



BANTUSAR WITH THE AHA 2020 GUIDELINE ON THE SKILLS OF HEALTH WORKERS AT LUKAS HOSPITAL BANGKALAN, EAST JAVA, INDONESIA

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ABSTRACT	Keywords
<p>Cardiac arrest is a critical condition that can be life-threatening where the condition of cardiac output is unable to meet the needs of oxygen to the brain and other vital organs suddenly and can return to normal if appropriate action is taken, BANTUSAR with AHA 2020 Guideline is one of the basic training for the skills of health workers in dealing with emergency problems due to trauma and cardiovascular disorders. Handling these problems is intended to provide basic life support so as to save lives and minimise organ damage and disability of sufferers. This research method uses Quasi Experiment Pre-Post Test Design. This research was conducted at Lukas General Hospital Bangkalan Madura, research data collection was carried out on 21 September 2024 with Total Sampling. Respondents in this study were all health workers at Lukas General Hospital Bangkalan, totalling 65 respondents. In the research process, researchers conducted a pre-test on the ability of health workers' skills in BANTUSAR using an observation sheet, then continued by providing an understanding of the latest BANTUSAR through training, and ended with a post-test. The collected data was then analysed using SPSS-10 with the Wilcoxon Signed Rank Test statistical test. The results of the Wilcoxon signed rank test statistical test showed a significance value / Sig. (2-tailed) p-value of $0.000 < \alpha 0.05$ with a Z value (-7.278), it can be concluded that H_0 is rejected, which means that there is an influence between BANTUSAR and the AHA 2020 Guideline on the skills of health workers. By providing BANTUSAR training at Lukas Hospital Bangkalan Madura, it can improve the skills of health workers which is expected to be in line with patient satisfaction.</p>	<p>BANTUSAR, health worker skills</p>

INTRODUCTION

Cardiac arrest is a critical condition that can be life-threatening if it does not get good treatment from health workers. (H.S. et al., 2011) Where the condition of cardiac output is not able to meet the oxygen needs of the brain and other vital organs suddenly and can return to normal if the right action is taken, on the contrary, it will result in death and permanent damage if the action is inadequate. According to World Health Organization (WHO) Cardiovascular disease is still the number one cause of death worldwide with 18.6 out of 39.5 million deaths (AHA, 2020). In 2020 in Wuhan, there were reports of 151 people experiencing Inhospital Cardiac Arrest (IHCA) (Perkins & Soar, 2005) in 40 days of observation, and only 136 people were carried out by the RJP. Of the 136 people, only 18 (13.2%) patients managed to achieve the condition Return of Spontaneous Circulation (ROSC) although the RJP can be attempted in less than 1 minute in 89% of cases, and 4 people can survive in 30 days. The majority of patients over 60 years old (80.9%), 66.2% were male, with the most comorbidities being hypertension (30.2%). Respiratory problems (87.5%) were the most common cause of IHCA and only 10 cases with cardiac etiology, 83.1% of cases occurred in ward rooms. From the data obtained, it was concluded that the life expectancy of critical patients with severe covid-19 pneumonia who experienced IHCA in Wuhan was poor (Murphy et al., 2022). And there are reports of outcomes of patients who experience IHCA due to covid-19 in New York City showing a poor prognosis (Liu et al., 2020). Data in Indonesia There is no statistical data on the exact number of cardiac arrest events each year, but the incidence of cardiac arrest in Indonesia ranges from 10 out of 10,000 normal people under the age of 35 and can reach 300,000-350,000 incidents every year

(Tarmizi, 2023). Based on data from the Province and Regency, data on the prevalence of critical illnesses that experience cardiac arrest and receive basic Life Support measures (BANTUSAR) not available.

First aid in cardiac arrest is very necessary and must be done quickly because survival is higher if the victim gets Cardiopulmonary Resuscitation (CPR) (Husein, 2019). Emergency calls and immediate CPR can increase the chance of survival In most cases, it takes a long time from the onset of cardiac arrest and respiratory arrest to arrival at emergency services. In addition to the distance travelled, the patient's prognosis is also affected by the initial management of cardiopulmonary resuscitation.

BANTUSAR with Guideline AHA 2020 is one of the basic training for health workers in dealing with emergency problems due to trauma and cardiovascular disorders. Handling these problems is intended to provide basic life support so as to save lives and minimise organ damage and disability. Health workers as the front line in emergency services must be able to handle problems caused by accidents quickly and accurately. With a nursing and medical care approach that includes bio-psycho-socio-cultural and spiritual aspects. Therefore, health workers are required to be competent in managing emergencies due to trauma and cardiovascular disorders. One of the efforts in increasing this competence is through BANTUSAR training with the AHA 2020 Guideline for Health Worker Skills.

In critical care nursing (Williams, B., Jalilianhasanpour, R., Matin, N., Fricchione, G. L., Sepulcre, J., Keshavan, M. S., ... & Perz, D. L. (2018). Individual differences in corticolimbic structural profiles linked to insecure attachment and coping styles in motor functional ne, 2019)

Health workers, especially nurses, play a role in providing quality care to patients by closely observing the patient's condition, nurses are required to master cardiopulmonary resuscitation skills and respond quickly to patients with cardiac arrest. So that resuscitating nurses must be able to provide the best quality CPR and as early as possible. Quality cardiopulmonary resuscitation is to perform chest compressions at a speed between 100-200x/minute, chest compressions are carried out with a minimum depth of 2 inches (5 cm), allowing full recoil at the end of each compression, minimising interruption pauses, preventing excessive ventilation, compressors are changed every 2 minutes or less than 2 minutes if fatigue is felt earlier, provide adequate ventilation, namely 2 artificial breaths after 30 compressions, each 1x artificial breath is done for more than 1 second and the provision of artificial breath is called perfect if the patient's chest is lifted (AHA, 2020). The impact on the patient if the cardiopulmonary resuscitation measures provided are not of high quality, the patient is not able to achieve ROSC conditions and will certainly increase the mortality rate. For nurses themselves if they successfully perform CPR they will gain confidence in providing further CPR actions because of the experience of previous successes (Rahmawati et al., 2023). The success of cardiopulmonary resuscitation requires good skills that must be possessed by health workers in its implementation sometimes prioritises male health workers who must perform compressions, large nurses who perform compressions, or nurses with new tenure who perform CPR.

In this study, based on the problem-solving approach mentioned above, we need to understand the proper Bantusar technique. Effective education is a key variable in improving the chances of survival from cardiac arrest. Without effective education,

lay rescuers and healthcare providers will struggle to consistently apply the science supporting evidence-based treatment of cardiac arrest. Evidence-based instructional design is critical to improving provider performance and patient-related benefits from cardiac arrest. Key elements of a resuscitation training programme that determine how and when content is delivered. The 2010 AHA Guideline provides recommendations on various instructional design features in resuscitation training and describes how specific provider considerations influence resuscitation education. New and updated recommendations in the field of education will have a significant impact on cardiac arrest mortality.

The AHA 2010 BANTUSAR Guideline (Older version) is Lay rescuers do not need to check for a pulse and should assume that cardiac arrest occurs if an adult individual suddenly collapses or an unresponsive victim is not breathing normally. Healthcare providers should not check for a pulse for more than 10 seconds and, if the rescuer does not feel a pulse within that time frame, the rescuer should initiate chest compressions. The AHA 2020 (Latest) Guideline recommends that lay individuals initiate CPR for suspected cardiac arrest because the risk of harm to the patient is low if the patient is not in cardiac arrest. New evidence suggests that chest compressions on victims when not in cardiac arrest are low risk. Lay rescuers cannot accurately assess whether a casualty has a pulse, and whether withholding CPR from a casualty without a pulse is riskier than unnecessary chest compressions (AHA, 2020). Berdasarkan uraian tersebut perlu dipahami terhadap semua perawat dalam memberikan BANTUSAR Dengan Guideline AHA 2020.

BANTUSAR research with AHA 2020 Guideline towards the skill of health

workers is put forward a problem solving approach as follows; One, Identify knowledge and skills before being given BANTUSAR training with AHA 2020 Guideline. Two, Identify knowledge and skills after being given BANTUSAR training with AHA 2020 Guideline. Three, Analyse BANTUSAR with AHA 2020 Guideline on the skills of health workers before and after training.

METHOD

The BANTUSAR research method with the AHA 2020 Guideline on the skills of health workers uses the Quasi Experiment Pre-Post Test Design research design. This research was conducted at Lukas Bangkalan General Hospital, The research data collection was carried out on 21 September 2024 by means of Total Sampling. Respondents in this study were all nurses at Lukas Bangkalan General Hospital, totalling 65 respondents. In the research process, researchers conducted a pre-test on the ability of health workers' skills in Basic Life Support (BANTUSAR) with the AHA 2020 Guideline using an observation sheet, then continued by providing an understanding of Basic Life Support (BANTUSAR) with the latest AHA 2020 Guideline through BANTUSAR training, and ended with a post test. The data that has been collected is then analysed using SPSS-10 with the Wilcoxon Signed Rank Test statistical test.

RESULT

1. Table 1.1 Frequency Distribution of BANTUSAR Respondent Characteristics with AHA 2020 Guideline on Health Worker Skills

No	Characteristi c	Frequenc y	Percenta ge
1	Gender		
	Man	15	23.1
	Women	50	76.9
		65	100.0

No	Characteristi c	Frequenc y	Percenta ge
2	Age		
	Teenagers: 10-18 Years	0	0
	Adults: 19- 59 Years	65	100
	Elderly: 60 Years and Above	0	0
		65	100.0
3	Last Education		
	D3 Nursing	1	1.5
	S1 Nursing	44	67.7
	D3 Midwifery	20	30.8
		65	100.0
4	Length of Service		
	< 5 Tahun	23	35.4
	≥ 5 Tahun	42	64.6
		65	100.0
5	Ever had BLS training		
	Ever	45	69.2
	Never	20	30.8
		65	100.0

Sumber: Data Primer

Based on table 1.1 shows that almost all of the respondents are female as many as 50 respondents (76.9%). Based on age, all respondents in the adult age range 19-59 years as many as 65 respondents (100%). As for the characteristics of the last education, most of them have an S1 Nursing Ners education, namely 42 respondents (64.6%). Most of the respondents have worked for more than 5 years, namely 42 respondents (64.4%). And most of the respondents as many as 45 respondents (69.2%) had attended BLS training before.

2. Table 1.2 Frequency Distribution of Health Worker Skill Pre-Post Test BANTUSAR with AHA 2020 Guideline

No	Skill BANTUSAR	Pre Test		Post Test	
		Frequency	Percentage	Frequency	Percentage
1	Less	61	93.8	0	0
2	Simpl y	4	6.2	18	27.7
3	Good	0	0	47	72.3
		65	100.0	65	100.0
Pre-Post Test Wilcoxon Signed Rank Test					
	Z value	-7.278			
	Asym p. Sig. (2-tailed)	.000			

Sumber: Data Primer

Based on table 1.2 that almost all of the respondents, namely 61 respondents (93.8%) have BANTUSAR skills are still lacking at the Pre Test stage. Whereas in the post-test hold, most of the respondents as many as 47 respondents (72.3%) were able to achieve bantusar skills in the Good category. The results of the Wilcoxon signed rank test statistical test showed a significance value / Sig. (2-tailed) p -value of $0.000 < \alpha 0.05$ with a Z value (-7.278), it can be concluded that H_0 is rejected, which means that there is an influence between Bantusar with the AHA 2020 Guideline on the skills of health workers.

DISCUSSION

Sudden cardiac arrest is one of the most common causes of death in the world. It is usually an emergency situation that occurs in a hospital setting with the highest risk of death. Medical professionals report that victims of cardiac arrest have a high survival rate without nerve damage if first aid is administered within 3-5 minutes of the incident (Ganfure et al., 2018; Kleinman et

al., 2018). To provide immediate care, knowledge and skills of CPR are essential to prevent and save the patient's life, so there is a need for health workers who have good attitudes and adequate skills to provide high-quality CPR (Dwitanta & Yusuf, 2023).

The BANTUSAR programme conducted by the researchers included both theoretical and practical components. These basic skills in health workers are influenced by many factors such as theoretical training provided during education, length of service, training, personal experience, and clinical observation. In addition, the use of up-to-date education and training methods that are based on evidence-based practice is very important in terms of outcomes (Kose et al., 2020). This study was conducted to evaluate the effect of BANTUSAR training on health workers' skills. Health workers' skills on BANTUSAR were assessed using an observation form. In this study, the study revealed that the skills of health workers before being given training were still inadequate. Based on table 1.2 that almost all of the respondents, namely 61 respondents (93.8%) have BANTUSAR skills are still lacking at the Pre Test stage. While at the post test stage, most of the respondents as many as 47 respondents (72.3%) were able to achieve bantusar skills in the Good category. The results of the Wilcoxon signed rank test statistical test showed a significance value / Sig. (2-tailed) p -value of $0.000 < \alpha 0.05$ with a Z value (-7.278).

In accordance with research (Hernando, 2016) The study on the effect of BLS training on the level of readiness to perform CPR showed an increase in the level of readiness to perform CPR after BLS training with a p value of $0.000 < 0.05$. Supported also by research that has been done by Fitriyah et al., 2022; Palele et al., (2022);

Razak et al., (2022) It is believed that the increased level of knowledge possessed by nurses is able to improve nursing care services better. This better service is possible because nurses who have better knowledge of emergency management will be able to act better when these conditions occur, even in undesirable situations. Nurses' understanding of emergency conditions that occur will directly be perceived by patients as a swift treatment (Prawesti et al., 2019). Information obtained by a person can affect their lives, which will lead to changes or increases in knowledge. The more information, the more knowledge is gained.

According to Ivancevich (2008) Training is defined as an attempt to increase knowledge, change behaviour and develop skills. Therefore, BLS training can improve the skills and knowledge of respondents and influence their attitude or desire to do something. BLS is considered a basic skill for nurses (Parajulee & Selvaraj, 2011). Meanwhile, according to the American Heart Association, Basic Life Support can be done by anyone, not necessarily health workers. BHD skills are important because they teach the basic techniques of rescuing victims.

Training is a short-term educational process that brings together theoretical and practical learning, so training is a factor that can increase a person's knowledge. (Larasati, 2018). Training can significantly affect knowledge because it has supporting factors. One of the factors that makes training with simulation methods can increase knowledge is because participants are guided directly by trainers who already have Training of Trainers (TOT) certificates. This is in line with research (Doni et al., 2024) who stated that training with feedback trainers can immediately provide corrections and instructions if the procedure is not

correct. In addition, participants can directly ask questions, so that participants will understand more in the training process. Training is a learning concept that focuses on skills. Training forms the basis of the implementation of one's skills. Training should be an ongoing thing with the aim of remembering and updating the knowledge and skills possessed.

Another factor that made respondents' skills improve significantly was the use of phantoms as teaching aids. Based on research conducted by Andita (2016) in (Nirmalasari & Winarti, 2020) In this study, we examined the effect of health education with slide media and mock objects on changes in knowledge, and found that the use of mock tools (phantoms) can improve a person's knowledge and skills. The use of props can make respondents feel as if they are helping real victims. In addition, by using props, more senses will be used so that more information and skills will be obtained. However, the role of the trainer is still very dominant because the phantom is only a means for skill demonstration. Skills can be moulded through training through various media. The more media used, the higher the quality of skills and knowledge retention.

Factors that can also affect the ability of BANTUSAR skills based on table 1.1 are; (1) The latest education, most participants have a bachelor's degree in nursing totalling 44 respondents (67.7%), but there are 20 respondents (30.8%) who have a D3 Midwifery education. The assumption of researchers is that health workers with D3 Midwifery background have never attended BTCLS training even though a person's education is needed in carrying out an action. Education is developed to produce graduates who have professional attitudes, knowledge and skills in order to carry out their roles and functions as

professional nurses/ midwives /medical personnel. Hospital health workers are required to provide good behaviour in order to assist patients in achieving recovery. A high education of a health worker will provide optimal health services. For a health worker when carrying out his profession must have knowledge and education in certain fields, for this reason, appropriate education is needed so that it can run well and professionally. In this study, the higher a person's education, the better a person's action will be. (2) The length of work factor can also affect BANTUSAR skills, which shows that most of the respondents have been working for more than 5 years, namely 42 respondents (64.4%), and (3) have attended BLS training, 45 respondents (69.2%) but there are still 20 respondents (30.8%) who have never attended BLS. The researcher assumes that those who have attended BLS have experience with BLS or BANTUSAR. In general, health workers with longer work experience have good experience and make these individuals more mature in doing their work. And with high work experience nurses have an advantage in several ways that are useful in developing expertise (Hutabarat, 2022). The tenure of health workers determines the quality in the room. health workers who have a new tenure. then the experience is still limited compared to health workers who have been in the room for a long time. The length of service of health workers who have long had more abilities, which can be obtained in the room for several years since working in the hospital, so that the health worker has moved around the room and from there the health worker gets different experiences in each room. health workers who have worked for a long time have good work quality compared to people who have just worked, the longer a person's working period, the more skilled and experienced they will be in dealing with problems in their work. The

length of service of a health worker greatly affects the quality of work of a health worker who works in the room. The longer the health worker works in the hospital, the more experience the nurse gets, so that the health worker has good work quality. In this study, the understanding of health workers who have worked at the hospital for a long time is very different from the understanding of people who have just worked at the hospital. In essence, health workers who have worked for a long time have a mature mindset, have a good attitude, and have good work quality.

Based on the results of the study and the description above, there is an influence between BANTUSAR and the AHA 2020 Guideline on the skills of health workers with a positive direction. So that the provision of BANTUSAR training at Lukas Hospital Bangkalan Madura can improve the ability of nurses which is expected to be in line with patient satisfaction.

CONCLUSIONS

The results of the conclusion in this study can be conveyed that there is an effect of BANTUSAR training with the AHA 2020 Guideline on the skills of health workers at Lukas General Hospital Bangkalan Madura. This shows that BANTUSAR training can improve knowledge and skills. Based on the results of the research conducted, there are several things that can be recommended, namely this research can be the basis for the importance of providing BANTUSAR training with the AHA 2020 Guideline on the skills of health workers to improve knowledge and skills in basic life support skills. Furthermore, it is hoped that experimental research can be carried out using a larger sample, as well as using a control group to see the effect of training on knowledge and skills and also to examine confounding variables that have a

relationship with knowledge and skills. Furthermore, hospital institutions should have scheduled training programmes related to Basic Life Support (BHD) training on an ongoing basis.

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