The Influence of Basic Life Support Education Increases The Knowledge And Attitudes Of The Pemulutan Community

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ABSTRACT

Introduction: Cardiac arrest or respiratory arrest is a life-threatening problem and can result in death if it takes too long to be helped (Ministry of Health, 2016). The increasing cases of cardiac arrest in the community certainly raises serious new problems, namely disability to death that should be able to prevented by anyone who was in the environment of the incident, including one of the people. The solution that can be done is to provide education about basic life support (BLS) to the community. Research related to the influence of education about BLS on knowledge and attitudes of the community has not been widely carried out in the province of South Sumatra. Purpose: To find out the effect of basic life support education on the knowledge and attitudes of the pemulutan community. Method: This research is a quantitative study using a pre-experiment, with a pre-test and post-test design. The population in this study was the productive age community in the Pemulutan subdistrict, totaling 240 respondents and the research sample totaling 33 respondents, the sampling technique used consecutive sampling. The research was conducted from February to April 2023. Data collection techniques used knowledge and attitude questionnaires before and after BLS education. Data analysis carried out through 2 stages, namely descriptive analysis and inferential analysis using the Wilcoxon test. Results: The results of this study indicate that the average value of prior knowledge is 12.88 and after the average value of knowledge is 18.83 with $\rho$ value = 0.001. The average value of the attitude before 45.50 and the average value of the attitude after 55.43 with $\rho$ value = 0.001. Discussion: Knowledge and attitudes increased after being given education, there was a significance of Basic Life Support education on the level of knowledge and attitudes.

Keywords: Attitude, Basic Life Support, Community, Education, Knowledge.
INTRODUCTION
Cardiac arrest or respiratory arrest is a life-threatening problem and can result in death if it takes too long to help (Kemenkes, 2016). The incidence of cardiac arrest or cardiac arrest in the world ranges from 10 out of 100,000 normal people aged under 35 years and reaches around 300,000-350,000 events annually. According to the report, heart attacks remain a public health crisis. There are more than 356,000 out-of-hospital cardiac arrests each year in the United States, nearly 90% of which are fatal. The incidence of cardiac arrest can occur in all age groups, it is estimated that 356,461 people experience cardiac arrest in the community, or nearly 1,000 people every day (AHA, 2022). Indonesia reports in the 2018 Basic Health Research (Riskesdas) that the incidence of heart disease is increasing from year to year with a prevalence of heart disease in Indonesia of 1.5% (RISKESDAS, 2018).

This shows that the large number of cardiac arrest incidents outside the hospital. Cardiac arrest or cardiac arrest is a sudden loss of heart function, mostly due to damage to the heart's electrical system. When the heart stops beating, there is no blood supply flowing throughout the body including vital organs such as the brain (AHA, 2020). This cardiac arrest situation does not only occur in the hospital environment, but also occurs in the community. The impact of cardiac arrest or cardiac arrest is fatal, namely organ system failure to death, if the first treatment is not carried out within a certain period of time (Sawyer et al., 2020). This is of course strengthened by research conducted Ong, Perkins & Cariou (2018), explaining physiologically the state of the brain will die within a period of approximately three to four minutes after the event of cardiac arrest, if it is more than that time then it is biological death. This is of course very dangerous and requires immediate treatment in a state of cardiac arrest that occurs in the community or in a pre-hospital setting.

The first treatment that can be done by ordinary people, namely in a state of cardiac arrest, can be done by providing basic life support (BLS). (AHA, 2020). According to Gadar Medik Indonesia (GDMI) Basic Life Support (BLS) is the immediate aid given to patients with cardiac arrest and respiratory arrest (GDMI, 2019). The provision of basic life support can be carried out by ordinary people who are close to the incident. All levels of community should be taught about basic life support especially for workers related to providing safety assistance (Lontoh et al., 2013). It is better to know first aid and not need it than to need first aid and not know it. Everyone should be able to perform first aid, because most people will eventually find themselves in situations that require first aid to others or themselves. (AHA, 2020). This indicates that ordinary people can be the first helpers.

In research Wibrandt et al., (2015), explained that everyone, both medical and ordinary people (Bystanders) could have become first responders at the scene. Delayed or inappropriate treatment of cardiac arrest will result in death within minutes. In contrast, OHCA patients who immediately undergo cardiac resuscitation have a greater chance of survival. The return of spontaneous circulation within less than 20 minutes after cardiac arrest has a
positive association with the survival rate of OHCA patients (AHA, 2020). Therefore, the community can be the first helpers in efforts to treat cardiac arrest through BLS, therefore the community must also have knowledge and attitudes regarding BLS.

Research conducted by Hidayati (2020), entitled “Level of Public Knowledge About Management of Cardiac Arrest in the North Jakarta area” showed that as many as 139 people (56%) respondents had low knowledge about the management of cardiac arrest, 90 people (36%) respondents had sufficient knowledge, and only 21 people (8.4%) respondents had good knowledge. Reinforced research conducted by Özbekgin et al., (2015), where 58.5% of respondents did not know how to do cardiac resuscitation and 45% of respondents' attitudes were not good about BLS.

Considering that in situations where there are many cardiac arrest cases in the community and the condition of the people who have poor knowledge and attitudes towards first aid or first aid providers, the role of the nursing community is needed, namely as a provider of care in providing superior nursing care and nurses as educators in providing explanations or health education to the public (Nies & McEwen, 2019). Knowledge and attitudes can be increased by various methods from health education or education. Health education is a consciously planned process to create opportunities for individuals to continually learn to improve literacy and increase knowledge and attitudes for the benefit of their health. This knowledge and attitude is very influential because children will gain experience, a broad level of knowledge, and this knowledge will provide awareness in the community regarding basic life support (BLS), while attitudes can make community more accepting, responsive, and more responsible for the importance of providing BLS assistance (Nursalam & Efendi, 2016). This certainly requires strategies and special materials for the community.

The material presented in health education must be on target so that it is easy to understand and useful for them. Likewise, the method of delivering health education to children must be appropriate to the age and development being undertaken so that children are able to grasp the material easily (Idayanti et al., 2017). Health education methods are used in the approach or education process to convey messages to the target, so that learning activities when conducting health education are effective, tools or media are needed that can support the delivery of material (Ismaniar, 2017). Based on the problems above, the researcher is interested in examining the effect of BLS education on the knowledge and attitudes of the people in Pemulutan Community.

MATERIALS AND METHODS

This research is a quantitative study using a quasi-experimental research method with a one-group pre-test and post-test design. The population in this study were all people of productive age, especially teenagers in Pemulutan sub-district, Ibul III village, totaling 240 respondents. The sample in this study amounted to 33 respondents and the sample was taken using consecutive
sampling. This research was conducted in February-April 2023 in Pemulutan District using leaflets as media. The instrument used in this study was a knowledge questionnaire about basic life support which consisted of 15 questions.

This research was carried out in several stages, namely applying for a research permit to the Rector of IkEsT Muhammadiyah Palembang. Submit a complete proposal. Submitting a research permit application letter at Pemulutan subdistrict community policy makers. After obtaining a research permit, the researcher submitted the letter to each Pemulutan subdistrict policy holder.

The researcher had a discussion with the Pemulutan sub-district and explained the research process carried out. The researcher conducted a pre test to find out the knowledge and attitudes of the Pemulutan community before education. Researchers provide interventions, namely direct education using leaflet media to the public regarding basic life support. The researcher conducted a formative evaluation, namely the post test at the end of BLS education Data analysis uses SPSS to produce univariate and bivariate values. This study used an alternative measurement scale in the form of intervals and not normally distributed, so the data analysis used the Wilcoxon parametric test.

RESULT

1. UNIVARIATE ANALYSIS
   a. Data on Respondents' Age and Gender Characteristics

Based on the results of the study, the results of the frequency distribution of the characteristics of the respondents in the study were obtained as follows:

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>Min</th>
<th>Max</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>14.85</td>
<td>14</td>
<td>23</td>
<td>8.744</td>
</tr>
</tbody>
</table>

Based on the data table above, it is known that the average age of the respondents was 14.85 with a median of 14.00, with the youngest age being 14 years and the oldest being 23 years.

<table>
<thead>
<tr>
<th>Gender</th>
<th>(f)</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laki-laki</td>
<td>15</td>
<td>46.2</td>
</tr>
<tr>
<td>Perempuan</td>
<td>18</td>
<td>53.8</td>
</tr>
<tr>
<td>Jumlah</td>
<td>33</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Based on table 2 of the data distribution above, it is known that 18 female respondents (53.8%) outnumbered 15 male respondents (46.2%).

a. The Knowledge Of The Pemulutan Community Before And After Being Given The Basic Life Support Intervention
Table 3 show that of the 40 respondents, the median knowledge of respondents before counseling was 13.00 and the maximum value was 17 with a minimum value of 6 respondents and a Confidence Interval of 12.04-13.71 and knowledge of respondents after counseling was 18.00 and the maximum value of 24 respondents with a minimum value of 12 respondents and Confidence Interval 17.35-19.30.

b. Attitudes of community in Pemulutan before and after being given the Basic Life Support intervention

From the table 5 it can be seen that the average respondent's knowledge before counseling was 12.88 with a median of 13.00 and a standard deviation of 2.604 after counseling the average respondent's knowledge increased by 18.33 with a median of 18.00 and a standard deviation of 3.033. The results of the Wilcoxonstatistical test obtained a p value = 0.001 (p value <0.05) meaning that there was a significant difference between the respondents' knowledge before and after the BLS education for the Pemulutan community.

b. Differences in Respondent’s Attitudes Before and After the Pemulutan Community Before and After Being Given Basic Life Support Education

Table 4 show that of the 40 respondents, the median attitude of the respondents before the counseling was carried out was 48.50 and the maximum value was 56 with the minimum score of 18 respondents and the confidence Interval 42.38-48.02 and the attitude of the respondents after the counseling was 55.00 and the maximum value of the respondent is 71 with the minimum value of the respondent being 40 and the Confidence Interval 52.47-58.38.

1. Bivariate Analysis
a. Differences in Respondent’s Knowledge Before and After the Pemulutan Community Before and After Being Given Basic Life Support Education

<table>
<thead>
<tr>
<th>Variable</th>
<th>Median</th>
<th>SD</th>
<th>P Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Knowledge Pre Test</td>
<td>13,00</td>
<td>2,604</td>
<td>0.001</td>
</tr>
<tr>
<td>Knowledge Post Test</td>
<td>18,00</td>
<td>3,033</td>
<td></td>
</tr>
</tbody>
</table>
From table 6 it can be seen that of the 40 respondents, the average attitude of respondents before counseling was 45.20 with a median of 48.50 and a standard deviation of 8.803 after counseling the average attitude of respondents increased, namely 55.43 with a median of 55.00 and a standard deviation 9.246. The results of the Wilcoxon statistical test obtained a p value = 0.001 (p value <0.05) meaning that there was a significant difference between attitudes before and after the Pemulutan community’s Basic Life Support (BLS) education was carried out.

DISCUSSION

1. Univariate Analysis

Heart attack events can happen to anyone, anywhere and anytime so that the surrounding community can be the first helpers who play an important role in providing first aid such as Basic Life Support (BLS). Based on the analysis that was carried out on 33 respondents, it was found that most of the respondents in the age range of the respondents averaged 14.85 with a median of 14.00. The results showed that the youngest was 14 years old and the oldest was 23 years old with 18 female respondents (53.8) more than 15 male respondents (46.2%). Comparison of observational data carried out by observers in the two previous observations was formed because the comparison of the questionnaire used, in the two previous observations was not in accordance with the recommendations Americans Heart Associations 2010.

Until several years, the development of CPR began with techniques that were sufficiently carried out by doctors and health workers. Right now this Lifesaving Technique is quite young to be taught to anyone. However, observations have shown a variety of causes for limiting bystanders in performing them, including fear that they may perform inappropriate CPR, fear of being liable for punishment, and fear of infection when performing mouth to mouth. (Americans Heart Associations, 2010).

The recommendations based on the 2010 AHA Guidelines for CPR & ECC (Emergency Cardiovascular Care) continue to be very fast in rescue, such as the A-B-C sequence changes to C-B-A, it is possible that chest compressions can be carried out at first, besides that “look, listen, and feel” is issued through an algorithm, with ordinary citizens not being obliged to provide ventilation to victims, so that more than the number of residents can act in the event of an emergency.

a. Knowledge Before and After Basic Life Support Education for the Pemulutan Community

Prior to conducting basic life support education in the Pemulutan community, the level of knowledge regarding first aid and emergency management in the area was still limited. It can be seen that of the 33 respondents, the median knowledge of respondents before education was 13.00 and the maximum value was 17 with a minimum score of 6 and a Confidence Interval of 12.04-13.71. Most residents may only have general knowledge about how to call an ambulance or contact medical personnel in an emergency, they may not know how to provide temporary
assistance while waiting for medical assistance to arrive.

After the education on basic life support in the Pemulutan community, the level of knowledge increased significantly with the result that the knowledge of the respondents after being given education was 18.00 and the respondent's maximum score was 24 with a minimum score of 12 and a Confidence Interval of 17.35-19.30. Residents now have better knowledge about the first aid measures to take in an emergency situation.

b. Respondent's Attitudes of Before and After Basic Life Support Education for the Pemulutan Community

Before being given education, it can be seen that of the 33 respondents, the median value of respondents' attitudes before being educated was 48.50 and the maximum value was 56 with a minimum score of 18 and a Confidence Interval of 42.38-48.02. Then the attitude of the respondents after being given education is 55.00 and the maximum value of the respondent is 71 with the minimum value of the respondent being 40 and the Confidence Interval is 52.47-58.38. The results of the analysis show a significant increase in the knowledge and attitudes of the Pemulutan community after receiving basic life support education. In particular, there was a significant increase in their understanding of the proper first aid measures in an emergency.

2. Bivariate Analysis

Bivariate analysis is a statistical method used to explore the relationship between two variables. In this bivariate analysis it can be seen the relationship between knowledge and attitudes to basic life support education in Pemulutan. Basic life support is an important skill to improve people's safety and welfare in an emergency. However, understanding and proper application of basic life support among the community is still limited. This study uses a bivariate analysis method to analyze survey data collected from respondents in Pemulutan.

The results of the study, it was obtained that the normality test data for Skewness values were in the pre-test (0.001) while in the post-test (0.001). From these data it can be said that the data is not normally distributed, so bivariate analysis uses the Wilcoxon test. The results of this study are limited to the understanding or knowledge of the community regarding BLS. The results of this study need to be compared or investigated further with the attitudes and skills of the community in carrying out BLS actions.

Research conducted by Hasanah (2015) found that there was a significant relationship between the level of knowledge and skills in performing basic life support. The results of this research are very important to be carried out again as material for ongoing evaluation of community BLS knowledge and as material for planning continuous health education in the community. The final hope of increasing the knowledge and skills of the community in carrying out BLS is that ordinary people become trained to help victims of cardiac arrest outside the hospital quickly and accurately so that survival rates increase and prevent disability.
a. The Influence of Basic Didi Support Education in the Pemulutan Community on Knowledge

In this study, bivariate analysis was conducted to identify the effect of basic life support education on the knowledge of the Pemulutan community.

The analytical method used included a difference test (paired t-test or Wilcoxon test) to compare differences in knowledge before and after the intervention in the experimental group. It can be seen that the average knowledge of respondents before counseling was 12.88 with a median of 13.00 and a standard deviation of 2.604, after counseling the average knowledge of respondents increased, namely 18.33 with a median of 18.00 and a standard deviation of 3.033. The results of the Wilcoxon statistical test obtained a p value = 0.001 (p value < 0.05) meaning that there was a significant difference between the respondents' knowledge before and after the Basic Life Support (BLS) education for the Pemulutan community. So, it can be concluded that basic life support education has a positive effect on the knowledge of the Pemulutan community.

b. The Influence of Basic Life Support Education in the Pemulutan Community on Attitudes.

In this analysis, it can be seen that there are significant differences in the results of attitudes towards basic life support education in the Pemulutan community. This bivariate analysis can consider several relevant statistical test results. The relationship between the level of knowledge and attitudes towards basic life support gave positive results to the Pemulutan community.

Based on the data collected, it can be seen that of the 33 respondents, the average attitude of respondents before education was 45.20 with a median of 48.50 and a standard deviation of 8.803. After education, the average attitude of respondents increased, namely 55.43 with a median of 55.00 and a standard deviation of 9.246. The results of the Wilcoxon statistical test obtained a p value = 0.001 (p value < 0.05) meaning that there was a significant difference between attitudes before and after the Basic Life Support (BLS) education was carried out in the Pemulutan community. Through this bivariate analysis, an understanding was obtained about the relationship between before and after basic life support education on the attitudes of the Pemulutan people. This information can be used to design more effective educational programs or to identify factors that affect the acceptance of basic life support in the Pemulutan community.

CONCLUSIONS AND SUGGESTIONS

Conclusions

Based on the results and discussion and guided by the research objectives, the authors can make the following conclusions:

1. The average value of knowledge before is 13.00 and after 18.00.
2. The average value of the attitude before is 48.50 and 55.00 after.
3. There is a difference in the average value of the knowledge of the respondents before and after the Basic Life Support (BLS) education was carried out on the knowledge and attitudes of the Pemulutan people, with a p value of 0.001.
Suggestion
1. For the Community
The results of this study are expected to provide input and information for the community in general and the Pemulan community regarding the importance of basic life support.

2. For Puskesmas
The results of this study can be used as a health center as a basis for primary prevention in pre-hospital cases in the Pemulutan community.

3. Further Research
The results of this study can be used as a reference for future researchers, namely research on skills with more complex designs and methods.

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CONFLICT OF INTEREST
In this study, no potential conflict of interest was reported by the authors.

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REFERENCE

GDMI. (2019). Basic Trauma dan Cardiac Life Suport.

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Tentang Pedoman Penyelenggaraan Program Indonesia Sehat dengan Pendekatan Keluarga.


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