THE EFFECT OF HEALTH EDUCATION ON THE LEVEL OF COMMUNITY KNOWLEDGE ABOUT LIFE SUPPORT BASE ON TRAFFIC ACCIDENT

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ABSTRACT
Basic Life Support is an emergency measure to free the airway, help breathing and maintain blood circulation without the use of assistive devices. Basic life support is usually provided by people around the victim who will contact the nearest health worker. This help must be given quickly and precisely, because wrong handling can result in bad, disability and even death to accident victims. The purpose of this study was to determine the effect of health education on the level of public knowledge about basic life support in the Bogor City Region. This type of research uses an Experiment or design, with a Pre-Experimental Design, namely One-Group Pretest-Posttest Design. The population and sample in this study amounted to 30 respondents using the total sampling technique. The research instrument was obtained by distributing questionnaires. Data analysis uses the Prerequisite Test, namely the Normality Test, Homogeneity Test, and Hypothesis Test. The results of the study were that before health education was carried out, the level of public knowledge about basic life support was 7 (23.3%) respondents in the good category, 15 (50.0%) respondents in the sufficient category and 8 (26.7%) respondents in less category. After health education, there were 14 (46.7) respondents in the good category, 12 (40.0%) respondents in the sufficient category and 4 (13.3%) respondents in the less category. The results of the Parametric T-Test Hypothesis Test showed that there was a relationship with a p value of $0.002 \leq 0.05$. The conclusion in this study is that there is a relationship between the influence of health education on the level of public knowledge about basic life support. This research is expected to provide an overview and reference for the community to be able to pay attention to the problem of knowledge regarding basic life support.

Keywords: Basic Life Support, Health Education

INTRODUCTION

The main part of health development is in emergency services. To improve the quality of service in handling victims or emergency patients, a victim handling system is needed that is carried out in an integrated and integrated manner by involving several parties. 1 Emergency services are one of the most important services in the event of a traffic accident. Traffic accidents are one of the phenomena that often occur in developing countries. Indonesia is the fifth country most affected by traffic accidents with a total of 38,279 deaths due to traffic accidents in 2015. 2

The Global Status Report on Road Safety (WHO, 2015) states that every year, worldwide, more than 1.25 million people die as a result of traffic accidents and 50 million people are seriously injured. Of this amount, 90% occur in developing countries where the number of vehicles is only 54% of the

number of registered vehicles in the world. If we all do nothing, 25 million victims will fall in the next 20 years.

Traffic accidents in Indonesia in 2019 increased when compared to 2018. Throughout 2019 the number of traffic accidents increased 3 percent, but the number of deaths decreased 6 percent compared to 2018. Based on data, there were 107,500 traffic accidents in 2019, an increase of 103,672 incidents in 2018. Meanwhile the number of victims who died as a result of traffic accidents in 2019 totaled 23,530 people, down from 27,910 fatalities in 2018. The number of traffic violations during 2019 increased from 2018, namely 7,456,913 traffic ticket violations and 3,620,393 violations resulted in a warning

According to data in Indonesia, an average of 3 people die every hour due to road accidents. The data also states that the number of accidents is caused by several things, namely: 61% of accidents are caused by human factors, namely those related to the ability and character of the driver, 9% are caused by vehicle factors (related to fulfilling road-worthiness technical requirements) and 30% caused by infrastructure and environmental factors.3

The number of traffic accidents increased in 2019, from 6,897 incidents in 2018 to 7217 incidents, but the number of deaths decreased. The number of fatalities in West Java decreased by 142 people from 3392 people to 3250.The number of seriously injured victims decreased in 2019, previously in 2018 the number of seriously injured victims was 1010 people. Meanwhile in 2019 the number of seriously injured victims reached 856 people, so the number decreased by 154 people or 0.15 percent. In 2019 the number of victims with minor injuries reached 7239 people while in 2018 it reached 7001 people, or an increase of 238 people or 3.39 percent.5

Polres Sukabumi Kota, West Java, stated that the number of traffic accident cases in their jurisdiction increased in 2019 compared to 2018. The majority of road accidents are two-wheeled vehicles or motorcycles. In 2018 there were 84 cases of traffic accidents (crime scene), while in 2019 it increased to 99 cases that occurred in the city and district of Sukabumi. In 2019, out of 99 traffic accident cases, 131 people were slightly injured, four people were seriously injured, and 60 people died. The number of traffic violation cases in 2019 increased compared to 2018. The number of violations that occurred in 2019 was 28,750 violations and for 2018 only 24,000 violations. 6

This study aims to determine the effect of health education on the level of public knowledge about basic life support for traffic accidents in the city of Bogor.

RESEARCH METHODS

The type of research used is Experiment or experiment, with the Pre-Experimental Designs research design, namely the One-Group Pretest-Postest Design and the sampling technique is using the Total Sampling technique. This research was conducted at society of Bogor City. This research was conducted on October 28 2022. The population in this study were 30 people in the Bogor City area. Sampling of this study used the Total Sampling technique, namely all members of the population were used as research samples. The sample used in this study was the community in the Bogor City Region, consisting of 30 people. The dependent variable in this study is the level of public knowledge about basic life support. The independent variable in this study is Health Education. Data was

obtained by using a questionnaire which was distributed to the public, which contained several closed questions. The questions are structured based on the operational definition of each variable. Data were analyzed by analysis of prerequisite tests, namely normality test, homogeneity test, and hypothesis testing.

RESEARCH RESULT

Table 1. Frequency Distribution of Respondent Characteristics Based on Respondent's Gender.

No	Gender	Frequency	Percentage %
1.	Man	26	86.7
2.	Woman	4	13,3
	Total	30	100

Based on Table 1, the frequency distribution of respondents' characteristics based on gender shows that out of the 30 respondents, the majority of respondents or the majority were male, namely 26 (86.7%) respondents.

Table 2. Frequency Distribution of Respondent Characteristics Based on Respondent's Age.

No	Age	Frequency	Percentage %
1.	25-31 years	16	53,3
2.	32-36 years	8	26,7
3.	37-42 years	6	20.0
	Total	30	100

Based on Table 2, the frequency distribution of the characteristics of the respondents based on age shows that out of the 30 respondents, the most respondents or the majority were aged 25-31 years, namely 16 (53.3%) respondents.

Table 3. Frequency Distribution of Respondent Characteristics Based on Respondent's Education.

No	Education	Frequency	Percentage %
1.	Bachelor	9	30.0
2.	Senior High School	21	70.0
	Total	30	100

Based on Table 3 attribution of frequency characteristics of respondents based on education it is known that out of 30 respondents the most respondents were obtained or most were of the SMA type, namely 21 (70.0%) respondents

Table 4. Frequency Distribution of Respondents' Characteristics Based on Respondents' Working Period.

No	Years of service	Frequency	Percentage %
1.	5-10 years	15	50.0
2.	11-15 years	8	26,7
3.	16-22 years	7	13,3
	Total	30	100

Based on Table 4, the frequency distribution of the characteristics of the respondents based on years of service shows that out of the 30 respondents, the most respondents or the majority were of the 5-10 year type of service, namely 15 (50.0%) respondents.

Table 5. Results of the Shapiro Wilk Test for Normality.

Tests of Normality						
	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistics	Df	Sig.	Statistics	df	Sig.
Pretest	.119	30	.200*	.956	30	.249
Posttest	.127	30	.200*	.964	30	.382

Based on the results of Table 5 above, it is known that the results of the Normality Test using the Shapiro Wilk Test formula are seen from the sig. (Significant) value, namely 0.249 during the Pretest and 0.382 during the Posttest. So, if the significant value is > 0.05 then the data distribution is normal.

Table 6. Levene Statistical Homogeneity test results.

Test of Homogeneity of Variances					
		Levene Statistics	df1	df2	Sig.
Outcomes of Health Education	Based on Means	055	1	58	.816
	Based on Median	.025	1	58	.874
	Based on Median and with adjusted df	.025	1	57,929	.874
	Based on trimmed mean	045	1	58	.832

Based on the results of Table 6 above, it is known that the results of the Homogeneity Test use the Levene Statistical formula seen from the sig. (Significant) or the probability value is 0.816. So, if the Sig. (Significant) or probability value > 0.05, then the data comes from populations that have the same or homogeneous variance.

a. Community Knowledge Level About Basic Life Support

Table 7. Frequency Distribution of Traffic Society Knowledge Level about BHD during Pretest in Bogor City Area

No	Education	Frequency	Percentage %
1.	Good 76-100%	7	23,3
2.	Enough 56-75%	15	50.0
3.	Less < 56%	8	26,7
	Total	30	100

Based on the results of Table 7 above, it is known that of the 30 respondents, the frequency distribution of the level of public knowledge about basic life support during the pretest at society of Bogor City, there were 15 respondents (50.0%) with sufficient level of public knowledge about basic life support.

b. Community Knowledge Level About Basic Life Support

Table 8. Frequency Distribution of Traffic Society Knowledge Levels about BHD during the Posttest in the Bogor City Area

No	Education	Frequency	Percentage %
1.	Good 76-100%	14	46,7
2.	Enough 56-75%	12	40.0
3.	Less < 56%	4	13,3
	Total	30	100

Based on the results of Table 8 above, it is known that of the 30 respondents, the frequency distribution of the Community's Knowledge Level about Basic Life Support during the Posttest at Society, Bogor City, there were 14 respondents (46.7%) with a Good Level of Community Knowledge about Basic Life Assistance.

c. The Effect of Level of Health Education on Public Knowledge About Basic Life Support

Table 9. Hypothesis T-Test results

Paired Samples Correlations				
		N	Correlation	Sig.
Pair 1	Pretest & Posttest	30	.554	001

Based on the results of Table 9 above, it is known that if the data is normally distributed, then the Parametric T-Test Hypothesis Test is used. The results of the Parametric T-Test Hypothesis Test in the table above are seen from the Sig value. (Significant) namely 0.002. So, if the P value <0.05 (Ho is rejected, Ha is accepted) it means that there is a relationship between health education and the level of public knowledge about basic life support.

DISCUSSION

Level of Community Knowledge About Basic Life Support Prior to the provision of health education

Based on Table 7 regarding the frequency distribution of the level of public knowledge about basic life support prior to the implementation of health education in the Bogor City area, out of 30 respondents, it was shown that as many as 15 (50.0%) respondents had a sufficient level of knowledge.

The results of this study are comparable to Sarfia Buamona's research with the title health education the effect of health education on the level of knowledge of basic life support in traffic accidents among students of SMAN 1 Sanana, Sula Islands Regency, North Maluku. There were 16 respondents in this study. The results obtained in this study were 13 respondents (81.3%) had a good level of knowledge, and 3 (18.7%) respondents had a poor level of knowledge.

Knowledge is the result of knowing and this occurs after people sense a certain object. Some factors that influence knowledge include: experience, broad level of education, beliefs without proof, facilities (television, radio, magazines, newspapers, books), income, and socio-culture.

Community is the executor element in charge of carrying out which include guarding, escorting and patrolling, community education and traffic engineering, registration and identification of young women or motorized vehicles, traffic accident investigators and law enforcement in the field of traffic in order to maintain order and smooth traffic .

Basic Life Support (BHD) is an emergency measure to free the airway, help breathing and maintain blood circulation without using aids. Basic life support is usually provided by people around the victim who will contact the nearest health worker. This help must be given quickly and precisely, because wrong handling can result in bad, disability and even death to accident victims.

Based on the theory and results of the research that the researchers conducted at Bogor City, with a total of 30 respondents, it was shown that most of the respondents had sufficient knowledge, as can be seen from table 7 before the health education was carried out, namely 15 (50.0%) respondents, this was reinforced from the questionnaire result items with indicators of the level of

public knowledge about basic life support that the researchers gave to the respondents. It was concluded that the respondents adequately understood the level of community knowledge about basic life support so that respondents maintained the level of community knowledge about basic life support at the society of Bogor City with the skills to carry out tasks would be better accompanied by better knowledge of basic life support.

Level of Community Knowledge About Basic Life Support at the Time After Providing Health Education

Based on Table 8 regarding the frequency distribution of the level of public knowledge about basic life support after health education was carried out in the Bogor City area, out of 30 respondents it was shown that as many as 14 (46.7%) respondents had a good level of knowledge.

The results of this study are comparable to Suharty Dahlan's study entitled The Effect of Health Education on Basic Life Support on the Knowledge Level of Health Workers at the Wori Community Health Center, Wori District, North Minahasa Regency. There were 50 respondents in this study. The results obtained in this study were 46 (92.0%) respondents with good knowledge and 4 (8.00%) respondents with poor knowledge.

Knowledge is defined simply as knowing, which is the result of knowing from human efforts to answer the question what, for example what is a rock, what is a mountain, what is water and so on.

The community is part of the society which is needed by the community to achieve peace, especially with regard to traffic. Service to the community in the field of traffic will affect the quality of life of the people because in modern society like today traffic is the main factor supporting productivity. The many problems or disturbances in traffic such as traffic accidents, congestion, and criminal acts related to motorized vehicles are problems that disturb the community.

Basic Life Supportis the first emergency treatment which is pre-hospital service and quick and appropriate response to save lives and prevent disability (time saving is life and limb saving) before being referred to the referral facility (hospital) as needed.

Based on the theory and results of research that has been done by researchers at the society of Bogor City, with a total of 30 respondents, the majority of respondents have good knowledge. It can be seen from table 8 that after the provision of health education, there were 14 (46.7%) respondents. strengthened from the questionnaire measuring results with indicators of the level of public knowledge about basic life support that the researcher gave to the respondents. It was concluded that the respondents had a better understanding of the community's level of knowledge about basic life support so that respondents maintained the level of community knowledge about basic life support at society of Bogor City with the skills to carry out tasks would be better accompanied by better knowledge of basic life support.

The Effect of Health Education on the Level of Public Knowledge About Basic Life Support

Based on the analysis of the researchers that the researchers carried out at the Paruungkuda Polsek, it was found that there was an increase in the total value of the community's knowledge level about basic life support from all 30 respondents. In the sufficient category at the time before the

provision of health education was carried out 15 (50.0%) respondents were in the sufficient category, in the good category after the provision of health education was carried out 14 (46.7%) respondents.

The results of this study are comparable to Erika Sylviana's study entitled The Influence of Health Education on the Knowledge Level of Basic Life Support in Level 2 Nursing Students at Medika Samarinda. The results of the Ui Wilcoxon Test are p = 0.000 <0.05. It is known that there is an effect of health education on the level of knowledge about basic life support in nursing students at Level 2 at Medika Samarinda.

Health Education is the application or implementation of education in the health sector. Operationally health education is all activities to provide and improve knowledge, attitudes, practices both individuals, groups or communities in maintaining and improving their own health.

Based on the results of the Before and After research also based on the theory above, the researcher concluded that providing health education is a very effective method for increasing knowledge and changing one's attitude and also distributing posters regarding basic life support to every community so that by distributing posters it can make it easier for people to read and understand in order to gain better knowledge. Hypothesis Test Results Parametric T-Test significant value 0.002 So, if the P value ≤ 0.05 (Ho rejected, Ha accepted). it can be concluded that there is an influence of health education on the level of public knowledge about basic life support at Society of Bogor City, seen from a significant value of 0.002 ≤ 0.05.

CONCLUSION

There is a relationship between the influence of health education on the level of society knowledge about basic life support in traffic accidents in the Bogor City Region.

SUGGESTION

1. STIKes Wijaya Husada
   From this research it is hoped that it can become additional literature for the development of nursing student knowledge, especially in emergency nursing
2. Research Place
   From this research, it is hoped that it will become material for evaluating health workers in providing motivation to the community as an effort to increase knowledge of correct assistance for accident victims.
3. Next researcher
   For future researchers who will conduct similar research, it is hoped that they can increase the sample, increase the comparison variables, and make direct observations in order to get more objective results and similar case studies.

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