

Knowledge, Attitude and Practice of first aid and factors associated with practice among taxi drivers in Addis Ababa, Ethiopia

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Abstract

Background: Globally, there are small proportions of drivers with first aid skills and even those trained do not practice it well. In Africa, the proportions of drivers with first aid skills were found to be much smaller. Evidences show that widespread first-aid training is important for successful pre-hospital care when accident occurs. However; most drivers are lacking such lifesaving skills. The present study aims to assess the level of first aid knowledge, attitude and practice and factors associated with practice among taxi drivers in Addis Ababa, Ethiopia in 2015.

Method: Cross-sectional study design with stratified cluster sampling technique was employed to select the study unit. Addis Ababa was stratified by five taxi zoning areas, each zone with its own number of routes. Tor-Hailoch has 24, Asko 42, Megenagna 38, Bole 31 and Saris 31 routes. Participants operating in the selected routes were selected and interviewed using a structured questionnaire. Descriptive analysis was done to determine the level of first-aid knowledge, attitude and practice. Multivariable logistic regressions analysis was used to determine the relationship between predictors and practice of first aid and the corresponding p-value of < 0.05 considered statistically significant.

Result: A total of 785 taxi drivers representing 4.7% of all taxi drivers (16,600) operating in Addis Ababa city were enrolled. About half (50.3%) of respondents had first aid knowledge more than 80% had appropriate attitude towards first aid, and only 44.3% assisted a car accident victim in the past one year. Those drivers who had first aid training (AOR=5.02, 95%CI: 2.81, 8.98, p<0.001), adequate knowledge (AOR=5.50, 95%CI: 3.13, 9.66, p<0.001) and first aid kit in their vehicles (AOR=5.20, 95%: 2.67, 10.03, p<0.001) were 5 times more likely to providing first aid to victims who sustained injuries than those drivers who did not have first aid training, inadequate first aid knowledge, and did not have first aid kit in their taxis respectively.

Conclusions: Although there was a favorable attitude observed, the levels of knowledge as well as practice of first aid found to be inadequate. The findings call for compulsory first aid training before a driving license is granted. [*Ethiop. J. Health Dev.* 2017;31(3):200-207]

Keywords: First aid knowledge, first aid attitude, First aid practice, Taxi drivers, Addis Ababa.

Background

First aid is an assistance given to a person suffering a sudden injury or illness, with care provided to preserve life, prevent the condition from worsening, and reducing severity of injuries (1). Taking immediate action and applying the appropriate first aid techniques makes a difference for saving lives (2). First aid is one of the six pillars of the pre-hospital care systems. It is possible to identify and train motivated laypeople to provide basic first aid treatment to the victims until the professional medical staffs arrive at the accident scene or transporting to the victim to a health facility (3). A blocked airway and severe bleeding are the most common fatality in traffic road accident victims. A blocked air way takes less than four minutes to cause death (4). There are ample medical evidences to recommend a "golden hour" for road traffic accident victims. If first aid and medical assistance administered immediately for causalities within this time, there is a greater chance of survival and a reduction in the severity of their injuries (1).

Reports from International Federation of Red Cross and Red Crescent Societies (IFRC) in 2004 in the World First Aid Day in 12 September, estimated that

"tens of millions of lives are saved each year by first aid techniques applied by neighbors and bystanders to the victims of accidents or disasters" (2).

Globally, there are very small numbers of trained drivers with first aid skills. Moreover, those trained are not practiced it well. A study revealed that only 30 percent of those with first aid skills had already used them (5). In Nigeria, the proportion of drivers with basic first aid knowledge was 51 percent, out of which only 16 percent provided first aid to the traffic accident victims (6). In Ghana, the proportion was found to be much smaller estimated at 35 percent (7).

The average time for emergency service team to arrive at the accident scene varies greatly across the globe. It was estimated at 15 minutes in Europe, 10 minutes for Singapore, 3 hours for Nepal and difficult to estimate for east Africa (8). In contrast, in Ethiopia, the average emergency response service times to an accident scene have not yet been documented and no emergency air ambulance service available. Additionally, in Ethiopia, drivers' level of first aid knowledge and practice not clearly found.

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First aid training started in Ethiopia by Ethiopian Red Cross Society (ERCS). Since its establishment in July 1935, ERCS has trained more than 250,000 first aiders, however, only less than half of them are still active and on duty which were considerably very low comparing with the percentage of population trained in any of Middle East and North Africa countries (8, 9). Similarly, there are no laws that make first aid certification compulsory for workplace including for drivers before taking their driving licenses.

Today's world is increasingly exposed to injuries which is predicted to rise by 20 percent by 2020 (10). It is becoming an emerging epidemic in developing countries and is causing 5 million deaths every year which is equal to the number of deaths from HIV/AIDS, Malaria and Tuberculosis combined (11). Hence, more than 90 percent of fatalities are occurring in Low and Middle income countries in connection to accidents and injuries (12).

In Ethiopia alone, road traffic accident has taken the life of 2000 people in 2011. Most of these casualties were pedestrians. More than 60 percent of these fatalities occurred in the capital city Addis Ababa and majority of these accidents occurred by Mini bus taxis (12 to 14 persons capacity) with 19 risks per 100 vehicles (13). Unfortunately, most of the injured casualties died or transferred to the health facilities without getting any first aid care on the spot (14). The problem is more pronounced by limited road infrastructures, pedestrians' pavement and networking, and low level of pedestrians' awareness on road safety. Thus, the magnitude and complexity of road traffic accident shows obviously that there is a necessity to capacitate citizens' ability to provide first aid which is particularly essential in the case of drivers, which could make a major contribution to the reduction in road fatalities and severe injuries (15).

According to World Health Organization (WHO) report, countries with no sufficient pre-hospital care systems in place, few victims receive treatment at the accident scene and fewer transported to the hospital in an ambulance (3). As a result, most of casualties transported to the hospital attended by untrained taxi drivers or truck drivers or a police officer. Consequently, many victims may needlessly die at the scene or en route in the first few hours following injury (3,8, 15).

There are sufficient evidences available that show providing first aid to the victim right-after accidents could improve the outcomes. However, there are limited studies published which show the level of first aid among Taxi drivers and even available ones have limitations. This study, therefore, aims to assess the level of first aid knowledge, attitude and practice and factors associated with first aid practice among taxi drivers in Addis Ababa.

Methods

Study design and area: A cross-sectional quantitative study design was employed in Addis Ababa. Addis Ababa is the capital city of Ethiopia with an estimated population of 3.5 million (16). The municipal administration is sub-divided in to 10 sub cities (16). Buses and taxis are the most common means of public transportation in Addis Ababa. The bus services are publicly owned by Anbessa City Bus Enterprise and taxis operated by the private sectors. As car ownership among the residents is very low, majority depends on bus and taxis. Each bus has 30 seats, but in crowded situation, the carrying capacity packed to over hundred passengers. A mini bus taxi has a carrying capacity from 12 to 14 persons. Buses provide 40 percent of the public transport in the city and taxis account for other larger portion (17).

Despite the growing volume of pedestrians, the road infrastructure of Addis Ababa is limited and on-street parking and on street vending prevails. The pavement condition and walkways are often damaged and left unmaintained after being excavated by various organizations for installation of water pipe, electric and telephone lines. Those newly constructed walkways are also occupied and closed by petty traders and shops putting their items on walkways almost blocking section of pedestrians' way.

Addis transport authority classified the city into five taxi zoning areas. Each zone has a specific number of routes within its zoning area. Tor-Hailoch has 24 routes; Asko 42, Megenagna 38 and both Bole and Saris 31 routes each. There were about 16,600 mini bus taxis in Addis Ababa operating in five zoning areas. (18).

This cross-sectional study was carried out to determine the current status of first aid Knowledge, attitude and practice and factors associated with practice among Taxi drivers in Addis Ababa in March 2015.

Study population: Minibus taxi drivers' in the selected taxi routes in Addis Ababa city administration.

Sample size determination: Sample size was determined using a single population proportion formula for the dependent variable based on the following assumptions; 95 percent confidence limit, 5 percent margin of error and a design effect of 2. A proportion of 16.2 percent first aid practice was taken from a result of a study conducted in Nigeria (6). After adjusting a 10% non-response rate, a sample size of 794 participants was selected for the study.

Sampling technique A stratified cluster sampling technique was carried to select the study unit. Addis Ababa was stratified by taxi zoning areas. Each zoning area has its own number of routes: Tor-Hailoch 24 Asko 42, Megenagna 38, Bole 31, and Saris 31. There

were a total of 166 taxi routes. The complete list of routes was obtained from Addis Ababa city transport authority. In each route, it was estimated that at least 100 taxis were operating. Lottery method was used to select these taxi routes from the complete list and eight taxi routes were selected based on dividing the total sample size with the number of taxis available in each taxi route (18). Those taxi drivers in the selected taxi routes were interviewed using structured questionnaire.

Variables of the study: First aid practice was measured in terms age, educational status, marital status, driving experience, first aid training, first aid knowledge, first aid attitude, and availability of first aid kit.

In this study, first aid was defined as an assistance given to an injured patient having difficulty of breathing or an air way problem, positioning an unconscious patient, splinting a suspected bone fracture or an assistance to control bleeding at the accident scene or during transporting patients to hospital. On the other hand, first aid kit refers to the availability of a first aid kit in a vehicle that meet at least the following basic contents; easily identifiable watertight box, adhesive plaster, disposable gloves, sterile dressing gauze, cotton wool, non-alcoholic wound cleansing wipes, scissors, notepad and pencils. First aid knowledge and attitude were measured using a mean score. Correct responses of the participants were summed up and those individuals who scored above mean were categorized as having adequate knowledge and attitude of first aid and rest was categorized as inadequate. Previously validated and published knowledge and attitude questions were used for the study. Additionally, the questionnaire was assessed through pre-testing on 21 taxi drivers (6).

Data collection procedures and quality assurance: Six nurses collected the data using structured and pre-tested questionnaire after receiving a two days training. The questionnaire comprised four sections of socio-demographic, knowledge, attitude and practice. The questionnaire was adopted from previous study conducted in Nigeria. (6). Additionally, a group of experts from Ethiopian Red Cross and Tebita ambulance had commented on the questionnaire and their feedback incorporated to ensure the applicability of the questionnaire in Ethiopian context.

Moreover, the consistency of the questionnaire was assessed through pre-testing on 21 taxi drivers in non-selected taxi routes. Accordingly, it was modified further to improve clarity and completeness.

The study was carried out from 05 to 25 March 2015 and a time between 10:00 AM and 3:00 PM was identified as an appropriate time for data collection to avoid rush hours. The interview was carried out at the terminal points while drivers were waiting for their next round of trips. The principal investigator provided daily supportive supervision for data collectors and assured the quality and completeness of the data.

Data management and analysis: Before the data entered in to EPI info 7.1.2 software any incorrect skip patterns, unreadable marks and any wrong code were corrected manually. The exported data from EPI info software later entered in to SPSS 20.0 for analysis.

First aid knowledge: The knowledge of the study participants about first aid was assessed using 7 main knowledge questions. Participants were asked to identify the first step that should be taken at the accident scene, the appropriate and safest way that should be taken for a suspected bone fracture and the best position for transporting an unconscious patient were some of the questions used to measure the level of first aid knowledge. The correct responses of the participants were summed up and those individuals who scored above mean were categorized as having adequate knowledge of first aid. The rest was categorized as inadequate.

First aid Attitude: Attitude of the respondents regarding first aid was determined using 6 questions. The responses consistent with the correct attitude were summed up and those who scored above the mean labeled as having appropriate/positive attitude and those scored below the mean classified as having inappropriate/ negative attitude. It is necessary to provide first aid to a car accident victim at the scene, perceived obstacles to take first aid training, and perception on the obstacles to offer first aid to a car accident victim and willingness to take first aid training were some of the attitudinal question used in the study.

First aid Practice: First aid provided for individuals suffering from an injury or illness at the scenes of traffic accident for the last one year.

Descriptive analysis was used to determine the level of first aid knowledge, attitude and practice. Subsequent bivariate analysis first used to identify the presence of association between the independent factors and outcome variable. Those variables with over 0.2 level of significant were selected for further analysis. Hence, multivariable logistic regression analysis was done to explore the relationship between predictors and outcome variable. Those variables, which had a P-value of less than 0.05 using backward logistic regression, were considered statistically significant.

Ethical clearance: The research was conducted after getting an ethical clearance and approval letter from Institutional Review Board of Debre Markos University and GAMBY College of Medical Sciences. Permission to conduct the study was also obtained from Addis Ababa City Administration road and transport Bureau prior to the data collection.

Participant's confidentiality was assured by removing personal identifiers. Objective of the study clearly explained to participants before conducting the interview and informed consent was obtained from each participant.

Results

A total of 785 taxi drivers responded to the study which resulted in a response rate of 98.8%. All of them were male. The mean age was 33 ± 6.6 years, 479 (61%) the participants were married, 411 (52.4%) had completed secondary education and 278 (35.4%) had completed primary education. The mean year of driving experiences was 8.3 ± 5.7 . With regard to the origin of driving license, 762 (97%) had a driving license issued from Addis Ababa, and 21 (2.6%) respondents found to have a license from Oromia region.

Table 1: **Socio-demographic characteristics of respondents in Addis Ababa, Ethiopia, March 2015 (n=785)**

Variable	Number (%)
Age group	
18-32	409 (52.1)
33-44	315 (40.1)
>=45	61(7.8)
Education	
Primary education	278 (35.4)
Secondary education	411 (52.4)
Above secondary	96(12.2)
Marital status	
Married	479 (61)
Single	254 (32.4)
Separated	52(6.6)
Origin of the driving license	
Addis Ababa	762 (97.1)
Oromia	21 (2.6)
Amhara	2(0.3)
Driving experiences	
< 3 years	150 (19.1)
4-9 years	373 (47.5)
10-15 years	181 (23.1)
≥ 16 years	81(10.3)

First aid training and first aid kit: Participants were asked about first aid training and less than one third of them 210 (26.8%) had attended some form of first aid training at some stage in their lifetime. In regard to first aid kit, 92(11.7%) of participants did in fact owned a kit.

Level of knowledge of first aid: The mean (+SD) knowledge score of study participants was $2.38(\pm 1.76)$ with a maximum score of 6. Three hundred ninety five (50.3%) had adequate first aid knowledge.

Among the study participants, 368 (46.9%) of the respondents knew the definition of first aid. Eighty six percent of respondents did not know what the first step to be taken at the accident scene. More than 627(80%) of the participants did not know what first step to be taken during evaluation of an injured person. Likewise, more than 567(72.2%) of the participants did not able to identify the best first aid management of mechanically obstructed airway. Three hundred ninety eight (50.7%) of the respondents identified tying the bleeding site with cloth or bandage was the best and safest way to stop bleeding, whereas 189 (24.1%) of study participants mentioned elevation of the affected wound was the best and safest way to stop bleeding. On the contrary, 102(13%) of the study participants indicated that washing the wound site with water was the best and safest to stop bleeding. Ninety six (12.2%) respondents said applying direct pressure and elevate the limb was the best and safest way to stop bleeding. Generally, more than 291(37%) of the respondents did not know how to stop bleeding.

Out of the total 785 respondents, 321(40%) knew the appropriate and safest way to stabilize fracture. Moreover, slightly more than 456(58%) of the study participants correctly identified the best position for transporting an unconscious patient.

Table 2: **Participants' response to knowledge questions of first aid, Addis Ababa, Ethiopia, March 2015 (n=785)**

Questions	Number (%)
Knows definition of first aid	368 (46.9)
Identify the correct first step to be taken at the accident	251 (32)
Knowledge about evaluating an injured patient	158 (20)
Knows the best first aid management of mechanically obstructed air way	218 (27.8)
Know the best and the safest way to stop bleeding site	
Tying the bleeding site with cloth/bandage	398 (50.7)
Pour water on the wound	102 (13)
Applying direct pressure and elevate the limb	96 (12.2)
Elevation of the affected area	189 (24.1)
Appropriate and safest care for a suspected bone fracture	
Immobilization using splinting	321 (40.9)
Applying ice-packs to reduce swelling and pain	63 (8)
Force it or try twist back in to the place	23 (2.9)
Scoop and rush to hospital	378 (48.2)
The best position for transporting an unconscious patient	157 (20)

Attitude towards first aid: The study participants had a mean attitude score of 2.85(± 0.52) with a maximum score of 4. It was observed that 631 (80.4%) of respondents had mean score of greater than 2.85. This suggests that the participants had an appropriate attitude towards first aid. Almost all participants, 777 (99%) thought that first aid was necessary. Six hundred ninety one (88%) thought their first aid knowledge was not adequate. Moreover, more than 93% of the respondents were willing to take first aid training. Similarly, 732 (80.6%) participants were willing to provide first aid to road traffic accident casualties. When the participants asked to identify hurdles to take first aid training, 44% and 23% of respondents thought time constraints and income respectively were the major ones.

When participants further asked to identify what potential obstacles would prevent them from providing first aid, 362(46.1%) respondents indicated that inadequate first aid knowledge was their concern, and 174(22.2%) of study participants believed due to fear of the scene of the accident. Additionally, 161(20.5%) and 88(11.2%) of the participants indicated that it was due to fear of doing more harm to the victim and fear of complications related to legal issues respectively was their concerns.

Level of first aid practice: More than half, 467(59.5%) of participants had witnessed a traffic accidents in the past one year. However, less than half of them 207(44.3%) had given first aid to victims immediately. The remaining proportion 260 (55.7%) of participants who arrived at the accident scenes, stated that they helped casualties with other types of assistances such as taking casualties to the nearby health facility, calling traffic police, calling an ambulance and

consoling the victims. One hundred and six of the participants (40.8%) reported to have done nothing either watched while others doing something or drove and by passed the scenes.

Among the types of first aid provided by participants, bleeding control was the major one which accounted for 129(55%). Similarly, the other types of first aid provided were fracture splinting, positioning of patients with suspected spinal cord injury and assisting patients with airway problems in which each accounted for 54(23%), 26(11%) and 25(10.6%) respectively. When participants asked to identify what main challenges they faced while providing first aid, 98 (74.3%) reported lack of first aid kits, 30(22.7%) reported overcrowding, and 4(3%) of them reported uncooperative victims were some of main challenges faced by the participants.

Factors associated with first aid practice: It was found that age of participants, marital status, educational status, driving experience, first aid training, first aid knowledge, first aid attitude, and availability of first aid kit were significant at 0.2 on binary logistic regression model and were entered in to multivariable analysis. Accordingly, five variables: educational status, driving experience, first aid training, first aid knowledge and availability of first aid kit maintained their significance in multivariable analysis at a 5% level of significance.

The likelihood of first aid practice among individuals who were secondary education was 20% less (AOR=0.80, 95%CI: 0.15 - 0.95) as compared with individuals who were above secondary education.

Table 3: **Factors associated with first aid practice among taxi drivers in Addis Ababa, Ethiopia, March 2015 (n=467)**

Variable	First aid practice		COR (95%CI)	AOR (95%CI)
	Yes (%)	No (%)		
Educational status				
Primary education	72 (47.4)	80 (52.6)	0.50 (0.24 - 1.04)	0.51 (0.20 - 1.32)
Secondary education	110 (39.9)	166 (60.1)	0.37 (0.18 - 0.74)*	0.80 (0.15 - 0.95)*
Above secondary	25 (64.1)	14 (35.9)	1	1
Driving experiences				
Less than 3 years	38 (35.2)	70 (64.8)	1	1
4-9 years	70 (29.8)	168 (70.2)	0.78 (0.48 - 1.27)	0.80 (0.45 - 1.43)
10-15 years	66 (81.5)	15 (18.5)	8.10 (4.08 - 16.10)**	16.70 (7.50 - 37.3)**
≥ 16 years	33 (67.7)	10 (23.3)	6.08 (2.70 -13.70)**	8.94 (3.40 - 23.20)**
First aid training				
Yes	77 (74)	27 (26)	5.11 (3.14 - 8.33)**	5.02 (2.81 - 8.98)**
No	130 (35.8)	233 (64.2)	1	1
First aid Knowledge				
Adequate	96 (64.9)	52 (35.1)	3.50 (2.30 - 6.21)**	5.50 (3/13 - 9.66)**
Inadequate	111 (34.8)	208 (65.2)	1	1
Availability first aid kit				
Yes	55 (74.3)	19 (25.7)	4.60 (2.62 - 8.03)**	5.20 (2.67 - 10.03)
No	152 (38.7)	241 (61.3)	1	1

* p-value < 0.05, ** p-value < 0.001; COR: Crude Odds Ratios; AOR: Adjusted Odds Ratios in multivariable analysis: first aid practice adjusted for educational status, driving experiences, first aid training, first aid knowledge, and availability of first aid kit

Groups of individuals who had driving experiences of 10 to 15 years were 16 times more (AOR= 16.70, 95% CI:7.50 - 37.30) likely to practice first aid than those individuals who had driving experiences of less than 3 years. Similarly, those individuals who had driving experiences of 16 years or more were 8.9 times more (AOR= 8.94, 95% CI:3.40 - 23.20) likely to practice first aid than those individuals who had driving experiences of less than 3 years. Conversely, those groups of individuals who had driving experiences of 4 to 9 years did not show any significant association with individuals who had driving experiences of less than three years. Those individuals who had first aid training were 5 times more (AOR=5.02, 95% CI: 2.81 - 8.98) likely to practice first aid than those who did not have first aid training. Participants with adequate knowledge of first aid were 5 times more (AOR=5.50, 95%CI: 3.13 - 9.70) likely to practice first aid than those individuals with inadequate knowledge. Moreover; those individuals who had first aid kit in their vehicles were 5 times more (AOR=5.20, 95%: 2.67 - 10.03) likely to practice first aid than those individuals who did not have first aid kit.

Discussion

This study found out that most taxi drivers were not trained on first aid, do not have first aid kits, and had low level of first aid knowledge. Less than half had assisted a car accident victim in the past one year.

Results of the study revealed that educational status and first aid training were important factors for first aid practice. Interestingly, taxi drivers with better educational accomplishment were more likely to provide first aid to a car accident victim. Similarly, participants with first aid training were five times more likely to provide first aid to victims than who did not have first aid training. On the other hand, in this study only 26.8 percent of the participants had some form of first aid training in their life time which was much smaller than the study findings in India where 61 percent of the drivers had first aid training (19). The reasons for this much difference from the current study might be first aid training was not given much attention in the study area.

Participants in the current study were quite younger than the study finding among Nigerian taxi drivers (45.9 ± 7.9) and in the present study age of participants had no association with first aid practice. Astonishingly, however, the present study discovered that participants having a driving experience more than 16 years found to have statistical significant association with the application of first aid ($p < 0.001$). This could be due to the fact that driving experience increased the chance to arrive at accident scene and more likely to attend to and help victims (6, 20). Although driving experience had strong association with first aid practice, the mean driving experience 8.3 years in the current study was very smaller than the study findings conducted in Nigeria which was 26.1 years (20).

In this study, respondents with adequate first aid knowledge were 5 times more likely to provide first aid

than those who had inadequate first aid knowledge. Study from Nigeria has revealed similar findings where positive association was noted between first aid knowledge and practice of first (20).

The overall level of first aid knowledge in the present study was 50.3 ± 2.38 which was similar to the findings of the study by Sangowawa and Owoajo in Nigeria 56.4 ± 12.4 , but much higher than Ghanaian study which was 42 percent (6). However 68%, of the participants in the current study were not aware of safety and only 51 percent had knowledge on correct method of bleeding control. Additionally, the present study revealed 58 percent of participants had knowledge on correct positioning of victims which was much smaller than the study finding in India (68%) but higher than the study finding in Nigeria (18.3%). Moreover, the present study disclosed that 80 percent of participants lack proper knowledge about what first measure to take for an unconscious patient. This was considerably lower knowledge level comparing with the study finding in India (6, 19).

Attitude towards first aid was generally positive and 99 percent of participants of the current study felt first aid was necessary. However, 88 percent of them felt their first aid knowledge was not adequate and were not confident to provide first aid which was much higher than the study finding in India where 42 percent of the respondents felt confident enough to provide first aid without any hesitation. Though, the current study revealed respondents exhibited a positive attitude towards first aid, it was not significantly associated with the practice of first aid. This was perhaps associated with participants did not receive any form of first aid training and felt their knowledge was not adequate enough to provide first aid and refrained from providing first aid to a car accident victim. A similar finding was found in Nigeria that good participant's attitude was not significantly associated with practice of first aid. Nevertheless, respondents' first aid applications considerably increased after the first aid training in Ghanaian study (6,7, 19,20).

It was observed in the current study that scared of doing harm and lack of first aid supplies were the common reasons that would prevent them from providing first aid and cited by 46 percent of the respondents. However, the finding of this study was inconsistent with similar study findings in India where not knowing precisely what to do, fear of the scene and fear of legal complications were mentioned by 30 percent of the participants and only 7.6 percent thought lack of first aid equipment were the reasons(19).

The current study revealed that 44.3 percent of participants practiced first aid in the last one year. This was much higher than the study finding by Sunday et al in Nigeria where 37.6 percent of the respondents practiced first aid (20).

Regarding the types of first aid provided, in this study, 55 percent of participants used correct bleeding control which was much higher than the study finding in Nigeria whereas only 44.5 percent of participants used

the correct method of bleeding control. Nonetheless, in the present study, stabilized a suspected bone fractures was 23.2 percent and which was much lower than the study finding in Nigeria where 88.5 percent of the study participants stabilized a suspected bone fractures. Additionally, in this study, 11 percent of participants used correct method of positioning of a suspected spinal cord fracture was consistent with the finding in Nigerian study (20).

The present study revealed that respondents with first aid kit were five times more likely to provide first aid to victims than who did not have first aid kit in their taxis.

In this study, concerning the challenges faced by the participants while providing first aid to victims, lack of first aid equipment was the prominent reason mentioned by majority of the respondents which was also verified in similar study by Arbon in Australia (21).

Limitation: This study used mean-split to classify individuals as having adequate knowledge (or not) and appropriate attitude (or not). Individuals who scored above the mean value classified as adequate knowledge, and adequate attitude. The subject of the study have quite lots of uncertainty in relation to many traffic offenses and wrongdoings and was challenging to reduce response bias.

Conclusions:

The study found that almost half of the taxi drivers have inadequate knowledge of first aid. Even though, most of the respondents felt that first aid is necessary, their first aid practice is inadequate. Participants' educational status, driving experience, first aid training, first aid knowledge and availability of first aid kit were found to have statistically significant association with first aid practice.

Recommendations

First aid training should be given to all taxi drivers to improve the current level of first aid. In addition, first aid training should be considered compulsory to all taxi drivers before issuing a driving license. Moreover, the Addis Ababa transport authority should enforcement the law to install first aid kit in the vehicles and should be one of the preconditions to be fulfilled during annual inspection of taxies. In addition, Nongovernmental organizations and drivers training centers should collaborate with Addis Ababa transport authority to provide first aid training to taxi drivers.

Competing interests

The authors declared that they have no competing interests.

Authors' Contributions

AAT has made significant contributions through the conception, data analysis, interpretation and writing the manuscript.

ZAA has made contributions to the analysis and interpretation of results.

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