawy, 2014) that the level of knowledge and length of experience has a large effect on the level of knowledge of nurses and nurses can develop their knowledge through experience. experience working in similar jobs needs to be considered in the placement of workers. Reality Shows that the longer the workforce works, the more experience the workforce has. Conversely, the shorter the working period, the less experience is gained. Experience. Work experience provides many expertise and work skills.

Conversely, limited work experience results in lower levels of expertise and skills. Work experience is a person's main capital to engage in a particular field (Ace et al., 2014).

Those who get the same knowledge as Bachelor of Nursing in nursing documentation. This is in line with what was revealed by (Aswad & Ferrial, 2016) education level has a significant effect on the performance of nurses at UIT Makassar Hospital. However, on the other hand, the available jobs are not always in accordance with the level and type of knowledge and skills possessed by a person. Something that someone sees by demonstrating is not necessarily lack of knowledge, conversely a person who has good knowledge is not necessarily doing the right thing, because many factors influence such as one's memory and one's perspective in understanding theoretical concepts. This was also stated by (Damansyah Haslinda, 2021) that the reason for the low knowledge of nurses could be due to the lack of integration of concept learning in the clinical area. Basically the knowledge of nurses is a very important aspect. The knowledge of nurses determines their quality in providing care for trauma and cardiac patients, especially for the prevention of injuries. This better service is very possible because nurses who have better knowledge of emergency management will be able to act better when these conditions occur, even in unwanted situations. The nurse's understanding of emergency conditions that occur directly will be felt by the patient as a swift treatment. Thus indirectly the public's perception of nurses working in these agencies will also be better (Sartono. et al., 2022).

In this study, nurses who had skills in carrying out primary survey handling in the skilled category totaled 10 people (50%) while the unskilled numbered 10 people (50%). A person's skills are individual development, because individual experience factors have an important role in the handling of the Primary Survey. This is in accordance with field events obtained by researchers, most of the nurses who work in the emergency room with a DIII education level are 12 people (60%). Because DIII nurses are vocational nurses or skilled nurses, it means that when a DIII nurse gets theory from learning they will immediately go into the field to practice with patients. However, in documenting DIII and S1 nursing there is no difference. In-depth experience will determine success in carrying out emergency nursing actions to help patients with emergency departments. This is in line with what was revealed by Jose (2017) that there is a relationship between knowledge and handling of the Primary Survey. Because the higher the nurse's knowledge, the better they are in handling the Primary Survey. In line with (Novitarum Lilis, 2019) There is a relationship between nurses' knowledge about Basic Life Support and the ability of nurses to carry out Basic Life Support actions at Aminah General Hospital Blitar with a p value of 0.025 and a value of $r_s = 0.290$ is obtained, which means that there is a relationship that has weak strength and in the same direction.

Based on the statement above, it can be concluded that with a good level of knowledge, one can apply the handling of the Primary Survey skillfully. This statement is seen from the chi-square test in table 5.7 with a cross table in the good category (75%) but there is a tendency with the results (25%) of unskilled nurses. In this study, nurses with less knowledge also had skill levels in handling the Primary Survey (25%). This happens because there are many factors that influence the handling of the Primary Survey which is related to the level of knowledge. It could be because the BTCLS (Basic Trauma Cardiac Life Support) training that she had done had taken a long time because the certificate was valid for only five years, causing many nurses to forget or not remember the handling of the Primary Survey with trauma and cardiac patients, this means that nurses do not have a high opportunity to develop their knowledge through training sessions. However, most of the knowledge in handling the Primary Survey can be obtained from information in reading the latest nursing books or getting

information from fellow nurses. The level of ability and knowledge of a person cannot be known because it comes from oneself, in work it requires skills and broad thinking abilities. Each individual will have a different level of perspective in handling the Primary Survey, this agrees with Hasibuan (2010).

A person's skills or skills can be seen when the nurse performs nursing actions in accordance with the applicable SOP (standard operating procedure). The Primary Survey is also influenced by several factors such as training or workshops held at the hospital to better understand and have the potential to take action. Nurses who often participate in direct training will have a better understanding of the procedure for handling the primary survey. This was also stated (Novitarum Lilis, 2019) mostly where there was an increase in knowledge after being given training. Primary Survey is an action that requires fast time to identify and correct life threatening problems. Age, education and length of work of a nurse also affect the nurse's knowledge of handling the Primary Survey. Because age affects one's comprehension and mindset. The older a person is, the more his comprehension and mindset will develop so that the knowledge obtained will be better. Work experience is one of the factors that influence the knowledge of nurses. This was also stated (Inayatullah.I, 2014) where the experience of nurses working affects the knowledge of nurses. This happens because the longer the nurse works, the more cases she handles so that the knowledge and experience gained increases. A person's skill in taking action is influenced by the individual's own behavior and experience. Responsive behavior accompanied by in-depth experience will determine success in performing first aid for emergency patients (Kaban & Rani, 2018b). Skill is dexterity, skill or ability to do something properly and carefully (with expertise) (Marbun et al., 2022).

CONCLUSION

There is a relationship between the level of knowledge about BTCLS (Basic Trauma Cardiac Life Support) and the handling of the Primary Survey in the Emergency Room at the General Hospital UIT Makassar because the value $\alpha = 0.046$ because the p value is smaller than 0.05.

REFERENCES

- Ace, S., Suhana, H., & Primita, I. (2014). Hubungan Pengetahuan dan Pengalaman Perawat Dengan Keterampilan Triase Pasien di IGD RSCM (Relationship Between. *Jurnal Keperawatan Poltekkes Jakarta III*, 2(3), 118–129.
- Al- Ftlawy, D. D. M. H. (2014). Determination of Nurses' knowledge Toward Care Provided to Patients with Acute Myocardial Infarction in Al-Najaf City. *Kufa Journal for Nursing Sciences; Vol 2, No 2 (2012): Volume 2 No. 2, 12(2)*, 37–45.
- Antonio, J., & Conceição, D. A. (2017). *Perawat Tentang Initial Assesment Dengan Pelaksanaan Primary Survey Di Instalasi Gawat Surabaya*.
- Aswad, H. N., & Ferrial, E. (2016). Pengaruh Tingkat Pendidikan, Pelatihan dan Kompensasi Terhadap Kinerja Perawat di Rumah Sakit UIT Makassar. *Jurnal Mirai Management*, 1(2), 413–425.
- Damansyah Haslinda, M. S. (2021). Pengetahuan Dan Sikap Perawat Tentang Basic Trauma Cardiac Life Support (Btcls) Dalam Pelaksanaan Tindakan Kegawatdaruratan. *Jurnal Zaitun*, 10.
- Emergency. P. (2011). *Basic Trauma Life Support (BTCLS)*.

- Inayatullah.I. (2014). *Hubungan Tingkat Pendidikan dengan Tingkat Pengetahuan Perawat tentang Asuhan Keperawatan dengan Pedoman NANDA NOC dan NIC di Rumah Sakit Umum Daerah Ajibarang.*
- K. Rosyidi. (2013). *Manajemen Kepemimpinan Dalam Keperawatan.*
- Kaban, K. B., & Rani, K. (2018a). Hubungan Pengetahuan Perawat Tentang Basic Lifesupport (BlS) Dengan Perilaku Perawat Dalam pelaksanaan Primary Survey Di Ruangigd Royal Prima Hospital. *IEEE International Conference on Acoustics, Speech, and Signal Processing (ICASSP) 2017*, 41(2), 84–93.
- Kaban, K. B., & Rani, K. (2018b). Hubungan Pengetahuan Perawat Tentang Basic Lifesupport (BlS) Dengan Perilaku Perawat Dalam pelaksanaan Primary Survey Di Ruangigd Royal Prima Hospital. *Jurnal Keperawatan Priority*, 1(1), 10–29.
- Kepmenkes. (2009). *Standar Instalasi Gawat Darurat (IGD) Rumah Sakit.* Jakarta : Menteri Kesehatan Republik Indonesia.
- Krisanty, P., Manurung, S., Wartonah, D., Suratun, Sumartini, M. (2009). *Asuhan Keperawatan Gawat Darurat.*
- Marbun, A. S., Sipayung, N. P., & Aryani, N. (2022). Hubungan Pengetahuan Perawat Tentang Basic Life Support Dengan Keterampilan Pemberian Tindakan Basic Life Support. *Indonesian Trust Health Journal*, 5(1), 30–34. <https://doi.org/10.37104/ithj.v5i1.94>
- Mifta Septarina. (2017). *Pengaruh Tingkat Pendidikan dan Lamanya Bekerja Terhadap Kinerja Karyawan.*
- Notoatmodjo. (2007). *Kesehatan Masyarakat Ilmu dan Seni.*
- Novitarum Lilis, S. S. M. (2019). *Hubungan Pengetahuan Perawat tentang Basic Life Support (BLS) dengan Kemampuan Perawat dalam Melakukan Tindakan Basic Life Support (BLS) di RSUD AMINAH BLITAR TAHUN 2018.* 45.
- Oman, K. S. (2008). *Panduan Belajar Keperawatan Emergensi.*
- PPNI. (2003). *Standar Profesi dan Kode Etik Perawat Indonesia.*
- Raffa, R., Anggreini, Y. D., & Amaliyah, N. (2021). Hubungan Tingkat Pengetahuan Perawat Tentang BTCLS (Basic Trauma Cardiac Life Support) Dengan Penanganan Primary Survey Di IGD RSUD “X” Provinsi Kalimantan Barat. *Khatulistiwa Nursing Journal*, 2(1), 43–55. <https://doi.org/10.53399/knj.v2i1.40>
- Sartono., Yayat, S., & Oyoh. (2022). Manajemen Pelatihan Basic Trauma Cardiac Life Support Terhadap Perilaku Perawat Dalam Penanganan Kegawatdaruratan. *Jurnal Keperawatan Silampari*, 6(1), 171–182.
- Team INCT. (2014). *Basic Trauma Cardiac Life Support (BTCLS) In Disaster.*