

Relationship Between Knowledge and Community Attitudes in First Aid to Traffic Accident Victims

Indri Wahyuningsih^{1*}, Rina Sri Wahyuni Kurniawati², Indah Dwi Pratiwi³,
Risa Herlianita⁴

Universitas Muhammadiyah Malang

ABSTRACT: Many people who play an important role in providing first aid to traffic accident victims still prefer not to approach when an accident occurs. So that the purpose of this study is to analyze the relationship between knowledge and attitudes of the community in first aid to traffic accident victims. **Methods:** This research was conducted on 82 respondents who live close to Beji Highway, Beji Village, Junrejo District, Batu City from October 2020 to March 2021 using a correlation description design with a cross sectional approach. The instrument used is divided into 3 instruments with data collection tools in the form of a questionnaire consisting of demographic data, knowledge, and attitude questionnaires. The data collected were identified using the Spearman Correlation statistical test. **Results:** The majority of respondents have less knowledge (n=46, 56%) and have a negative attitude in first aid to traffic accident victims (n=81, 99%). Based on the results of the Spearman correlation test, the significance value $(0.000) < (0.05)$ means that there is a relationship between knowledge and public attitudes in first aid for traffic accident victims with a moderate relationship strength (0.536) and a positive relationship direction, namely if knowledge increases the attitude of the people also increases. **Conclusion:** There is a relationship between knowledge and public attitudes in first aid to traffic accident victims.

Keywords: community knowledge, community attitudes, first aid actions in accidents.

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Corresponding Author: indri@umm.ac.id

BACKGROUND

Accidents are one of the phenomena that have an impact on increasing cases of morbidity and mortality in the community. One of the factors that cause the increase in cases is the provision of first aid, especially at the pre-hospital stage which is not appropriate. In this case, the community plays an important role in providing first aid to traffic accident victims, because the community is the first person at the scene and is often exposed to traffic accidents. However, there are still many people who choose not to approach when an accident occurs because they do not understand how to do first aid. This is also influenced by public awareness and knowledge regarding the handling of traffic accident victims who are still lacking (Mariza Elsi, 2019).

The results of research conducted by Torano & Parante (2018) regarding the description of public knowledge on first aid in traffic accidents in Jayapura City show that 83% have less knowledge about how to first aid in traffic accidents. Knowledge of first aid should be owned by the community because people who understand handling victims can save the lives of victims before being given treatment by the medical side. Knowledge also affects a person's response in taking action quickly and precisely (Karima, Nuraeni, & Mirwanti, 2019).

According to Rajaratenam, Martini, & Lipoeto (2014), adequate knowledge can affect a person's attitude in providing first aid to traffic accident victims. Attitude is a person's tendency to act, think, and feel in dealing with a particular object or situation. Attitude is a person's response to a certain stimulus which, if based on appropriate knowledge, can develop an appropriate attitude. The higher a person's knowledge, the higher the stimulus and affect the attitude to be taken. Attitude affects a person's awareness in determining actions and actions when reacting to something, one of which is the response in providing first aid to victims of traffic accidents (Mastarida, 2020).

Kureckova et al., (2017) explain the basic steps that the community can take in providing first aid to accident victims are checking the situation (security, number of victims, and the entire scene), taking quick action if there is something that could endanger the victim's life (no unconsciousness, heavy bleeding, and shortness of breath), and perform the treatment (if the victim is conscious and not bleeding, it is necessary to monitor the situation and ask about all important matters) and think about situations that can be life-threatening. Meanwhile, according to Kurniawati et al., (2020), some basic skills that must be possessed by the community in providing first aid to traffic accident victims include basic life support measures, splint dressing, and victim transportation. These actions can be carried out appropriately if the public knows effective first aid for accident victims.

Traffic accidents are also one of the leading causes of death in the world. The World Health Organization (WHO) states that traffic accidents result in the death of around 1.35 million people worldwide every year and cause 20 to 50 million people to be injured. The highest number of deaths due to traffic accidents are in the Southeast Asian region, amounting to 20.7 deaths per 100,000 population (WHO, 2018). Indonesia is one of the countries in Southeast Asia with

a high number of accidents. Data from the Central Statistics Agency of the Republic of Indonesia stated that the number of accidents in 2018 was 109,251 cases with total mortality of 29,427 cases. One of the provinces with the highest accident rate in 2018 was East Java with a total of 24,757 cases and mortality of 5,308 (BPS RI, 2018). Batu City also contributed to the number of accidents in East Java Province, which amounted to 299 cases with a mortality of 30 cases (BPS Kota Batu, 2020).

Based on a preliminary study conducted by researchers, it was found that one of the locations in Batu City which is prone to traffic accidents is on Beji Highway. Besides being caused by human error or driver error, the condition of the road which is the main access to the city center and tourist area is mostly traversed by large vehicles and has a fairly steep geographical condition because it is located in a highland area. This condition is increasingly dangerous, especially when it is raining or foggy which causes road conditions to become slippery and interferes with the driver's visibility so that it becomes a factor in traffic accidents. Based on the data on this background, researchers are interested in identifying the relationship between knowledge and public attitudes in first aid for traffic accident victims.

METHOD

This study uses a descriptive correlation design intending to know the relationship between knowledge and public attitudes in first aid to traffic accident victims with a cross-sectional approach. The population in this study is people who live close to the Beji Highway, Beji Village, Junrejo District, Batu City totaling 451 families. The sampling technique in this study used simple random sampling by taking the population based on the number of heads of families and selected randomly. The characteristics of the population chosen to be the sample are the people of Beji Village, Junrejo District, Batu City who live close to the highway and are willing to fill out the questionnaires distributed by researchers. The number of samples taken was 82 respondents who were calculated using the Slovin method.

The instruments used in this study were divided into 3 instruments with data collection tools in the form of questionnaires, namely demographic data questionnaires, knowledge questionnaires, and attitude questionnaires. The knowledge questionnaire was adopted from the research of Jayanti (2015) which has been tested for validity and reliability. The results of the validity test show the *r* table value of 0.444 which means it is valid and the results of the reliability test show the Cronbach's Alpha value of 0.891 which means it is very reliable. The questionnaire consists of twenty items that measure people's knowledge about first aid procedures for traffic accident victims which are divided into nine items. The questionnaire used contains questions with multiple choice answers (a), (b), and (c). Each question has an assessment in the form of a score of one if the answer is correct and a score of zero if the answer is wrong with an assessment of $\text{true}/20 \times 100$. Good criteria 76-100%, 56-75% enough, less 55%.

Meanwhile, the attitude questionnaire was adopted from the research of Kautsariyyah (2019) which has been tested for validity and reliability. The results

of the validity test show the r table value of 0.444 which means it is valid and the results of the reliability test show the Cronbach's Alpha value of 0.946 which means it is very reliable. The questionnaire consists of twelve items measuring attitudes regarding first aid to traffic accident victims consisting of two items. The measurement uses a Likert scale consisting of four answers to favorable statements with a score of 4 (Strongly Agree), 3 (Agree), 2 (Disagree), and 1 (Strongly Disagree). Meanwhile, the unfavorable statements were given a score of 1 (Strongly Agree), 2 (Agree), 3 (Disagree), and 4 (Strongly Disagree). The assessment criteria are positive (12-24) and negative (25-48).

Data analysis is carried out when all data has been collected and processed in several stages, namely, editing by examining and structuring the data. The activities carried out were checking the names and completeness of the respondents, checking the completeness of the contents of the data collection instrument, and checking the types of data contents to avoid uncertainty in filling out. Next do the coding, namely giving a code or value to the answers to the questionnaire that has been filled out by the respondent by giving a value to each answer based on the questionnaire item according to the explanation in the operational definition and giving a total score to get the category of respondents. Then do the entry by entering the data into the computer for processing. Data collection was carried out univariately, namely displaying frequency and percentage distribution tables, and finally, the data were analyzed using bivariate analysis by examining two variables, namely knowledge, and attitudes to identify the relationship between knowledge and public attitudes in first aid to traffic accident victims.

Identification was carried out using the Spearman Correlation statistical test with the results of this correlation analysis being that the correlation (r) would be rejected depending on the size of the difference between the hypothesis and sample values. If the difference is small, then the probability of a hypothesis being rejected will be small and the probability of the hypothesis being accepted will be greater. The statistical decision is known by comparing the results of the p -value with the value of α (alpha), namely: if $p \leq \text{value of } \alpha$, then H_0 is rejected and H_1 is accepted (which means: there is a significant relationship/difference between one data group and another) and if $p \geq \text{value of } \alpha$, then H_0 fails to be rejected (which means there is no significant relationship/difference between one group and another). This study uses the Spearman correlation test because the knowledge variable with the attitude of the community is a variable with an ordinal scale (Marina, 2017).

This research has been through an ethical test by the Health Research Ethics Commission of the University of Muhammadiyah Malang and was declared eligible on May 3, 2021, with letter number No.E5.a/080/KEPK-UMM/V/2021. In conducting research, researchers put forward ethical principles, namely not forcing respondents to participate in research, maintaining the confidentiality of research respondents, maintaining confidentiality and security and there is no element of threat to respondents who participate in research. Researchers also provide informed consent (agreement sheets) so that respondents can decide whether or not to participate in the research and to regulate the protection of

respondents and the responsibility of researchers towards research subjects (Muharto & Arisandy Ambarita, 2016). The main principles in this research are Informed Consent (Explanation and approval), Anonymity (Confidentiality), Beneficence (Useful), Nonmaleficence (No Harm), Justice (Justice).

RESULT

The characteristics of respondents are divided by age, gender, occupation, and education. The results of the study based on the age characteristics of the respondents can be seen in the following table.

Table 1. Frequency Distribution Based On Characteristics Of Respondents

Characteristics	Category	Frequency (f)	Percentage (%)
Age	Teenagers (13-24) years	30	36
	Adult (25-49) years old	31	38
	Elderly (>50) years	21	26
Gender	Man	42	51
	Girl	40	49
Profession	Employees	35	43
	Student	6	7
	Housewife	10	12
	College student	6	7
	Farmer	2	2
	Nurse	7	10
	Entrepreneur	1	1
	Driver	12	15
	Civil servant	1	1
	Does not work	1	1
Last education	Primary school	6	7
	Middle school	14	17
	High	46	56
	School/Equivalent		
	College	16	20

Based on the table above, the majority of respondents are in the adult category or aged 25-49 years (n=31, 38%), male (n=42, 51%), working as employees (n=35, 43%), and the respondent's last education was High School /equivalent (n=26, 56%). The results of research on community knowledge in first aid for traffic accident victims can be seen in the following table.

Table 2. Distribution Of Community Knowledge In First Aid To Traffic Accident Victims

No.	Knowledge	Respondent	
		N	%
1	Good	3	4
2	Enough	33	40
3	Less	46	56
Total		82	100

The table shows that the majority of respondents have poor knowledge of first aid for traffic accident victims (n=46, 56%). The results of the research on public attitudes in first aid to traffic accident victims can be seen in the following table.

Table 3. Distribution Of Public Attitudes In First Aid To Traffic Accident Victims

No.	Attitude	Respondent	
		N	%
1	Positif	1	1
2	Negatif	81	99
Total		82	100

The table shows that almost all respondents have a negative attitude in first aid to traffic accident victims (n=81, 99%). Furthermore, the data was tested using the Spearman correlation test to determine the relationship between the independent variable (knowledge) and the dependent variable (attitude). Based on SPSS data processing, the following results were obtained.

Table 4. Relationship Between Knowledge And Attitude

		Knowledge	Attitude
Spearman's rhoKnowledge	Correlation Coefficient	1.000	.536**
	Sig. (2-tailed)	.	.000
	N	82	82
Attitude	Correlation Coefficient	.536**	1.000
	Sig. (2-tailed)	.000	.
	N	82	82

** . Correlation is significant at the 0.01 level (2-tailed).

From the results of the Spearman correlation analysis, a significance value (sig) or p (value) of 0.000, then H1 is accepted because the value of sig (0.000) < (0.05) which means that there is a relationship between knowledge and public attitudes in first aid to victims. traffic accident. The strength of the relationship in the analysis is moderate (0.536) and the direction of the relationship is positive, that is, if knowledge increases, people's attitudes also increase.

DISCUSSION

Based on the results of the study, most of the respondents had less knowledge of first aid for traffic accident victims. According to Karima et al.,

(2019), the lack of knowledge about first aid can be influenced by the lack of training provided or the less varied training methods. The main method used in the training is the lecture method so it is less effective because it is easier to forget and the trainees are less able to review the training material. It is also mentioned in the research of Fadilla, Afriandi, Sitanggang, & Setiawati, (2015), that the effectiveness and understanding of the trainees can affect the knowledge possessed by the participants. Lack of knowledge can also be influenced by the education level of the respondents, most of whom are High School/equivalent. This is also mentioned in the research conducted by Zulmiyetri et al., (2019) with research respondents who are also dominated by high school education levels. In the study, it was stated that the level of education determines the absorption and understanding of the knowledge that a person acquires. Another study conducted by Agtikasari (2017) states that higher education will expand one's experience. This is also in line with Cahyaningrum (2018) which states that with high education, a person will be more receptive to information and affect one's perspective in receiving new information. So the higher the education, the easier it is for someone to receive information.

However, this cannot be used as a parameter for measuring one's knowledge, because from the results of the study, most respondents with college graduates also have sufficient or less knowledge in first aid to traffic accident victims. These results are in line with research of Retnaningsih (2016) which states that the level of knowledge is not only obtained from informal education. Knowledge can also be obtained from personal experience that a person has. Research of Ar-Rasily and Dewi (2016) states that personal experience is useful to gain knowledge. Experience can also be a way to obtain the truth of knowledge. Repeating the experience gained in solving problems in the past can be one way to gain knowledge.

Respondents with university graduates who have sufficient or less knowledge can be assumed that these respondents do not have experience with first aid for traffic accident victims. This is also in line with research of Ar-Rasily and Dewi (2016) which states that knowledge is not absolutely obtained from formal education but also non-formal education which means that someone with a low level of education does not absolutely have low knowledge and someone with a high level of education does not absolutely have knowledge. the good one. Besides being influenced by education, knowledge can also be influenced by a person's age. Research of Nurhasanah (2019) states that the older one gets, the reasoning, experience, and knowledge a person gains. Age also affects the level of maturity and strength of a person is thinking and working. The more mature a person's age, the capture power, and mindset will develop so that the knowledge gained is getting better (Yuswanita, Dyahariesti, Sari, & Sari, 2019). Suwaryo & Yuwono (2017) also mentions that the older a person gets, the more their grasping power and mindset will develop.

However, this is not in line with the results in this study which showed that the majority of adolescents, adults, and the elderly had less knowledge about first aid for traffic accident victims. It can be assumed that respondents who are teenagers, adults, and the elderly with less knowledge have not received media

exposure or sources of information regarding first aid for traffic accident victims. This is in line with research of Cahyaningrum (2018) which states that the age factor is not absolute as a measure of one's knowledge. A person's knowledge can significantly increase if there is media exposure or information sources received (Fridayanti & Laksono, 2018). The more sources of information obtained, the better the knowledge possessed (Agtikasari, 2017). Besides being influenced by age and education, knowledge is also influenced by one's job.

Research of Wijaya, Dewi, & Yudhawati (2016) states that work provides extensive experience so that it can contribute to one's knowledge. Another study conducted by Suwaryo & Yuwono (2017) states that when a person's work uses the brain more, memory will increase and increase. Zulmiyetri et al., (2019) also mention that work provides experience in the form of information and the ability to adapt which when developed will produce knowledge. However, this is not in line with the results of the study which showed that the majority of respondents with various occupations had less knowledge about first aid for traffic accident victims. This lack of knowledge can occur if someone is less in receiving knowledge from others at work. This is in line with research of Rafique and Mahmood (2018) which states that the higher the intention, willingness, and encouragement to share knowledge, a person will have more opportunities to develop new ideas and explore information.

Based on the results of the study, almost all respondents have a negative attitude toward first aid to traffic accident victims. This negative attitude can be influenced by the respondent's lack of knowledge regarding first aid for traffic accident victims. This lack of knowledge can be influenced by a person's level of education which in turn affects a person's mindset and perception. These mindsets and perceptions lead to the attitude to be taken. This is in line with research of Dharmawati & Wirata (2016) which states that someone with a low level of education can hinder the development of attitudes. However, the results of this study indicate that almost all people with higher education still have a negative attitude.

This negative attitude can be assumed that almost all respondents are not aware of the importance of providing first aid to victims of traffic accidents and lack knowledge about how to do first aid properly and correctly. This lack of knowledge encourages a person's attitude to be reluctant to provide first aid because he is worried that if he has to be a witness when giving help and giving first aid is not appropriate. Research of Kase, Prastiwi, & Sutriningsih (2018) states that ordinary people with less knowledge, especially in handling accident victims, will have difficulty in providing first aid and this action cannot be taken carelessly. Meanwhile, fast and accurate treatment can reduce morbidity and mortality in victims.

Another factor that can influence a person's attitude is age. I Nyoman Asdiwinata, A.A Istri Dalem Hana Yundari (2019) stated that adults have an attitude of responsibility towards others which is influenced by the maturity of the thought process. However, this is not in line with the results of research which shows that both adolescents, adults, and the elderly almost all have negative attitudes. This attitude can be assumed that almost all respondents do not have experience in providing first aid to traffic accident victims. This is in line with the research of Yuda and Nurmala (2018) which states that in addition to being influenced by mature thinking, attitudes are also influenced by one's experience which is useful in the decision-making process.

In addition, gender is also one of the factors that influence a person's attitude. The research of Sari & Dkk (2020) states that the female gender tends to care more about the environment and behaves well than men. It is also mentioned in research of Suhardin (2016) that women have a psychological condition that is attentive, affectionate, tender, emotional, and patient which forms more caring attitudes and behavior. Women also have attention to those around them, love, stare, and behave gently. However, the results of the study showed that there was no difference in attitudes between men and women who almost all had negative attitudes. It can be assumed that female respondents do not know so they are less sensitive in first aid. The research of Diaz-Quijano *et al.*, (2018) states that women are more interested and sensitive to acquire a skill so that it should allow female respondents to have a positive attitude in first aid to traffic accident victims.

Based on the Spearman correlation statistical test, it was found that knowledge was correlated with attitude. The lower the level of knowledge, the more negative the respondent's attitude, so that there is a relationship between knowledge and public attitudes in first aid to traffic accident victims. Research of Zulmiyetri *et al.*, (2019) states that ordinary people who have good knowledge in handling traffic accident emergency actions will be better able to handle basic procedures in an emergency. So that the results obtained that knowledge and attitudes are interconnected which then the attitude affects the actions that will be taken by someone.

The more knowledge gained, the better the attitude taken. This is in line with research of Hasanah (2019) which states that a person's attitude tendency can be influenced by several factors, one of which is knowledge. The higher the level of knowledge will have a positive impact on one's attitude. In addition, Kurniawati *et al.*, (2020) also emphasize that one's knowledge is very important in determining the attitude to be taken. It is also mentioned in research of Octarini (2017) that good knowledge tends to produce a more positive attitude, while less knowledge tends to produce a negative attitude.

The direction of the relationship in the statistical analysis of the Spearman correlation test is positive. This is in line with the research of L. M. Sari, Yuliano, & Almudriki (2019) which states that attitude change occurs through three stages. The first stage is knowledge which is the result of sensing an object, the second stage is an attitude which is a reaction or response to a stimulus, and the last stage is the implementation of an attitude in the form of action. So that the higher the knowledge, the respondent's attitude towards first aid for traffic accident victims will also be higher.

Thus, it can be described that there is a significant relationship between knowledge and public attitudes in first aid to traffic accident victims. From the results of this study, the relationship between the strength of the relationship between knowledge and people's attitudes was classified as moderate. This is evidenced by the level of public knowledge that is less and comparable to the negative attitude of the community. So based on this description, it was found that the attitude of people who were reluctant to provide first aid was due to a lack of knowledge about first aid for victims of traffic accidents. The results of this study imply that health workers, especially nurses, are needed in providing education and information related to public safety. The education provided can be in the form of counseling or approaches regarding appropriate management in providing first aid to traffic accident victims before being further handled by medical officers.

CONCLUSION

The conclusion from the results of this study is that the majority of people have less knowledge in first aid for traffic accident victims amounting to 56% (46 respondents). Almost all people have a negative attitude in first aid to traffic accident victims, amounting to 99% (81 respondents). In addition, there is a relationship between knowledge and public attitudes in first aid to traffic accident victims ($p = 0.000$). Based on the Spearman correlation statistical test, the value ($p = 0.000 < 0.05$) means that there is a relationship between knowledge and public attitudes in first aid for traffic accident victims. In this study, the researcher found several limitations of the research identified at the time of carrying out the study, namely this study only covered one location, namely Beji Village, Junrejo District, Batu City due to time and energy limitations so that researchers were not able to make observations in a wider location. This causes the research results to be less representative because they have not shown results in areas that have the same characteristics as the research location regarding the relationship between knowledge and public attitudes in first aid to traffic accident victims.

In addition, the sample in this study amounted to 82 respondents who live close to the highway Beji Village, Junrejo District, Batu City. This causes the results of the study cannot be generalized to a larger and wider population. This study uses a questionnaire instrument where respondents may only answer arbitrarily and not seriously so that the results obtained are not objective in describing the real situation. The researcher also observed that there were inconsistent answers to the questionnaire because respondents tended to be less careful with the questions and statements even though the researchers had anticipated by accompanying and supervising respondents in choosing answers on the questionnaire sheet. This causes the results of the questionnaire answers to be less valid in determining the actual knowledge and attitudes of the community.

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