



**KNOWLEDGE, ATTITUDE, AND WILLINGNESS TO PERFORM
BASIC LIFE SUPPORT AMONG ONLINE MOTORCYCLE TAXI DRIVERS**

Raisa Salsabila, Eka Yulia Fitri*, Mutia Nadra Maulida

Nursing Department, Faculty of Medicine Universitas Sriwijaya, Jl. Raya Palembang - Prabumulih Km. 32
Indralaya, OI, Sumatera Selatan 30662, Indonesia

*ekayulia_01@unsri.ac.id

ABSTRACT

Cardiac arrest is one of the emergency conditions that can occur anywhere and can result in death if not treated immediately. Handling cardiac arrest can be done by providing basic life support by the community, including online motorcycle taxi drivers. Knowledge, attitudes and willingness of helpers in performing basic life support measures are needed to reduce the risk of death in victims of cardiac arrest. Objective: This research aims to determine the level of knowledge, attitudes, and willingness to perform basic life support among online motorcycle taxi drivers in Palembang city. Methods: A quantitative methods using descriptive study approach was conducted at Palembang City, South Sumatera, Indonesia in 2023. In this study, 106 online motorcycle taxi drivers were assigned using accidental sampling. The knowledge, attitude, and willingness to perform basic life support was assessed using a questionnaire. A descriptive analysis was conducted to describe the frequency and percentages of the variables. Results: The results showed that 46.2% of respondents had sufficient knowledge, 54.7% of respondents had a positive attitude, and 95.3% of respondents had a willingness to perform cardiopulmonary resuscitation to immediate family members and relatives. The main factors of unwillingness to perform cardiopulmonary resuscitation were the situation of the victim (42.5%). Conclusion: Not all respondents have good knowledge, positive attitudes and willingness to perform cardiopulmonary resuscitation, so a strategy is required to provide basic life support education and training to the community.

Keywords: attitude; basic life support; knowledge; online motorcycle taxi drivers; willingness

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INTRODUCTION

Traffic accidents can potentially lead to emergencies. Estimates of deaths from traffic accidents are around 1.3 million each year (WHO, 2022). Delays in treatment can lead to the emergency conditions such as cardiac arrest and also death (Hasanah et al., 2019). Data from the Directorate of Traffic South Sumatra shows that the number of traffic accidents increased in 2021, with a total of 1,539 cases. Palembang City was the location with the most incidents. It was found that a total of 27 victims suffered from serious injuries and serious conditions such as cardiac arrest, and 89 victims were dead. According to the American Heart Association (2020), around 350,000 adults in the United States suffered out-of-hospital cardiac arrest in 2015. Traffic accidents were the leading cause of out-of-hospital trauma-associated cardiac arrest, with 5,300 cases or 61.3% (Kim et al., 2020). In Indonesia, although there is no specific data on the percentage of cardiac arrest incidence, it is estimated that around 10,000 people per year experience this condition (Kementerian Kesehatan RI, 2018).

Management of emergency conditions that aims to recover and maintain vital organ functions is called basic life support (BLS) (Saleha & Cahyati, 2022). According to the American Heart Association (2020), 40% of BLS with cardiopulmonary resuscitation (CPR) is provided by lay people, but most of the cardiac arrest cases do not get immediate treatment from the

beginning of the incident until the victim is in health services due to ignorance and fear of making the victim's condition worse (Kadri, 2023). CPR performed by lay people can increase the chances of survival of victims by 2 to 3 times (Panchal et al., 2020). Lay people are a supporting factor for the survival of cardiac arrest victims outside the hospital, so they are expected to be able to recognize the symptoms of cardiac arrest and provide direct BLS immediately (Sanusi et al., 2023). The American Heart Association (AHA) recommends that the general public should be able to start CPR immediately until an emergency team consisting of health or medical personnel arrives to take over saving the lives of victims of cardiac arrest.

Ojek online or online motorcycle taxi includes public transportation with the same function as ojek which is commonly used to transport passengers and goods by utilizing technology through smartphones during the transaction process with passengers (Kadri, 2023). Online motorcycle taxi is a mode of transportation that is mostly used by people in Palembang city because of its ease of transactions. Online motorcycle taxi drivers work to transport people from one location to another and spend most of their time on the road. Therefore, online motorcycle taxi drivers have great potential to become helpers for victims of traffic accidents who have cardiac arrest (Kurniawan et al., 2021). A preliminary study from 20 online motorcycle taxi drivers in Bukittinggi City found that 15 drivers did not know how to perform the BLS. Most drivers preferred to wait for help to come and did not dare to perform basic life support immediately. This condition will reduce the golden time of handling cardiac arrest by 3-10% per minute (Kosasih et al., 2020). This study aims to determine the level of knowledge, attitudes and willingness to perform basic life support among online motorcycle taxi drivers in Palembang, South Sumatra.

METHOD

A survey research used a quantitative methods with a cross sectional design approach was conducted on online motorcycle taxi drivers in Palembang City. The population of this study were all online motorcycle taxi drivers in Palembang City whose actual numbers are unknown. Inclusion criteria are licensed online motorcycle taxi drivers with an age range of 17-55 years, while exclusion criteria include work as health workers or medical staff, have attended basic life support training, and are not willing to be respondents. The sample size was determined based on Lemeshow formula. A total of 106 respondents were obtained in January 2023. The sampling technique is accidental sampling due to the position of online motorcycle taxi drivers who are spread out and not settled in one place. The data for this research was collected using a questionnaire that assesses socio-demographic variable, knowledge and attitudes towards basic life support, willingness to perform cardiopulmonary resuscitation, and reasons for performing basic life support. The questionnaire was developed based on literature and the 2020 American Heart Association cardiopulmonary resuscitation guidelines with validity test of 0.361 (significance level of 95%) and the reliability test result of 0.867 (Cronbach alpha > 0.60). The data was collected accidentally from respondents encountered on the street. The researcher explained the purpose and gave informed consent. Respondents who have agreed to take part in the study will be given a questionnaire to fill in with 10-15 minutes. The data that has been collected will be coded using Microsoft Excel and was analyzed using IBM SPSS Statistics for Windows, version 26.0 (Released 2019; IBM Corp., Armonk, New York, United States). Frequency and percentages were used for descriptions of categorical variables. Ethical approval was obtained from Faculty of Medicine Universitas Sriwijaya Medicine and Health Research Ethics Committee (Reference Number 304-2022).

RESULTS

Table 1 shows social demographic characteristics of the participants. Almost all of the participants (n=99; 93.4%) were male. In terms of age, a total of 48 (45.3%) were aged 36-45 years. Most of all participants (n=80; 75.5%) had a high school background and had online motorcycle taxis as their main job. Almost half of participants (n=44; 41.5%) had been exposed to information about BLS through online media. Respondents mostly never helped victims with cardiac arrest (93.4%).

Table 1.
Social-demographic characteristics of participants (n=106)

| Social-Demographics Characteristics | f | % |
|--|----|------|
| Gender | | |
| Female | 7 | 6.6 |
| Male | 99 | 93.4 |
| Age | | |
| 17-25 | 21 | 19.8 |
| 26-35 | 29 | 27.4 |
| 36-45 | 48 | 45.3 |
| 46-55 | 8 | 7.5 |
| Educational background | | |
| Elementary School | 7 | 6.6 |
| Junior high School | 9 | 8.5 |
| Senior high School | 80 | 75.5 |
| Undergraduate | 10 | 9.4 |
| Job other than online motorcycle taxi driver | | |
| Not | 80 | 75.5 |
| Yes | 26 | 24.5 |
| Information exposure about BLS | | |
| Printed Media | 5 | 4.7 |
| Electronic Media | 13 | 12.3 |
| Online Media | 44 | 41.5 |
| Other | 1 | 0.9 |
| Never | 43 | 40.6 |
| Experience helping victims with cardiac arrest | | |
| Never | 99 | 93.4 |
| Ever | 7 | 6.6 |

Table 2 shows the general level of knowledge and attitude toward BLS among participants. It was found that 48 out of 99 male participants had sufficient knowledge about BLS and 53 male participants had a positive attitude toward BLS. Most online motorcycle taxi drivers, whether they have additional jobs or not, had sufficient knowledge and positive attitudes toward BLS. Almost all of participants who did not have experience helping victims with cardiac arrest also had adequate knowledge (93.3%) and positive attitudes toward BLS. Most information exposure comes from online media, a total of 17 male respondents and 2 female respondents had sufficient knowledge after being exposed to BLS information through online media and had a higher percentage of positive attitudes than other information media sources. Further, most of the participants with an age range of 36-45 years had better knowledge than younger online ojek drivers (61.5%) and almost half of the participants had a positive attitude toward BLS (48.3%). Almost all of the participants (n=22; 84.6%) who had a high school education background had good knowledge about BLS, but almost all of them also had a fairly high percentage of negative attitudes toward BLS (79.2%).

Table 2.

Level of knowledge and attitude towards basic life support based on the social-demographic characteristics of participants (n=106)

| Social-Demographic Characteristic | Level of Knowledge | | | Attitude | |
|--|--------------------|------------------|------------|----------------|----------------|
| | Good f (%) | Sufficient f (%) | Less f (%) | Positive f (%) | Negative f (%) |
| Gender | | | | | |
| Female | 4 (15.4) | 1 (2.0) | 2 (6.5) | 5 (8.6) | 2 (4.2) |
| Male | 22 (84.6) | 48 (98.0) | 29 (93.5) | 53 (91.4) | 46 (95.8) |
| Job other than online motorcycle taxi driver | | | | | |
| Not | 17 (65.4) | 37 (75.5) | 26 (83.9) | 45 (77.6) | 35 (72.9) |
| Yes | 9 (34.6) | 12 (24.5) | 5 (16.1) | 13 (22.4) | 13 (27.1) |
| Experience helping victims with cardiac arrest | | | | | |
| Never | 24 (92.3) | 46 (93.9) | 29 (93.5) | 54 (93.1) | 45 (93.8) |
| Ever | 2 (7.7) | 3 (6.1) | 2 (6.5) | 4 (6.9) | 3 (6.3) |
| Information exposure about BLS | | | | | |
| Printed Media | 2 (7.7) | 2 (4.1) | 1 (3.2) | 0 (0.0) | 5 (10.4) |
| Electronic Media | 5 (19.2) | 5 (10.2) | 3 (9.7) | 11 (19.0) | 2 (4.2) |
| Online Media | 15 (57.7) | 17 (34.7) | 12 (38.7) | 0 (0.0) | 22 (45.8) |
| Other | 0 (0.0) | 1 (2.0) | 7 (22.0) | 22 (37.9) | 18 (37.5) |
| Never | 4 (15.4) | 24 (49.0) | 0 (0.0) | 15 (27.1) | 1 (2.1) |
| Age | | | | | |
| 17-25 | 2 (7.7) | 13 (26.5) | 6 (19.4) | 11 (19.0) | 10 (20.8) |
| 26-35 | 8 (30.8) | 16 (32.7) | 4 (12.5) | 0 (0.0) | 13 (27.1) |
| 36-45 | 16 (61.5) | 15 (30.6) | 5 (16.1) | 16 (27.6) | 20 (41.7) |
| 46-55 | 0 (0.0) | 5 (10.2) | 17 (54.8) | 28 (48.3) | 5 (10.4) |
| Educational background | | | | | |
| Elementary School | 1 (3.8) | 3 (6.1) | 3 (9.7) | 5 (8.6) | 2 (4.2) |
| Junior high School | 1 (3.8) | 4 (8.2) | 4 (12.5) | 6 (10.3) | 3 (6.3) |
| Senior high School | 22 (84.6) | 37 (75.5) | 9 (27.9) | 42 (72.4) | 38 (79.2) |
| Undergraduate | 2 (7.7) | 5 (10.2) | 21 (67.7) | 5 (8.6) | 5 (10.4) |

Table 3 shows cross-tabulation data between case scenarios and willingness to perform BLS among the participants. Almost all of the participants (n= 101; 95.3%) had the willingness to perform BLS on cardiac arrest victims either from nearest family member and relatives.

Table 3.
Willingness to perform basic life support in cardiac arrest cases (n=106)

| Scenario | Willingness to act, f (%) | |
|-----------------------|---------------------------|-------------------|
| | Willing to do | Not willing to do |
| Foreign male | 97 (91.5) | 9 (8.5) |
| Foreign female | 82 (77.4) | 24 (22.6) |
| Children | 93 (87.7) | 13 (12.3) |
| Elderly people | 83 (78.3) | 23 (21.7) |
| Nearest family member | 101 (95.3) | 5 (4.7) |
| Relatives | 101 (95.3) | 5 (4.7) |
| Friends | 97 (91.5) | 9 (8.5) |
| Accident Victims | 84 (79.2) | 22 (20.8) |

Table 4 shows varied reasons for the lack willingness to perform BLS. The condition of the victim was the main reason (n=45; 42.5%) why respondents refused to perform BLS to the cardiac arrest victim.

Table 4.
Reasons to not perform basic life support (n=106)

| Reasons | Unwillingness to do CPR f (%) | | |
|-------------------------------------|----------------------------------|----------|-----------|
| | Total (Percentage) | Female | Male |
| Fear of causing legal problems | 16 (16.2) | 0 | 16 (15.1) |
| Nervous and afraid | 5 (4.7) | 0 | 5 (5.1) |
| Don't Know about heart compressions | 4 (3.8) | 0 | 4 (4.0) |
| Depending on the victim's condition | 45 (42.5) | 4 (57.1) | 41 (41.4) |
| Fear of catching the disease | 41 (38.7) | 3 (42.9) | 38 (38.4) |
| Doesn't want to touch other people | 7 (6.6) | 1 (14.3) | 6 (6.1) |
| Other | 12 (11.3) | 2 (28.6) | 10 (10.1) |
| None of my business | 4 (3.8) | 0 | 4 (4.0) |

DISCUSSION

The result shows that almost half (46.2%) of participants had sufficient knowledge about basic life support. The results of this study are in line with research from Resti et al. (2023), it is known that all online motorcycle taxi drivers had a level of knowledge with sufficient values as many as 42 people or 42% assessed from the categories of airway, breathing, and circulation. Research conducted in the city of Denpasar also provides similar results that most participants had sufficient knowledge about the first handling in emergency situations due to the experience factor of helping victims in emergencies (Dharma et al., 2022). A different opinion arises from Santoso et al. (2021) which states that the majority of online motorcycle taxi drivers (62%) had a lack of knowledge about basic life support because they never received any information about it. A study conducted in Uganda found that the majority of taxi driver operators had low knowledge of first aid which has similar findings in Nigeria and Zambia due to the influence of education level, experience in finding accident cases, and the availability of first aid kits (Ssewante et al., 2022). Research conducted among drivers in Sharjah revealed a significant lack of first aid knowledge among drivers despite a high desire and awareness to provide first aid (Mohamadiyah et al., 2023). The results of this study contradict the findings reported by Putri, (2021) which showed that the majority of the

participants had good knowledge of emergencies. A study conducted among professional inter-city drivers in the Northwest Region of Cameroon found that about 46.2% had high knowledge of first aid for trauma in traffic accidents, which was also influenced by training (Awa & Wren, 2021).

Differences in research results regarding knowledge levels may be influenced by the “Know” behavior cycle process, which starts from awareness, interest, evaluation, trial, and adaptation Bloom's theory, known as Bloom's Taxonomy, states that knowledge is the result of know that occurs after an individual observes a particular object. The five senses of the human body, namely sight, hearing, smell, taste and touch, are used to detect objects and events. Most of knowledge is obtained through the sense of sight (eyes) and the sense of hearing (ears). The more a person obtain information, the more it can influence knowledge about an object Knowledge domain is very important in determining how individual's behavior (Wawan & M, 2018).

The result shows that there are differences in the level of knowledge between women and men. Previous study showed that cognitive differences between the two genders are not always consistent in all aspects, as there are times when a person can be more expert in a particular aspect and similarities in the ability to acquire the same knowledge (Wawan & M, 2018). The result shows that most of the respondents were in the last stages of adulthood. This is consistent with the theory stating that the final adulthood is included in a productive period characterized by extensive experience (Wawan & M, 2018). This is consistent with a study from Saudi Arabia, which revealed that older participants had greater knowledge scores than younger participants, even though most of the samples collected were from younger age groups. Older people have been exposed to more cases requiring BLS as they age (Shaheen et al., 2023). The relationship between education level and knowledge level runs parallel, the higher a person's education level the easier to receive information and tend to result in better knowledge. However, education is not the only factor that influences knowledge, as there are other internal and external factors of the individual that also play a role in shaping knowledge (Hizrian et al., 2022).

The result shows that the type of work held by participants does not affect their level of knowledge or attitude towards providing first aid in cases of cardiac arrest. Most participants who did not have additional jobs (75.5%) still had sufficient knowledge due to the influence of other factors such as access to information and the environment. The results of this study are in line with the previous study by Hasnain et al. (2023) in Pakistan, which found that job specialization did not really affect the level of knowledge about basic life support, because there are factors of training and experience that have a better influence on the level of knowledge. Previous study in Saudi Arabia found that employed individuals performed better in the BLS knowledge test than those who were unemployed because the work environment can provide certain information that enhances respondents' understanding. This is due to the fact that those who are employed earn higher salaries, which allows them to afford BLS courses and receive training and have easier access to BLS knowledge (Shaheen et al., 2023). Tabulation between respondents' experience in helping cardiac arrest victims and the level of knowledge showed that a small proportion of respondents who had experience in helping cardiac arrest victims had good knowledge (7.7%) and only 6.5% had poor knowledge. On the other hand, most of the respondents who had never helped a cardiac arrest victim had a poor level of knowledge (93.5%). This proves that someone who has experience dealing with a certain condition will have a better view and understanding in handling similar situations. This is in line with research by Dharma et al. (2022), that online motorcycle taxi drivers who

have experience helping victims of emergency conditions have sufficient knowledge (77.9%). Experience has a strong influence in affecting the level of knowledge starting from training and finding cases that require Basic Life Support so that it can provide individuals with a stronger overview and insight (Hasnain et al., 2023).

One of the supporting factors that influence respondents' knowledge is the access to information about BLS, including through online media, the results of this study are consistent with the findings in Iran explains that online media such as the use of Telegram has a positive influence on increasing respondents' knowledge and awareness of basic life support (Ziabari et al., 2019). The results of this study are in line with previous research, where 55.4% of sources of information about BLS are through social media or the internet. Effective communication is one of the important factors affecting the public health system. Online media has improved communication between individuals, communities and organizations in the delivery of health education and is a new alternative approach to improving education related to basic life support (Fitri Y., et al., 2023). Research conducted on online motorcycle taxi drivers in Makassar city found that the source of information about basic life support that is widely accessed comes from electronic media (36%) (Resti et al., 2023). The main sources of information for learning BLS by the general public are through the internet, TV, and training courses. In some regions, TV and movies are the most commonly accessed sources of information (Alrasheedi et al., 2022).

The research findings show that most online motorcycle taxi drivers have a positive attitude (54.7%). Similar results were also found from a study to professional inter-city drivers in the North West Region of Cameroon, that almost all respondents (97.5%) had a positive attitude, where they agreed to provide first aid (Awa & Wren, 2021). This positive attitude is influenced by the urge and desire to help, with 75% of respondents strongly agreeing to provide basic life support to victims in emergency conditions. Studies conducted in Jordan also revealed that the majority of respondents had the willingness to perform CPR and showed a positive attitude towards CPR (79.2%), which was influenced by the urge to learn and the desire to help others (Oteir et al., 2020). A study conducted in Uganda found that the majority of taxi drivers have a positive attitude regarding the provision of first aid to accident victims even though in practice they still have low output and training support is still needed in providing better practices when encountering cases that require first aid (Ssewante et al., 2022). Research in Saudi Arabia shows that the majority of respondents have a positive attitude towards BLS despite lacking knowledge of BLS, this is because of the urge to help others (Saquib et al., 2019). The elements that influence attitudes and mentality include individual experience, communication, others who are considered important and appreciation of social stimuli that influence and become the basis for reciprocal responses (Ambarika et al., 2023). Studies conducted on motorcycle taxi drivers in Tanzania found that motorcycle taxi drivers are willing to provide assistance according to their abilities and have the motivation to learn information about BLS (Omar, 2021).

This study used eight case scenarios to assess the willingness to act among online motorcycle taxi drivers. The results showed that the majority of respondents had the willingness to perform BLS actions to the closest family or relatives. The results of this study are in line with research by Fitri Y., et al. (2023) that the relationship with the victim affects the willingness to perform CPR, where almost all respondents will perform CPR to friends, closest family members, and relatives. The results of research conducted in China found that respondents had a high willingness to perform CPR on their closest family members (Jiang et al., 2020). There is a sense of attachment so that respondents have a high desire to perform

CPR to their families (Jaskiewicz et al., 2022). Research conducted in Jordan found that the majority of respondents prefer to provide basic life support to family, friends and neighbors. The concern of performing CPR for strangers include the fear of making mistakes and legal repercussions (59%), with the least concern about causing fractures (18.3%). This indicates that efforts to save the lives of family members and strangers are prioritized with fears about making mistakes being the most important concern (Jarrah et al., 2018).

Depend on the situation of the victim, fear of catching a disease, and fear of causing legal problems for themselves were the main reasons for not performing CPR in this study. These reasons made respondents hesitant to act for fear of aggravating the victim's condition and causing other losses. Common reasons people do not perform CPR include panic, lack of confidence, worry about being sued for taking the wrong action and fear of catching a disease (Liou et al., 2021). The results of this study are in line with research by Fitri Y., et al. (2023), which found that some of the reasons respondents did not want to provide basic life support included fear of endangering the victim, fear of getting involved in legal problems, lack of knowledge about CPR, depend on the victim's situation, nervousness, fear, lack of confidence, fear of catching diseases, unwillingness to touch others, and unwillingness to interfere in other people's affairs. Self-confidence, confidence in cognitive abilities, fostering motivation, and being determined to act in overcoming existing challenges (Sanusi et al., 2023). The results illustrate that knowledge, attitudes and willingness to act greatly influence the implementation of BLS. Knowledge becomes the foundation in the accuracy of providing action, attitude becomes the main response and response that affects the willingness to implement BLS actions. The provision of BLS in emergency conditions is influenced by knowledge, attitudes, and the urge to provide help to save someone's life (Abelsson et al., 2020).

CONCLUSION

This study provides insight into the social demographic characteristics, knowledge, attitudes, willingness to perform BLS, and reasons not to perform BLS among the online motorcycle taxi drivers. Overall, the participants demonstrated some level of knowledge and attitude toward BLS. Knowledge of BLS is in the sufficient category, while most participants had a positive attitude toward BLS. The willingness to perform BLS is influenced by the victim's condition, awareness of disease transmission and fear of legal issues. The findings of this study can be used as a reference in considering promotive and preventive measures for delay in providing BLS. Providing information and training on BLS can help prepare skilled lay people to minimize delays in providing assistance regarding out of hospital cardiac arrest. However, there are some limitations in this study such as female gender, elementary education and early elderly who are only reflected in a small proportion of respondents.

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