



ADDIS ABABA UNIVERSITY

COLLEGE OF HEALTH SCIENCE

SCHOOL OF MEDICINE

**ASSESSMENT OF KNOWLEDGE, ATTITUDE AND
PRACTICE OF TAXI DRIVERS TOWARDS SEATBELT
USE AND ASSOCIATED FACTORS IN ADDIS ABABA**

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Declaration

I, the undersigned, declare that this thesis is my original work, has not been presented for a degree in this or other university and that all sources of the materials used for this thesis has been fully acknowledged

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Date: June , 2015

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Table of Contents

AKNOWLEDGEMENT	I
Table of Contents	II
Abstract	VI
1. Introduction.....	1
1.1. Background	1
1.2 Statement of the Problem	3
1.3. Significance of the study.....	5
2 .literature review	6
2.1 Overview of road traffic accidents, Injuries and deaths	6
2.2. Knowledge, Attitude and Practice of Seat belt use	9
3. Objective.....	12
3.1 General Objective:	12
3.2. Specific Objectives:	12
4. Methods	13
4.1. Study setting.....	13
4.2. Study design	13
4.3. Source population	13
4.4. Study population.....	13
4.5. Inclusion/exclusion criteria	13
4.6. Sample size determination	14
4.7. Sampling procedures.....	14
4.8. Data Collection Procedures.....	15
4.9. Study variables	15
4.10. Operational Definitions and or standard definitions	16
4.11. Data quality management.....	17
4.12. Data Analysis Procedures.....	17

4.13. Ethical Consideration.....	17
4.14. Dissemination of Results.....	18
5. RESULT.....	19
5.1. Socio demographic characteristics of the study participants	19
5.2. Knowledge of study participants.....	23
5.3. Taxi drivers attitude towards seat-belt wearing	28
5.4. The practice of seatbelt use among taxi drivers	Error! Bookmark not defined.
5.5. Risk factors of seatbelt use.....	Error! Bookmark not defined.
5.6.Knowledge of taxi drivers about seat belt use.....	38
5.7.Attitude of taxi drivers towards seat belt use.....	41
5.8.Practice of seatbelt by taxi drivers.....	44
5.9.Multivariant analysis of risk factors.....	46
6.Discussion.....	47
7. strength and limitation.....	49
8.Conclusion and recommendations.....	50
9.References.....	51
10.Taxi drivers information sheet and consent form.....	53
10.1.Information sheet.....	54
10.2.Consent form.....	55
10.3.Questionnaire:English version.....	55
10.4.Questionnaire:Amharic version.....	58

List of tables and figures

Tables

Table. 5.1. Socio demographic characteristics of taxi drivers. Addis Ababa, Ethiopia, June 2015 (n=398 taxi drivers).

Table 5.2 Frequency of knowledge of taxi drivers towards seat-belt use Figure 3. Use and non use of addictive agents among taxi drivers, Addis Ababa city, June 2015.

Table 5.3. Taxi drivers' attitude towards seatbelt use

Table 5.4 the practice seatbelt use among taxi drivers

Table 5.5 socio-demographic characteristics of taxi drivers in association with seatbelt use. Table 5.6. Knowledge of taxi drivers in association with

Table.5.7.Attitude of taxi drivers towards seatbelt use

Table 5.8.practice seatbelt by taxi drivers

Table 5.9. Multi variant analysis of factors that determine seatbelt use among taxi drivers in Addis Ababa, June 2015.

Figure.1.Age of taxi drivers in Addis Ababa town, Ethiopia; June 24, 2015

Figure.2. Sex distribution of taxi drivers in Addis Ababa city Ethiopia; June 24, 2015.

Figure.3. Use and non use of addictive agents among taxi drivers, Addis Ababa city, June 2015

Figure.4 .Seat belt use rate by the tax drivers, Addis Ababa city, June 2015.

Abbreviation and Acronyms

AA	Addis Ababa
AARTA	Addis Ababa road and transport authority
AAPCCTAIO	Addis Ababa police commission crime and traffic accident investigation office.
AATPO	Addis Ababa traffic police office
AAU	Addis Ababa University
D/VKT	Drivers death per vehicle kilometer travel.
FRCS	Federal road safety corps
KAP	knowledge, attitude and practice
RTA	Road traffic accident
RTI	Road traffic injury
SB	Seatbelt
WHO	World health organization

Abstract

Introduction

Road traffic accident is increasing and becoming public health burden worldwide. About 1.24 million people die each year on the world's roads and between 20 and 50 million sustain non-fatal injuries.

Objectives: The main objective of the study was to assess knowledge, attitude and practice (KAP) of taxi drivers towards seatbelt use and associated factors in Addis Ababa town, Ethiopia.

Methods: a cross sectional study design by knowledge, attitude and practice (KAP) questionnaire involving 398 public transport taxi drivers.

Study setting: The study was conducted in Addis Ababa city administration.

Study design and tools: The study population is sampled drivers from the source population with cross sectional study approach.

Data collection method: the data was collected by employing pre-tested interviewer administered knowledge, attitude and practice questionnaire. Interview with randomly selected taxi drivers was carried out in the respective randomly chosen taxi stations of the zones.

Result: *most of 394(99%) taxi drivers were male and only 4(1%) were females from the total study participants. 394(99%) of the study participants have heard about seatbelt of this number 195(49%) were heard from mass media. Majority 192(48.2%) from the total study participants were grade 9th and 10th. According to this study, the seatbelt wearing rate by taxi drivers were 86.7%. Seat belt wearing rate has significant association with not taking/using addictive agents.*

Key words: *attitude, crash, injury, knowledge, practice, seat belt, taxi drivers.*

1. Introduction

1.1. Background

Road traffic accident is increasing and becoming public health burden worldwide. About 1.24 million people die each year on the world's roads and between 20 and 50 million sustain non-fatal injuries. According to World Health Organization (WHO) global status road safety report, the African Region remains the least motorized of the six world regions, but suffers the highest rates of road traffic fatalities. Though the African Region possesses only 2% of the world's vehicles, it contributes 16% to the global deaths (1). To overcome the global burden of public health (injuries, disabilities and deaths) due to road traffic accidents, the United Nations General Assembly adopted a Decade (2011-2020) of Action for Road Safety to stabilize and reduce the increasing trend in road traffic fatalities, saving an estimated 5 million lives over the ten years period (2).

In Ethiopia in general and Addis Ababa in particular, the number of road traffic accidents has been increasing for the last several years. According to the report of road traffic office report, a total of 20,953 and 29,595 accidents/crashes has occurred in 2013 and 2014 respectively in Addis Ababa, capital of Ethiopia. The report showed that, there is a death of 384 in 2013 and 411 in 2014 a total of 793 deaths is recorded. These crashes has involved property damage account 72,687,411 Ethiopian birr in 2005 and in 2006, more than two times from the previous that is 182,815,163 Ethiopian birr (3).our country; Ethiopia is one of the six countries responsible for 64% of deaths as a consequence of road traffic accidents (1). A study conducted in Ethiopia showed that a total of 4,053 crashes occurred only on Addis Ababa-Adama/ Hawassa road during the study period (4) .Of these crashes, 29.4% (1,193) were fatal and 24.2% (980) injury crashes, resulting 1,392 fatalities and 1,749 sever and slight injuries. The rapid growth of road (including railway) and building constructions, and the increase in ownership of vehicles may escalate and doubling the problems magnitude in the coming years.

Implementing road safety laws is believed to prevent and reduce the percentage of injuries and deaths as a result of the road accidents. However, according to World Health Organization (WHO), only 28 countries, covering 7% of the world's population, have comprehensive road safety laws on five key risk factors: drinking and driving, speeding, and failing to use motorcycle helmets, seat-belts, and child restraints (1).

Among these safety measures, seatbelt is one of the single most important measures in a vehicle that serves to reduce the severity of injuries to car occupants and or drivers that resulting from traffic crashes. Seatbelt were invented by English engineer George Cayley in the early 19th century. It is a vehicle safety device designed to keep secured the occupants of a vehicle against harm full movements during collision or sudden stop. It minimizes the likely hood of death or serious injury by reducing the force of secondary impact with the interior strike hazards by keeping occupants positioned in place and by preventing being ejected from the vehicle in a crash or roll over. A seat belt applies an opposite force to the drivers and passenger from falling out or making contact with the interior of the car. The world's first seat belt law was put in place in 1970, in the state of Victoria Australia, making the wearing of seat belt compulsory for drivers and front seat passengers (3). Wearing a seatbelt can reduce the risk of fatal injuries by upto 50% for front seat occupants and by upto 75% for rear seat passengers (5). It also works primarily by restraining car occupants during event of crashing. Without a seatbelt in a crash at 30 mph occupants will be thrown forward with 30-60 times of the body weight. If not wear a seatbelt, car occupants may strike the interior part of the car and they are more likely to be thrown out of the car if windows are breaking due to crashing. Seatbelt is also most effective in rollover accidents, frontal collisions and in lower speed crashes particularly in urban areas. However, seat belt wearing rates in built up areas average only 66% (ranging from 36%-99% across Europe) (6). As the same document illustrated, enforcement of laws relating to key risk factors is considered poor in most countries. Ethiopia is one of the countries that have road safety laws including seat belt law since January 2011 and set targets to reduce fatality rate by 50% in 2020 (7) but car occupants and taxi drivers are not wearing as it is needed to be and even if they are wearing, not due to the knowledge its safety measures to reduce the severity of injury in road traffic accident, but they are wearing due to the fear of seat enforcement law and traffic police fines(8). Ethiopia is enforcing interventions to increase the seat belt use though the enforcement is inadequate. For example, significant number of the study subjects 233 (66.6%) had risky driving behaviors as a study in Mekele city of Ethiopia reported (9).

The study may add knowledge on understanding of seat belt use, it is one of the road safety measures in prevention and control of road traffic accident.

1.2 Statement of the Problem

Road traffic injuries, disabilities and deaths are a major public health problem globally and in developing countries like Ethiopia. Different initiatives, actions and strategies are being implemented to avert the problem globally and nationally. Ethiopia has road safety laws since January, 2011 and as a response to address the underlined causes for road traffic injuries, disabilities and deaths which enforce the implementation (10). There are different sources to report road traffic injuries, fatalities and trends of seat belt use in Addis Ababa (including the daily accidents, property damage and associated factors analysis report via FM radio from traffic police office), but they have several limitations, Such as how many of from these accident are caused by taxi drivers due to not using seatbelt. Apart from the obligatory use of seat belts, understanding the knowledge, attitude and practice of taxi drivers and occupants as well as the other associated factors which affect them not to wear seat belt are essential in order to device mechanisms and interventions to increase the properly wearing of seatbelt. As a study with the aim of assessing the major contributing factors that affect road traffic accidents revealed, most accidents (68.9%) were caused by drivers whose educational level is secondary(11). However, there is a big gap with regard to the KAP of taxi drivers and the factors which affect their practice of seat belt.

Even if seat belt is important in prevention and reduction of the consequence of serious injury in road traffic accident or crashes, taxi drivers who are using seat belt are lower. Even if they are wearing, they are not to do so because of due to knowledge of the benefits of seat belt as road traffic safety measures, in prevention and reduction of injury associated with crash and not due to good attitude towards seat belt, but because of the fear of penalty or fine and law for not wearing seat belt. There are several causes that are believed to reduce the rate of seat belt wearing and seat belt wearing rates, including forgetfulness(“not in habit”)(15.4%),short trips, frequently stops(40.5%), discomfort(21.4), being male, perception that other do not wear it, it is dangerous, it is likely to mesh up my cloth, traffic police are not available around, drinking and perceived low risk of driving. Therefore, the benefit of seat belt wearing need to be

promoted and the perceived reason for not wearing seat belt should be reduced by taking different intervention measures including continuous education and strict enforcement for not wearing seatbelt(1,8).

With the present spate of accidents in our roads and attending carnage, it is essential to know the effectiveness of enforcement of wearing it, taxi driver's education and information programs, since seat belt is the single most effective safety measures in the vehicle that reduces the severity of injuries to taxi drivers and vehicle occupants that result from road traffic crashes.

Generally, road traffic accident (RTA) is currently increasing in the world, Africa even our country Ethiopia. The increasing trend of death, disability and property damage associated with road traffic accident is associated with lack of implementing different road safety measures including not wearing seatbelt. it is the single most important road safety measures that helps to reduce the severity of injury in road traffic crashes. But, taxi drivers and car occupants have not properly use it may be due to lack of adequate knowledge about the importance of wearing seatbelt as road safety measures, negative attitude towards the use of seatbelt or the beliefs that it is not important to reduce severity of injury in road traffic crashes or othe associated factors.

Research Question

The study will answer the following research questions:

1. What are the knowledge, attitude and practices of taxi drivers towards seatbelt usage?
2. What are the factors affecting the utilization of seat belt among taxi drivers?
3. To identify socio-demographic and environmental factors associated with use of seat belt.

1.3. Significance of the study

Today road traffic accident is one of the most worldwide catastrophes and it is indiscriminately affecting every countries. It has no human boundary and causes a series of problems that has multifaceted impact in terms of health, economy and social sectors in the world. The epidemic is also highly increased in the developing continent such as Africa. Our country Ethiopia is one of the African countries victimized with this problem. The possible causes for road traffic accidents includes over speeding, drinking and driving and not wearing seat belt.

Seatbelt is the single most effective safety measures that can reduce the severity of injury that occurred as a result of road traffic crash. But, there are limited studies conducted about the importance of seat belt use and associated factors among drivers in our country, as well as in Addis Ababa town. Therefore, this paper provide useful base line information about the benefits of using seat belt and its contribution in reducing the severity of injury and mortality rate by road traffic accident. The finding and the data in this study may also be used for further studies and investigations in similar field of studies. It is also helpful for Ethiopian trade and transport minister, Addis Ababa city administration road and transport bureau, and other concerned stake holders organization and offices in planning, implementing and evaluating road safety measures including seatbelt.

2 .literature review

2.1 Overview of road traffic accidents, injuries and deaths

Road traffic injuries are the major public health challenge and a leading cause of death, disabilities and injury around the world. Of all the issues with which people have to deal every day, road traffic systems are the most complex and the most dangerous. Approximately 1.2 million people died per year in road crashes worldwide and 50 million people are injured. More than 95% of this death is distributed in low-and middle-income countries. This number will increase by 65% in the coming 20 years unless there is a new commitment and prevention strategies undertaken. Every month a silent tsunami wave of road traffic crashes sweeps away 100, 00 lives, this costs the global community about US\$18 billion. Africa accounts for nearly 16% of this global figure (1).

Road traffic injuries are estimated to be the eighth leading cause of death globally. However, there are large disparities in road traffic death rates between regions. The risk of dying as a result of a road traffic injury is highest in the African Region (24.1 per 100 000 population), and lowest in the European Region (10.3 per 100 000). Over 90% of the world's fatalities occur in low-income and middle-income countries (2). Wearing a seatbelt can reduce the risk of fatal injuries by up to 50% for front seat occupants and by up to 75% for rear seat passengers (5). To achieve this effect to increase the rate of seat belt wearing among taxi drivers different researches have been conducted. These seatbelt wearing rate can be improved through the implementation of existing legislation, preparation for new legislation and by measure such as police enforcement education and information (6)

Population-based study in Iran demonstrates that the morbidity rate of road traffic injuries (RTIs) is about ten times higher than the national figures reported by other available sources; and this can serve as an important warning to countries like Iran to prioritize this issue in their public health activities (11). This paper recommended that obligatory use of seat belts and other protective equipments such as booster seats be implemented in the long term and the Iranian traffic officials/police continue to enforce the legislation accompanied by campaigns to increase public awareness about the risks and the reasons behind such legislation. The pilot study that is conducted in Karachi, Pakistan of 19th July 2009 showed that 15.7% of drivers (N=5158) wore seatbelt. Drivers and motor cyclists aged 18-35 years were more likely to wear seatbelt and

helmets than those aged 36 years or more. Similarly, those driving cars, jeeps and minivans were more likely to wear seatbelts than those of driving heavier vehicles. A total of 4,613 drivers of four-wheeled motorized vehicles were observed in Nov 2009 and 3342 of them were observed in April 2010. drivers were mostly men (>97%) aged 24-45 years(>85%). cars and jeeps accounted for over half (57.7%) of the vehicle .drivers aged 18-35 years and of lighter vehicles were more likely to wear seatbelts than those aged 36 years or more or driving heavier vehicles. on average, 35.8% of drivers wore seatbelt in Nov 2009 and 39.8% wore seatbelts in April 2010; has a 4% increase (12).

Driver seatbelt use rate increased from 26.7 to 58.8% in 1985 after the enactment of seatbelt legislation, and rose again from 56.8% to 96.5% in 1987 after the introduction of penalties. Their deaths decreased by 2% in 1985 and by 5.2% in 1987 and over the same years driver drivers death per vehicle kilometer travel (D/vkt) declined by 5% and 8.6%, respectively. This represents 34.7% of the expected reduction in 1985 and 42% in 1987. although motor vehicle passenger deaths decreased between 1984 and 1987, a period during which passengers belt use increased rapidly, there was no clear correlation between front seat passengers belt use rate and passengers death. Seatbelt use rate among fatally injured drivers in vehicle crash were disproportionately low compared with belt use among the general public. In Japan, during 1999, only 31% of fatally injured drivers under 30 and 41% of those over 30 years used seatbelt whereas observed belt use in general public was 88%. Attributing this discrepancy solely to the effectiveness of seatbelts in preventing deaths requires assumption of unrealistically high belt performance.

Less compliant drivers tend to be young, male, speeders, drinkers, and drunk drivers; these all are the trait that increases the risk of crashing (13). A number of risk factors for RTI have been identified also in Thailand, including drinking and driving, speeding, substance abuse and failure to use seatbelt (14,15,16).

As the study conducted in China, southern city of Guangzhou, public health promotion/education campaign and enhanced police enforcement resulted in a marked increase in compliance rate of seat belt wearing rates overall 62%. Taxi drivers was noted the largest compliance rate with a significant elevation reported from intervention level of 30% to post intervention level of 51%(17). Another large scale observational study in Nanjing and Zhoushan between 2005-2006 found that half of the sample of drivers was wearing seat belt (18). smaller observational study is also conducted in Beijing indicate that a wide difference of seatbelt wearing; That is in a study

involving 2300 drivers on three different types of roads around the city is found to have a wearing rate of 63.6%(19). However, in a study involving 235 taxi drivers in Chaoyang district Beijing showed that 7.7% taxi drivers only wearing a seat belt (20).

Of the 231 observation made, 21.2% taxi drivers were observed to wear seatbelt correctly, half of them (47.2%) were observed not wearing a seatbelt and 31.6% were using a belt in a non-functional way for example, belt draped across the chest but not buckled it up. Front seat taxi passengers are more likely and correctly to use seat belt than rear seat taxi passengers, 88.3% and 22.9% respectively (21).

In London, overall, almost one in six drivers (n = 6293, 15.3%) was not wearing a seat belt. It concluded that a worryingly high level of non-compliance with laws on seat belts by drivers (22). In another study, almost all respondents said that they always use their seat belts (91%). Few said that they did not always (8%) or never (1%) used belts (23). According to a time series study in Italy, the finding reported that reduction in fatalities was consistent with the finding of increased seat belt use (24). When the drivers and car occupants use the safety belt they increasing their survival rate and they by reduce the probability of injury by the accident (25). Studies demonstrate that mandatory seat belt enforcement law plays a role to increase the prevalence of seatbelt wearing rates among taxi drivers and the whole passengers in different countries.

The disparities in road traffic deaths and injuries are clearly demonstrated in various studies and contexts. A study conducted in Mekele, Ethiopia showed that majority of the risk groups are males 339(96.6%) and the mean age was 28.7, more than of the study participants 202 (57.85) were single, majority 284(81%) of the study participants were orthodox Christian and majority of the respondents' educational status was secondary 185(52.30). half of the respondents have monthly income less than 2350 Et Birr or around 167 US dollar (9).

Ethiopian trade and transport minister worked to tackle the alarmingly growing road traffic accident, in collaboration with Addis Ababa police commission but still they does not know how much of the road traffic accident is due to not using safety seatbelt (8,10)

2.2. Knowledge, Attitude and Practice of Seat belt use

The demographic characteristics, awareness and attitude of drivers are the significant factors in determining the use of seat belt. A study in Mekele city, Tigray region of Ethiopia, found that drivers of secondary education and with high average monthly income were more likely to have risky driving behavior. Having supportive attitude towards risky driving behaviors and not getting advice about risky driving from significant others increases the likelihood of developing risky driving behavior (8). According to a study in Pakistan on the use of seat belt and enforcement of seat belt laws, unawareness of the law/usefulness, seat belt not fitted, discomfort, forgetfulness, low speed, and careless attitude were major reasons for noncompliance with seat belt laws among Pakistani drivers (2). In another study conducted in Trinidad also revealed that the reasons for not using seat belt by the drivers were given as frequent stops (40.7%), discomfort (21.4%), forgetfulness (15.8%) and habit (15.3%) (24). However, vast majority of the drivers (96.1%) were aware of the seat belt law in the country.

On the contrary, a study in Selangor reported that certain aspects of the drivers' knowledge on when to use seat belts were still lacking. 23% of the drivers said that seat belt should be used for long distance travel, 3.5% said that seat belt should be used on the highway and a small percentage said seat belt should only be used when they are on the main road or only when they are speeding.

A survey in England examined drivers' attitudes about seatbelts. As a result, negative attitudes about seatbelts were found to be highly associated with low seatbelt use. Those drivers reporting a lower rate of seatbelt use were more likely than those reporting a higher rate to believe that it is better to be thrown clear of the car if involved in a serious accident, that seatbelts are inconvenient, uncomfortable, and easy to forget to put on, that it is not dangerous to drive without a seatbelt, and that a person who is not wearing a belt is no more likely to be injured in an accident than one who is wearing a belt (27). In contrast, driving a short distance (67%), forgetting (60%), and comfort (47%) were common reasons why part-time belt users do not buckle up; comfort (77%), not needing a seat belt (54%), and disliking being told what to do (50%) were most frequently cited among nonusers (29).

The same study concluded that Even though most people always buckle up, belt interlocks are supported by only about half of full-time belt users and by fewer part-time belt users and nonusers. Enhanced reminder systems are more acceptable than belt interlocks and are viewed as almost as effective as interlocks if persistent enough (23).

Effectiveness of seatbelt

Swedish Research on the Effectiveness of Seatbelt

The effectiveness of seatbelt and its associated restraint system can be measured by the percentage of reduction fatalities or injuries for restrained occupants and drivers as compared to those suffered by unrestrained occupants. To do so, research was conducted in Sweden from end of March 1965 up to the end of March 1966 from the divers to complete after the accident. During this time there were 37,761 accidents were reported and 28,780 accident forms satisfactorily completed. Of these number 28,780 drivers, 8,731 front seat occupants, and 5,302 rear seat occupants were involved in the accident,1,803 of which resulted in an injury to one or more of the occupants. A comparison between belted and unbelted drivers enabled us prediction to be made about the protective effect of wearing or not wearing a seatbelt in a variety level of speeds. The rate of non-fatal injuries among belted drivers is f was 57% at lower speed and 48% at higher speed; and in unbelted occupants where seatbelts were found to have reduced the rate of injuries 63% and 55% at lower speed and at higher speed respectively. Only one belted occupants was found to have injured fatally in this study, and the author commented that wearing seatbelt was entirely protective against fatal injuries.

The study also compares injury due to ejection of the front seat occupants. Which happened in 159 unbelted cases but in only one of the belt? The author estimate that the risk of fatal injury is increased 10 times more than if an occupants is ejected from the vehicle.

Factors Determining Seat Belts Use

Apart from the awareness and attitude of the drivers, there are various associated factors affecting the practice of seat belts use. The motivations to use seat belt by the drivers from Trinidad were given as stiffer penalties for non-compliance with the seat belt law (44.5%), increased mass media promotion (36.4%) and increased traffic police patrols (19.1%). The drivers use seat belt sometimes (51.8%), always (31.6%) and never (16.6%) when driving (26).

On the contrary, a study in Mongolia reported that 40% of drivers consider that the use of seat belts is not necessary if driving carefully. In addition, 17% of drivers have a negative attitude towards the seat belts. They think that seat belts may be a hindrance in extreme situations, such as hijacking, accident etc (28).

The seat belt use varies on different time characteristics (day and night) and availability of traffic police officer for check/surveillance. According to a study in Nigeria, the overall compliance for seat belt use was 57.0%. As per the finding from this study, use of seat belt was highest in the afternoon with 64.4%, followed by 59.0% in the morning and 44.2% at night (14). As the study elaborated, In Markudi (Nigeria), Federal Road Safety Corps (FRSC) officers usually come out in the afternoons for surveillance, and it may be that road users, being familiar with this routine, would take precaution by wearing their seat belts.

Another study in London found that non-compliance with regard to mobile phones was associated with failure to wear a seat belt while driving, the prevalence of which was high. And it recommended that greater efforts are needed to educate the public and enforce these laws (20).

3. Objective

3.1 General Objective:

The objective of the study was to assess the KAP of seat belt among taxi drivers and associated factors in Addis Ababa town from December 2014 to January 2015.

3.2. Specific Objectives:

1. To assess the knowledge of taxi drivers towards seatbelt use.
2. To assess attitude among taxi drivers on using seatbelt.
3. To assess practice of seatbelt by taxi drivers.
4. To assess factors associated with seatbelt use

4. Methods

4.1. Study setting and period

This study was done in Addis Ababa, the capital city of Ethiopia from April 2014 up to June 2015. Addis Ababa is found at the heart of the country with a population of more than 3 million people, the population accounts 23% of urban population of the country. It has a total area of 54,000 hectares. Addis Ababa is the home of different international organizations including the African union, economic commission for Africa and different international meetings has taken place. The mode of transport of the city includes public bus, minibus, and taxi, none motorized transport and animal cart dominate in the periphery (30). There are 6500 taxies giving a service for the public currently (29). 72% of the city's population is covered by these taxies. There are ten sub-cities under Addis Ababa town administration. It is divided in to five zones according to Addis Ababa road and transportation office to ease the road traffic management. The economic activity of the city mostly relied on service, industry and only a few was by agriculture. There more than 41 hospitals, 507 clinics, 36 health centers and 42 health posts. the proportion of physicians, nurses, health officers to the population is 1:25,924-23,662, 1:2547-2304 and 1:235,307-73,186 respectively and the health coverage is 34% but the quality is very low because the number of health institution less when compared with the yearly population boom (30).

4.2. Study design

The study was deployed cross sectional study design to examine the KAP and associated factors of taxi drivers on the use of seatbelt use in Addis Ababa city, Ethiopia.

4.3. Source population

The source population was all taxi drivers that are found in Addis Ababa in the year 2015.

4.4. Study population

The study population was public transport taxi drivers operating in Addis Ababa city in the year 2015.

4.5. Inclusion/exclusion criteria

The inclusion and exclusion criteria were:

1. Public transport taxi (minibus) drivers who are above 18 years
2. Public transport taxi (minibus) drivers.
3. Public transport taxi (minibus) drivers who are volunteer to participate in the study.

4.6. Sample size determination

The sample size for this study was determined by using the following:

$$n = \frac{z_{\alpha/2}^2 p(1-p)}{e^2} \times K \text{ where,}$$

n is the sample size in terms of number to be interviewed;

z is the statistic that defines the level of confidence desired;

p is an estimate of a key variable to be measured by the survey (use of seat belt by taxi drivers)

k is a multiplier to account for the anticipated rate of non-response;

e is the margin of error to be attained.

Then the desired number of people to be sampled and interviewed is:

$$n_i = \frac{z_{\alpha/2}^2 p(1-p)}{e^2} = \frac{1.96^2 \times 0.5(0.5)}{0.05^2} \times K = 384.16$$

Since the target population is below 10,000, so i have to find the final sample size.

It becomes 362 i.e the **nf is 362**.

Take the non response rate 10% of the final sample size, which is 36, therefore the total final sample size becomes 398.

4.7. Sampling procedures

The sampling procedures were involved multi-stage sampling methods. There are five zones as (Addis Ababa city administration road and transport authority report). These are Asiko, Bole, Megenagna, Saris and Torhailoch. At the first stage zones as delineated by Addis Ababa city administration road and transport bureau/authority, was selected by simple random sampling of lottery method. Since, these Zones have multiple taxi resting stations; at the second stage these stations again were selected by using lottery method from the randomly selected zones. Then finally, those taxi drivers found in the selected stations were included in the study.

4.8. Data Collection Procedures

Standardized data collection tools to capture the required data for the study from the primary sources has prepared. In preparation of the data collection questionnaires, standardized questionnaires was searched and constructed accordingly from similar literatures. First the questionnaire was prepared by English version then it was translated in to Amharic version.

The data was collected by the principal investigator and other assistant data collectors. The assistant data collectors have educational background of health sciences or social sciences like psychology/sociology. Data collectors/research assistants were briefed regarding the study and on the application of the questionnaire for the study. They were trained in a ways of administering the questionnaire.

Interviewer administered questionnaires: Quantitative data was collected through self administer questionnaires. Subjects were approached in locations they were expected to have sufficient waiting time to complete the questionnaires. All of the study participants were adults (≥ 18 years). Verbal consent was obtained from the participants prior to inclusion in study. All subjects who completed the questionnaire were included and none were excluded due to reported mileage or any other characteristics.

4.9. Study variables

Independent variables: knowledge

Attitude

Practice

Dependent: seat belt use

4.10. Operational Definitions and or standard definitions

Attitude: a predisposition or tendency to respond positively or negatively towards seatbelt use. it influences an individuals' choice of action and responses to challenges, incentive and rewards. In this specific study the respondent's attitude was assessed by eight questions. Their response and scoring system ranged from strongly agree (5), agree(4),neither agree nor disagree(3),

Disagree (2) and strongly disagree(1). The response was summed up and a total score obtained for each respondent. The mean score was calculated and those scored above the mean and the mean score had positive attitude and scores below the mean meant negative attitude towards seat belt use. The highest score was expected to be 40 and the lowest score to be 8.

Knowledge-is awareness or understanding of someone, something such as facts, information, descriptions, or skills which is acquired through experience or education by perceiving, discovering or learning. In this respective study there are eight multiple choice questionnaires that carried a total of 30 scores. Each correct response was given a score of 2 and wrong response was given 1.total point to be scored were 30 and the minimum was 14. Therefore the scores with their respective knowledge levels were.

25-30-good knowledge

19-24 -satisfactory

18 and below- poor knowledge

Property damage: All collisions that did not result in injuries or death of human beings.

Practice: to do something regularly as a part of one's normal behavior. in this respective study drivers who are not wearing a seat belt are labeled as having poor practice where as those who are wearing a seat belt labeled as good practice for seat belt.

Sever injuries: at least one person was injured and admitted in hospital, but no death no death occurred.

Slight injury: At least one person required medical care, but no fatalities or injuries that required hospitalization occurred.

Road Traffic collision: a collision that occurs on a way or street open to the public traffic, results in one or more persons being killed or injured and at least one moving vehicle is involved.

Road traffic fatality: is any person killed immediately or dying within 30 days as a result of a road traffic accident

Seat Belt: any strap, webbing, or similar device designed to secure a person in a motor vehicle. Including all necessary buckles and other fasteners, and all hardware designed for installing such safety belt assembly in a motor vehicle.

Taxi: a car used to loading and transport peoples, usually a short distance; has a carrying capacity of 12 individuals and painted with blue color.

Taxi Drivers: means a person who drives or is in actual physical control of a motor of a taxi.

4.11. Data quality management

All the collected data was reviewed daily by principal investigators for its completeness, accuracy and clarity carefully. Any error, ambiguity or incompleteness encountered was addressed on the same day before starting next day activities. The questionnaire was pre-tested to ensure for their consistency and training was given for assistant data collectors.

4.12. Data Analysis Procedures

Data editing was done to ensure that the questionnaires have the required quality. After retrieving the filled questionnaires from the field, manual editing and coding was done before entry to computer. Data from the questionnaires, then, was exported to SPSS for statistical analysis based on the objectives of the cross sectional survey. Descriptive statistics was calculated to produce measure of central tendency (mean, mode and median), measure of dispersion (range, standard deviations, and variance) and frequencies, percentage and proportion. In addition, binary and multiple logistic regression analysis will be done to identify the association of other factors in affecting the use of seat belt by taxi drivers.

4.13. Ethical Consideration

Ethical clearance was secured from ethical committee of Addis Ababa University and written consent has obtained from Addis Ababa University, department of emergency medicine. An official letter of cooperation was written by Addis Ababa University to the concerned offices including Addis Ababa city administration road and transport bureau. Information about The purpose of the study, ethical considerations and eligibility criteria was explained to police officers and to participate in the study was explained briefly to the study participants; taxi drivers. In addition, the rights of leave of the study participants to quit from the study at any time will be safeguarded. Verbal informed consent was obtained from each of the study participants. Throughout the study starting from research proposal preparation to dissemination of results and beyond all ethical issues was considered and maintained.

4.14. Dissemination of Results

The final study result will be submitted and presented to the school of medicine and health science, Addis Ababa University through hard copies. Similarly, the final paper will also be sent to EPHA and other organizations to compete for publishing. The findings will also be communicated for Road and Transportation Minister and its line offices, traffic police office and other organizations working on the issue through hard and or soft copies found appropriate. Finally, the manuscript will get submitted for publication in peer reviewed scientific journal.

5. Result

Descriptive statistics

5.1. Socio demographic characteristics of the study participants

Three hundred ninety eight (398) taxi drivers were included in the study with a response rate of 98%. The majority of taxi drivers 181 (45.5%) were in the age group of 26-35 years. Of the study participants majority 394(98%) were males that are mostly found in Yeka sub-city 161(40.5%) and Arada sub-city 126(31.7%).most of the drivers 180 (45.2%) are Amhara and orthodox Christian 296 (74.4%) religion followers. These study participants also incorporated from 226(56.8%) married taxi drivers who have and majority 264(66.3%) have monthly income of 1000 Ethiopian birr and above. Their educational statuses were mostly 192(48.2%) grade 9 and 10.

Table 1: Socio demographic characteristics of taxi drivers,Addis Ababa, Ethiopia, June 2015

(n=398 taxi drivers).

Variables	Number	Percent
Age in years		
18-25	107	26.9
26-35	181	45.5
36-59	96	24.1
≥60	14	3.1
Sex		
Male	394	99
Female	4	1
Woreda		
Arada	126	31.9
Bole	110	40.5
Yeka	161	27.6

Birth place		
Rural	129	32.4
Urban	269	67.6
Religion		
Orthodox Christian	296	74.4
Muslim	63	15.5
Protestant	34	8.5
Catholic	5	1.3
Nationality		
Amhara	180	45.2
Oromo	88	22.6
Guragie	66	16.6
Tigrie	50	12.6
Others	14	3.5
Marital status		
Married	226	56.8
Single	162	40.7
Widowed	7	1.8
Divorced	3	0.8
Monthly income		
<999	132	33.2
≥1000	266	66.8
Level of education		
9-10	192	48.2
11-12	122	30.7

College diploma	72	18.1
University degree	12	2.8

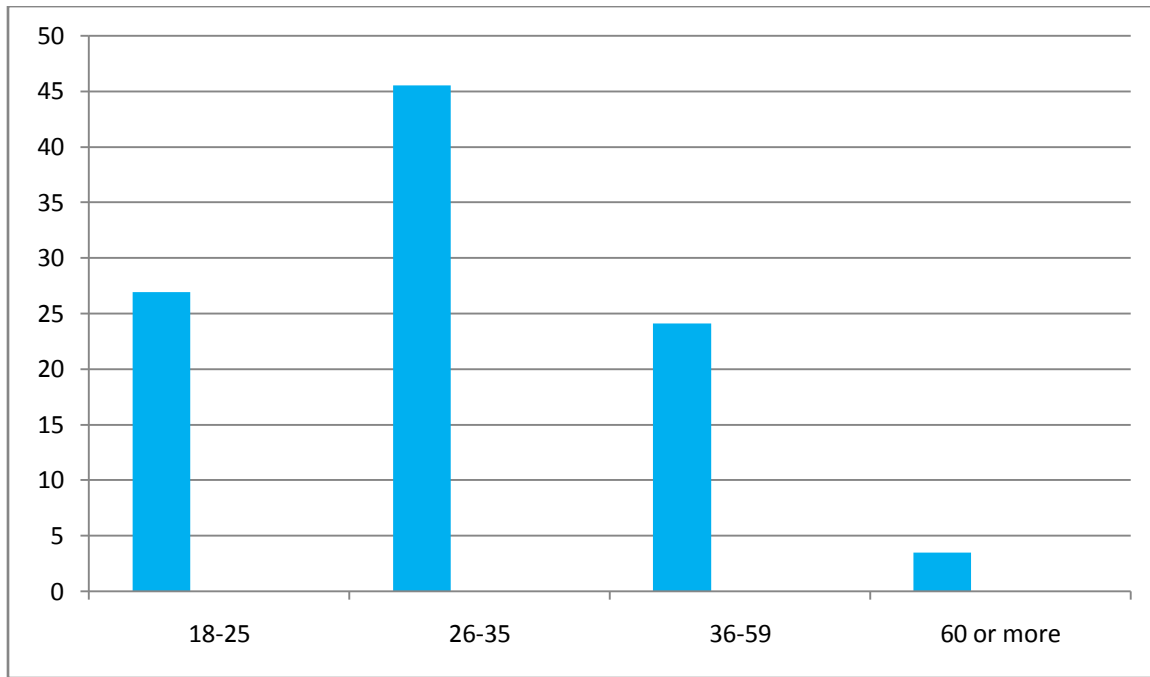


Figure.1.Age of taxi drivers in Addis Ababa town, Ethiopia; June 24, 2015

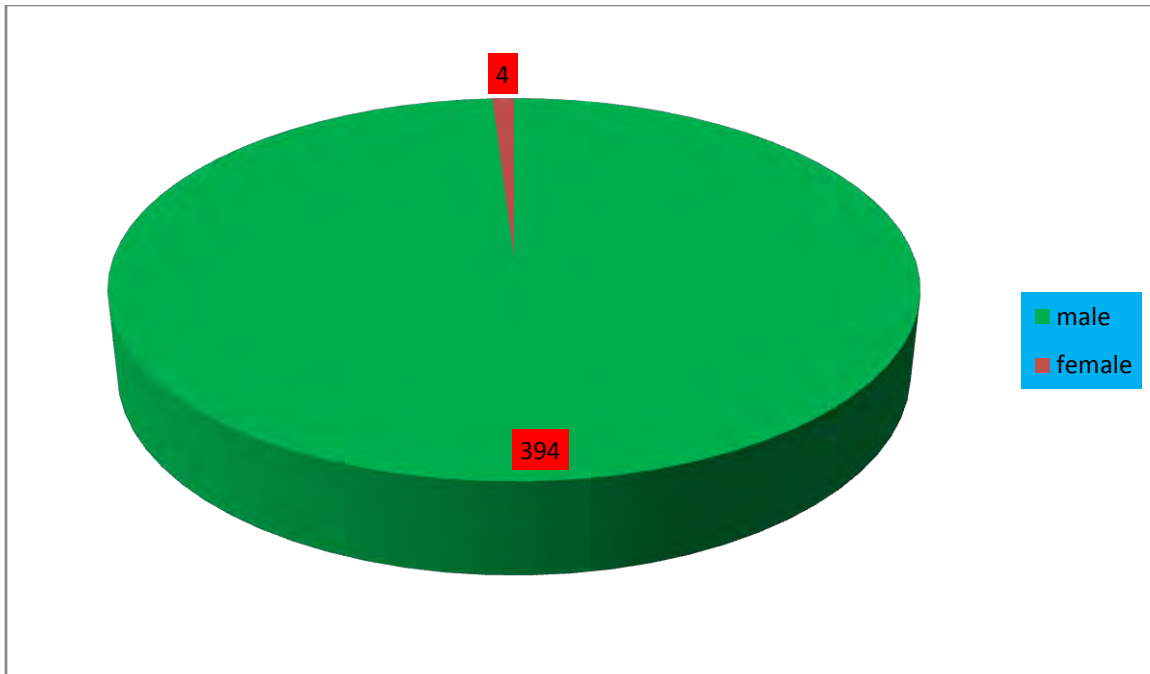


Figure.2. Sex distribution of taxi drivers in Addis Ababa city Ethiopia; June 24, 2015

5.2. Knowledge of study participants

This study wants to describe the knowledge of taxi drivers about road safety measures including the use of seat belt while driving. Majority 394(99%) of the taxi drivers knew the road safety measures. Among them 391(98.1%) have ever heard about seat belt. Of these number most of the taxi drivers 177 (45.7%) have heard about seat belt before four years and 143(35.9%) heard before three years. Most of them 195(49.0%) have got this information from mass media such as television and radio. Of the total taxi drivers 358(89.9%) of taxi drivers use reduced speed as road safety measures, 359(90.2%) of taxi drivers not driving after drinking, 345(86.7%) of taxi drivers use/wear seat belt as road safety, 331(83.2%) have restricted from using mobile phone while driving and 332(83.4%) of the taxi drivers have not used addictive agents while driving. Majority of the taxi drivers 386(97.0%) know the importance of seat belt in prevention and control of road traffic accident. Of the total drivers included in the study, majority 232(58.3%) knew seat belt does not prevent unnecessary movement and 229(57.5%) were said that it is unnecessary for short trips. In relation to this the other majority of taxi drivers 340 (85.4%) have said that wearing a seat belt while driving their taxi gives no comfort. In this study, 291 (73.1) and 271(68.1%) of taxi drivers said that seat belt is important in minimizing the severity of injury related with traffic accident and it prevents projection movement from the vehicle or taxi while it is rolled-over respectively. Most of the taxi drivers 377(94.7%) knew that driving without seat belt wearing increase the severity of injury while traffic accident have occurred.

The overall knowledge score of on seatbelt were indicated that 243 (61.06%), 125(31.1%) and 30(7.8%) of the respondents have good, satisfactory and poor knowledge. The overall knowledge score of on seatbelt were indicated that 243 (61.06%), 125(31.1%) and 30(7.8%) of the respondents have good, satisfactory and poor knowledge respectively. But good knowledge may not significant indicator of seatbelt use.

Table 5.2 Frequency of knowledge of taxi drivers towards seat-belt use

Variables	Number	Percent
<i>Do you know about road safety</i>		
Yes	394	99
No	4	1
<i>Have you ever heard about seat-belt</i>		
Yes	391	98.1
No	7	1.9
<i>When you heard</i>		
Before 1 year	25	6.3
Before 2 years	51	12.8
Before 3 years	143	35.9
Before 4 years	179	45
<i>Source of information</i>		
Mass media	195	49
Pictures, botchers, billboard etc	4	1.3
Health professionals	5	1.0
Traffic police	41	10.3
Family, colleagues, friends	36	9
Teachers while learning to have driving license	115	28.9

Road safety measures

Reducing speed

Yes	358	89.1
No	40	10.9

Not driving after drinking

Yes	359	90.2
No	39	9.8

Seatbelt wearing

Yes	345	86.7
No	53	13.3

Not using mobile phone while driving

Yes	331	83.2
No	67	16.8

Not using addictive agents

Yes	343	86.7
No	43	13.3

The importance of seat-belt use

Prevents unnecessary movement

Yes	166	41.7
No	232	58.3

It is unnecessary for short trips

Yes	169	42.5
No	229	57.5

Gives comfort while driving

Yes	58	14.6
No	340	85.4

Prevents projection movement while the taxi rolled-over

Yes	271	68.1
No	127	31.9

It minimizes the severity of injury in traffic accident

Yes	291	73.1
No	107	26.9

Driving without wearing seat-belt increase

The severity of injury

Yes	377	94.7
No	21	5.3

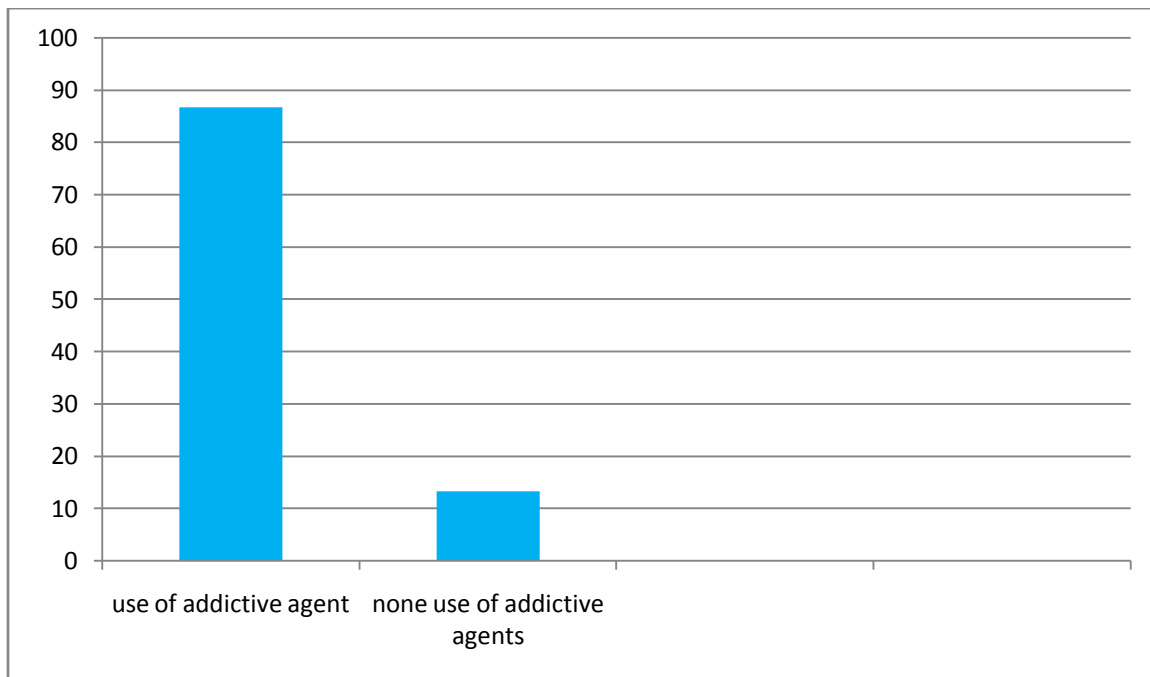


Figure 3. Use and non use of addictive agents among taxi drivers, Addis Ababa city, June 2015

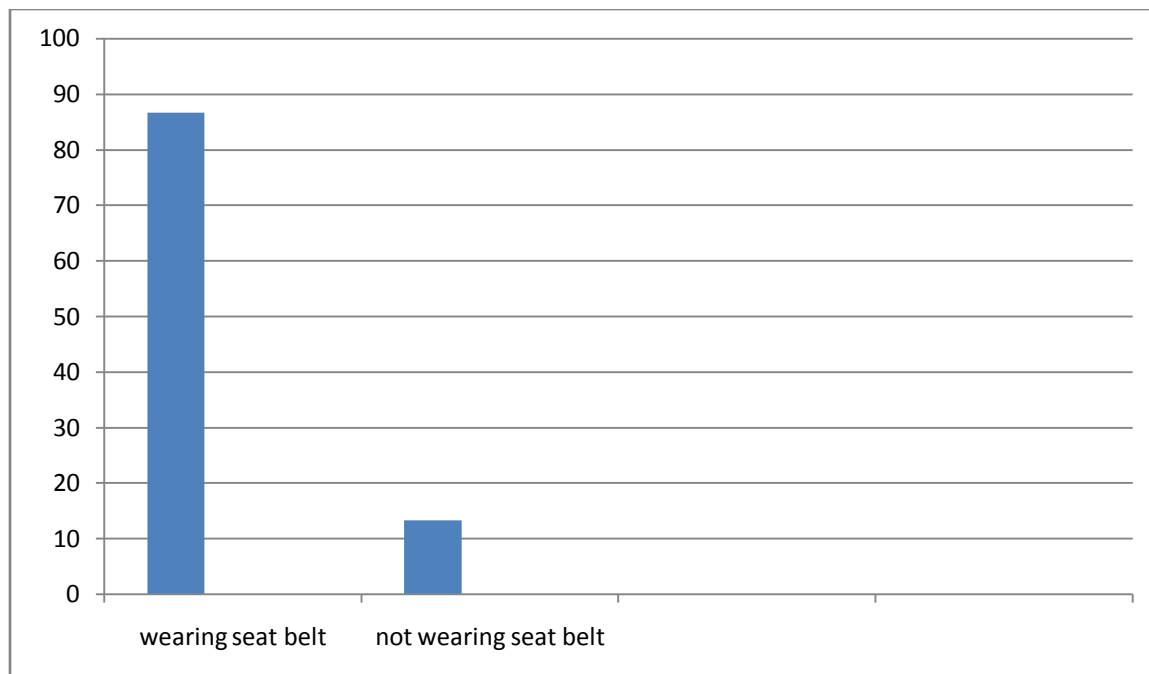


Figure.4 .Seat belt use rate by the tax drivers, Addis Ababa city, June 2015

5.3. Taxi drivers attitude towards seat-belt wearing

There are a total of three hundred (398) study participants that have been included in this study. Of these study participants majority 170 (42.7%) of them were strongly agreed that they may face road traffic accident (RTA) in their travel. Majority 248 (62.3%) of the taxi drivers agreed that seat belt is important in prevention of road traffic accident. Taxi drivers who are wearing a seatbelt were less likely to be injured in road traffic accident in comparison with those taxi drivers who were not wearing a seatbelt according to most 340 (85.4%) of the taxi drivers.

This study also have tried to find out taxi drivers attitude of seat belt wearing whether it is dangerous or not; most of them were disagreed that wearing a seat belt is not harmful or dangerous. Majority of the taxi drivers 173(43.5%) disagreed and 134(33.7%) were strongly disagreed that seatbelt may not be really necessary to wear it if they drove carefully. In another words, more than half 237 (59.5%) were agreed that wearing seatbelt reduce the risks of injury in most accidents. Seat belt is important to keep them trapped in case of an emergency according to most of the taxi drivers, agreed 100 (25.1%). They may wear seatbelt knowingly for their safety 333(83.4%) of taxi drivers but, other smaller proportion 65(16.6) may wear for showing to traffic police.

The finding has indicated that out of 398 respondents 304(78.4%), 12(3.2%), and 82(18.4%) had positive, neutral negative attitude towards seatbelt respectively.

Table 5.3.Taxi driver attitude towards seatbelt use

Variables	Number	percent
Any drivers including you may face RTA		
Strongly agree	170	42.7
Agree	173	43.5
Neither agree nor disagree	2	0.5
Disagree	44	11.1
Strongly disagree	9	2.3
Seatbelt helps in prevention of RTA		
Strongly agree	248	62.3
Agree	133	33.4
Disagree	14	3.5
Strongly disagree	3	0.8
<i>Taxi drivers those wearing seatbelt are less likely to be injured than those not wearing</i>		
Yes	348	85.4
No	58	14.6

Seatbelt is dangerous or harmful for taxi drivers

Strongly agree

Agree	35	8.8
Neither agree nor disagree	112	28.1
Disagree	2	0.5
Agree	161	40.5
Strongly disagree	88	22.1

If drive carefully seatbelt may not really necessary

Strongly agree	25	6.3
Agree	64	6.1
Neither agree or disagree	2	0.5
Disagree	173	43.5
Strongly disagree	134	33.7

In most accident SB reduce the risk of injuries

Strongly agree	273	59.5
Agree	129	32.4
Neither agree nor disagree	0	0.0
Disagree	25	6.3
Strongly disagree	7	1.8

Taxi drivers being trapped by seatbelt

in case of an emergency

Strongly agree	100	25
Agree	161	40.3
Neither agree nor disagree	1	0.3
Disagree	99	24.9
Strongly disagree	37	9.3

Taxi drivers wear SB to show to traffic

police only

Yes	65	16.6
No	333	83.4

5.4. The practice of seatbelt use among taxi drivers

From the overall taxi drivers that has been included in the study majority 346(86.9%) of them have third level driving license and most of them 121(30.4%) have a driving experience three to five years. Most of the taxi 394 (99%) are fitted with functional seatbelt drivers and they wore it.

From those taxi drivers who have a taxi with a seatbelt, most of them 314 (78.9%) wore their safety seat belt always. Why they wore their seatbelt is because it is used as a restraint according to most of them 332(83.4%). Finally most of the taxi drivers 313 (78.6%) used to wore their safety seatbelt always while they are driving.

Table 5.4 the practice seatbelt use among taxi drivers

Variable	Number	Percent
Driving license		
Secondary	5	1.3
tertiary	346	86.9
Fourth	30	7.5
fifth	17	4.3
Driving experience(years)		
1-2	74	18.6
3-5	121	30.4
6-10	95	23.9
≥10	108	27.2
Does your taxi fitted with		
Seatbelt		
Yes	395	99
No	4	1
Do you wear it?		
Yes	395	86.7
No	53	13.7

How often do you wear it

Always	314	78.9
Very often/usually	57	14.4
Sometimes	27	7.8

Why you wear seatbelt

Afraid of the law	30	7.3
It is used as a restraint	332	83.4
Because others wear it	1	0.3
Afraid of traffic police fine	34	8.5

If you does not wear seatbelt, why?

Discomfort	1	0.3
Missing	397	97.7

When you wear a seat belt

Day time	4	1
Morning	5	1.2
Throughout the day	47	11.8
When traffic police officer available around	27	6.8
During hot time	3	0.9
Always while driving	314	78.9

5.5. Risk factors of seatbelt use

Socio demographic characteristics of participants

All the socio-demographic characteristics of the taxi drivers, such as age, sex, level of education status, marital status, and monthly income were not associated with the use of seat belt use in a bivariate analysis (table 5.1).

Table 5.5 Socio-demographic characteristics of taxi drivers in association with seatbelt use.

Variables	COR(95%CI)	p-value
Age in years		0.796
18-25	1.798(0.217,14.904)	
26-35	2.279(0.286,18.147)	
36-59	1.857(0.222,15.503)	
≥60	1	
Woreda		0.227
Arada/bole	1.543(0.763,3.118)	
Yeka	1	
Birth place		0.190
Rural	0.642(0.330,1.2447)	
urban	1	
Religion		
Orthodox Christian	0.717(0.078,6.564)	0.253
Muslim	0.345(0.032,3.704)	
<i>protestant</i>	<i>0.250(0.018,3.420)</i>	
Catholic	1	
Marital status		
Married	1.221(0.149,10.019)	0.581
Single	1.642(0.199,13.54)	
Widowed/divorced	1	

Monthly income

≤999 1.372(0.756,2.487) 0.298

≥1000 1

Educational status

9-12 1.011(0.495,2.062) 0.977

≥12 1

5.6. Knowledge of taxi drivers towards seatbelt

Table 5.6. knowledge of taxi drivers in association with SB use

Variables	COR (95%)	p-value
<i>Do you know about road safety measure</i>		0.500
Yes	0.456(0.47,4.468)	
No	1	
<i>Have you ever heard about SB</i>		0.036
Yes	0.196(0.042,0.899)	
No	1	
<i>When you heard about it</i>		0.319
Before 1 year	0.381(0.028,5.274)	
Before 2 yrs	0.429(0.035,5.253)	
Before 3 yrs	0.189(0.016,2.9)	
Before 4 yrs	1	
<i>Source of information</i>		0.035
Media, poster & billboard		
Health professional & traffic police	0.340(0.030,3.885)	
Family, colleagues and driving license school	1.527(0.071,3.025)	
	1	
<i>Reduce speeding</i>		0.00

Yes **0.051(0.024,0.017)**

No **1**

Not drive after drinking

Yes 0.041(0.019,0.88) 0.00

No 1

Not use mobile phone

Yes 0.008(0.003,0.021) 0.00

No 1

Not use addictive chemical

Yes 0.012(0.005,0.028) 0.000

No 1

Seat belt is important in minimizing sever injuries

Yes 0.139(0.043,0.448) 0.001

No 1

SB Prevents unnecessary movement

Yes 0.507(0.269,0.956) 0.036

No 1

SB is unnecessary for short trips

Yes 1.141(0.638,2.042) 0.656

No 1

SB gives comfort

Yes 1.049(0.467,2.357) 0.908

No 1

SB prevents projection movement

Yes 1.218(0.643,2.036) 0.546

No 1

Minimize the risk of injury

Yes 0.556(0.303,1.020) 0.058

No 1

Driving without SB increase the risk of injury

Yes 0.356(0.132,0.963) 0.042

No 1

5.7. Attitude of taxi drivers towards seatbelt use

Attitude of taxi drivers were not associated with seatbelt use in bivariate analysis (tables 5.7)

Table.5.7. Attitude of taxi drivers towards seatbelt use

<i>Variables</i>	<i>COR(95 % CI)</i>	<i>P-value</i>
Any drivers may face RTA		0.495
Strongly agree	1.510(0.181,12.573)	
Agree	0.929(0.110,7.860)	
Neither agree nor disagree and disagree	1.406(0.155,13.342)	
Strongly disagree	1	
SB reduce the severity of injury in RTA		0.624
Strongly agree/agree	0.745(0.229,2.420)	
Strongly disagree/disagree	1	
SB is dangerous for drivers		
Strongly agree/agree	0.840(0.5341,1.322)	0.452
Strongly disagree/disagree		
If drive carefully SB may not be necessary		0.60
Strongly agree	2.163(0.651,7.188)	
Agree	2.621(1.140,6.024)	
Disagree	11.357(0.673,191.521)	
Strongly disagree	1	

In most RTA wearing SB reduce 0.907

The injury for taxi drivers

Strongly agree 0.971(0.113,8.322)

Agree 0.789(0.089,7.015)

Strongly disagree 1.143(0.107,12.246)

disagree 1

There is risk of being trapped

For taxi drivers by SB 0.11

Strongly agree 3.347(1.520,9.237)

Agree 1.993(0.815,4.876)

Strongly disagree/disagree 1

Taxi drivers wore SB to show to

To traffic police

Yes 1.428(0.691,2.950) 0.336

No 1

5.8. The practice of seatbelt use by taxi drivers

Table 5.8.practice seatbelt by taxi drivers

variables	COR(CI 95% CI)	P-value
Level of driving license		
2 nd and/3 rd	0.819(0.315,1.942)	0.650
4 th and/5 th	1	
Driving experiences(years)		
1-10	1.304(0.657,2.587)	0.448
≥10	1	
1-10	1.304(0.657,2.587)	
≥10	1	
How often you wear SB		0.517
Always	0.360(0.220,1.734)	
Very often/usually	0.471(0.129,1.717)	
Sometimes/once within a day	1	
Why wear SB		
Because afraid of the law		0.256
It is used as a restraint	2.359(0.617,9.023)	
Afraid of traffic police fine	1.122(0.377,3.340)	
And others wear it	1	
When you worn SB		0.235
The whole day/sunny time	2.001(0.947,4.232)	
Night and morning	3.730(0.330,42.148)	

While traffic police available around 1.356(0.443,4.154)

Always while driving/rainy time 1

5.9. Multi variant analysis of factors

Among all variables that was entered in to the model of only not using addictive agents remained predictor of seatbelt use among the study participants (AOR=86.659; CI=29.504, 254.534; P-value <0.001).

Table.5.9. Multi variant analysis of factors that determine seatbelt use among taxi drivers in Addis Ababa, June 2015

Variables	AOR (CI 95%)	P-value
Not drive after drinking	1.266(0.443,3.617)	0.659
Not use addictive agents	86.659(29.504,254.534)	0.000
Prevent unnecessary movement	1.321(0.526,3.322)	
Drive without seatbelt increase	1.610(0.032,8.585)	0.554
The risk if injury		0.577
Source of information		
Mass media, posters & billboard	1.586(0.578,4,347)	0.653
Traffic police & health professionals	1.162(0.329,4.096)	
Colleagues,family and driving license school	1	

6. DISCUSSION

This community based study has attempted to assess knowledge, attitude and practice of taxi drivers towards seatbelt use and associated factors in Addis Ababa city, Ethiopia.

According to this study, the result showed that the use of seatbelt among drivers/taxi drivers is influenced by their knowledge about seatbelt as one of the most important road safety measures. Taxi drivers who have heard about seatbelt are more likely to wear it than those who were not heard ($p < 0.05$) that means taxi drivers knowledge and seatbelt use have high significant association for seatbelt wearing.

According to this study from the total of 398 taxi drivers included in the study $N=394(99\%)$ of them have taxi that are fitted with functional seatbelt and they are using it. As this result is compared with the study that have been conducted in Beijing, china (17--20) indicated that taxi drivers have better wearing rate .this significant wearing rate may be due to increasing police enforcement to fasten their seatbelt, traffic police officer fine for not wearing their safety seatbelt or for those violating the law, increasing education through mass media or onsite education about the importance of wearing seatbelt in road traffic accident prevention and control. This education has significant role and contribution in maximizing taxi drives awareness and knowledge about the importance of seatbelt that enables them to wear it. Only few drivers $N=4(1\%)$ have not taxi that are not fitted with functional seatbelt. About $N=314(78.9\%)$ of taxi drivers used their seatbelt always while driving. This number is similar to the study reported drivers in Kingston, Jamaica (81%) in 2011 (26). Most 314(78.9%) of the taxi drivers wear their seatbelt always when they are driving, 57(14.4%) wear their seatbelt very often and or usually and From out of the total study participants 27(6.8%) worn their seatbelt when traffic police is available around and sometimes and very smaller 5(1.2%) and 5(1%) worn their seatbelt during day time and in the morning time respectively. This number is relatively lower in comparison with study done in Thailand that is in the afternoon (64.4%) and in the morning time (59.0%) (14).

In this study the proportion of taxi drivers who always use /wear their seatbelt is higher (78.9%) in comparison with taxi drivers using seatbelt in Trinidad, Tobago (31.6%) (26).

Generally, this study showed that the 86.7% of seatbelt use prevalence rate among study participants.

Out of the total study participants, 394 (99%) of taxi drivers knew about road traffic control safety measures and have heard about seatbelt. From these taxi drivers, 195(49%) heard about the importance of seatbelt from mass media and 179 (45%) have

got these information before four years. Most of the proportion 386(97%) of taxi drivers know that seatbelt is significantly important in prevention and control of road traffic accidents. 232(58.3%) of taxi drivers was agreed that it does not prevent unnecessary movement while they are driving. Majority 229(57.5%) of the taxi drivers has reported that seatbelt is unnecessary for short trips and 340(85.4%) of out of the total taxi drivers reported that, wearing it does not gave them comfort while driving their taxi. For instance, 377(94.7%) of taxi drivers knew that wearing it has a significant contribution in reducing the severity of injury in road traffic collision and accidents. Most of the proportion 271(68%) of taxi drivers has reported that seatbelt is the beneficial in prevention of projection movement while the car has rolled-over.

Most of 348(85.4%) of taxi drivers agree that, those taxi drivers wearing seatbelt are less likely to be injured than those who are not wearing seatbelt. the other majority 173(173%) of taxi drivers disagreed that even if have drove carefully attiring seatbelt is necessary and the majority 161(40.3%) of taxi drivers agreed wearing seatbelt keep them trapped in case of an emergency.

The overall knowledge score of on seatbelt were indicated that 243 (61.06%), 125(31.1%) and 30(7.8%) of the respondents have good, satisfactory and poor knowledge respectively. But good knowledge may not significant indicator of seatbelt use.

Based on the above evidence, intervention should be focused on attitude change of taxi drivers rather than awareness and knowledge.

The finding has indicated that out of 398 respondents 274(68.7%), 12(3.2%), and 112(28.1%) had positive, neutral negative attitude towards seatbelt respectively.

Apart from awareness of taxi drivers, there are several associated factors affecting the attitude and practice of seatbelt use. The motivation to use seatbelt by taxi drivers are increase mass media promotion and increase traffic police fines for non-compliance with the seatbelt law (8.5%) afraid of the seatbelt law (7.3%). This number is lower when compared penalties for non-compliance seatbelt law (44.5%) and increase traffic police patrols (19.4%) with the study that have conducted in Trinidad, Tobago that is (26).

There are few studies about the effectiveness of seatbelt usage in developing countries and to my, knowledge there are no studies done about knowledge, attitude and practice of seatbelt wearing among taxi drivers in Ethiopia, even Africa the whole, therefore I used data from Europe (26). Driver's level of education, age, sex, marital status, monthly income and level of education were not associated with the use of seatbelt in a bivariate analysis (fig 5.1)

7. Strength and Limitation

Strength

- ❖ Simple random sampling technique was employed to improve the representativeness of study participants that were recruited in the research.

Limitations

- ❖ Limited co-operation of study participants during data collection could have affected the validity of the data.
- ❖ There could have been ascertainment errors to measure certain variables such as age.
- ❖ Limited knowledge on research methodology and related fields.

8. Conclusion and recommendations:

Conclusion

Even though majority 394(99%) of the respondents knew and heard about seatbelt, there are misconception in some respondents that seatbelt does not give comfort, it is unnecessary for short trips and does not minimize the risk of injury in crash.

Majority 386(97.0%) of taxi drivers know that seatbelt has significant contribution in prevention and control of injury in road traffic accident, but only 345(86.7%) of the taxi drivers used to wear it; that is the seatbelt wearing rate is 86.7%.

The overall knowledge score of on seatbelt were indicated that 243 (61.06%), 125(31.1%) and 30(7.8%) of the respondents have good, satisfactory and poor knowledge respectively. But good knowledge may not significant indicator of seatbelt use.

Based on the above evidence, intervention should be focused on attitude change of taxi drivers rather than awareness and knowledge.

The finding has indicated that out of 398 respondents 274(68.7%), 12(3.2%), and 112(28.14%) had positive, neutral negative attitude towards seatbelt respectively.

Recommendation

Based on the findings in the study, the following were recommended.

1. AARTA should work hard to minimize using of addictive agents by taxi drivers through continuous distribution of information or education through electronic and print media.
2. Government should plan and carryout ongoing strategies that helps to increase the rate of seatbelt wearing.
3. The taxi drivers should effectively discharge their responsibility of practicing seatbelt use and communicating the importance of seatbelt wearing to non-seatbelt wearing drivers.
4. Intervention should focus on attitude change attitude change.

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10. Taxi drivers information sheet and consent form

10.1. Information sheet

Hello my name is -----and I am Emergency medicine and critical care in AAU, college of health of science, school of medicine. I am conducting survey on the KAP of taxi drivers towards seatbelt use and associated factors in Addis Ababa city administration. The result found from this will be used by the government and the Addis Ababa city administration road and transport bureau to base their decision to develop appropriate decision to increase seatbelt wearing rate. The research is intended to be benefit the government and the respondents participating in the study and will introduce no risk to the participant. The questionnaire requires the maximum 20 minutes. Your participation is entirely based your volunteer and you can quite from the study any time you want. You will have no punishment for not participating in the study; however your participation in the study will be very important. Your name and other personal identity will not be specified and the hence the information we will collect from you will completely be kept confidential and will not be disclosed to any third person other than the people participating in the study. For any question you want to ask, you can you use the contact address here under.

May I know begin the interview?

If yes, continue interviewing

If no, thank and stop interviewing

Name of the interviewer -----sign-----Date-----

Address

0920755186/0935663062

Email.atalomekonnen00@gmail.com

10.2. Consent form

The respondents, the undersigned, am told that the researcher is going to conduct study in this city to assess KAP of taxi drivers towards seatbelt use and associated factors in Addis Ababa city he acquainted with me the first time he meets. I am also informed that the result of the study will be used by both government and Addis Ababa city administration road and transport bureau to plan appropriate strategies to increase knowledge, attitude and to maximize seatbelt wearing rate. I am told that the research will benefit the respondents and the research will not inflict any harm to me. I have been told that I have full right to have enough enough time to understand and take part in the study on the basis of my interest and besides, I am briefed that I will be interviewed for not more than 20 minutes. My participation in the study is entirely voluntarily, and that I that I can quit from the study any time I want. I am enlighten that I will not be subjected to any form of punishment following my failure to participate in the study. In the same way I am explained that the information collected from me will not by any means be disclosed to any people other than those participating in the study unless obtained permission from me. Equally, I am told that I can ask them questions I found difficult or any type otherwise.

Name of the interviewer-----Date-----

Signature-----

Address

Tel; 0920755186/0935663062

Email.atalomekonnen00@mail.c

10.3. Questionnaires: English version

These questions are designed to determine knowledge, attitude and practice of taxi drivers towards seat belt use and associated socio-demographic characteristics.

Part one: socio-demographic characteristics.

- 1, Age A. 18-25 B. 26-35 C. 36-59 D. ≥ 60
- 2, Sex A. male B. female
- 3, Woreda
- 5, place of birth A. rural B. urban
- 6, Religion A. Orthodox B. Muslim C. protestant D. catholic E. others(specify)
- 7, Ethnicity A. Amhara B. Tigrie C. Oromo D. Guragie E. Other(specify)
- 8, Marital status A. married B. single C. widowed D. divorced
- 9, Monthly income A. ≤ 999 B. ≥ 1000
- 10, Educational status A. high school B. preparatory C. college graduate
D. University degree

Part two: Knowledge on seat belt

11. Do you know about road traffic safety measures? A. yes B. No
12. Have you heard about seat belt ? A. yes B. No.
13. If „yes“ when you have heard
A. before one year B. before two years C. before three years D. before four years

14. If „yes for question 11“ from which source have you got the information?

A. mass media B. Brochures, posters and other print materials C. health workers
D. traffic police E. family, friends, neighbors and colleagues.

G. teachers while educating to have driving license.

15.If „Yes“ for question 13 what are these safety measures?

A. reduces speeding B. Not driving after drinking alcohol C. seat belt wearing
D. not using mobile phone while driving E. not using addictives (chat, hashish...)

16. Do you know that seat belt is important in road traffic accident prevention and control?

A. yes B. No

17. What is/are the benefit of seat belt wearing?

A. prevents unnecessary movement/stabilize

B. It is unnecessary for short trips

C. gives comfort while driving.

D. Prevent projection movement while the vehicle rolled-over.

E. Minimize the severity of injury in crash.

18. Do you know that driving without wearing a seat belt increase the severity of injury in road traffic accident?

A. yes B. No

Part three: Question on attitude towards seat belt

19.Any drivers including you may face road traffic accident?

A. Strongly agree B. Agree C. Neither agree nor disagree

D. Disagree E. Strongly disagree

20. Seat belt helps in prevention of severity of injury due to road traffic accident

A. Strongly agree B. Agree C. Neither agree nor disagree

D. Disagree E. Strongly disagree

21. Do you think that drivers who is wearing a seat belt is less likely to be injured than who is not wearing a seat belt in RTA?

A. Yes B. No

22. Seat belt is harmful or dangerous to taxi drivers A. Strongly agree B. Agree

C. Neither agree Nor disagree D. Disagree E. Strongly disagree

23. If you drive carefully seat belt is not really important/necessary? A. Strongly agree

B. agree C. neither agree nor disagree D. disagree E. strongly disagree

24. In most accident seat belt reduce the risk of series injuries for drivers

A. strongly agree B. agree C. neither agree nor disagree

D. disagree E. strongly disagree

25. There is a risk of being trapped by the seat belt in case of emergency for taxi drivers?

A. strongly agree B. agree C. neither agree nor disagree

D. disagree E. strongly disagree.

26. Do you think that taxi drivers wear a seat belt for showing to traffic police?

A. yes B. No

Part: Questions on practice of seat belt

27. Level of driving experience A. secondary B. tertiary C. fourth D. fifth

28. How many years of driving experience do you have?

A. 1-2years B. 3-5years C. 6-10 years D. >=10years

29. Does your car have a seat belt? A. yes B. No

30. If „yes“ for question 29 have you wear it? A. yes B. No.

31. If „yes“ for question 29 how often you wear it while driving?

A. always B. very often C. usually D. sometimes E. once in a day.

32. Why you wear a seat belt while driving? A. Because I afraid the law. B. it used as a restraint
C. Because others wear it. D. afraid of traffic police fines

33. If „No“ for question 29 why? A. it may be painful B. i feel discomfort
C. It is dangerous D. unnecessary for short trips E. others do not wear it

F. forget G. don't need SB

34. When do you wear a seat belt while driving? A. day time B. morning
 C. night time D. whole day E. when traffic police officer available around
 F. during hot time G. rainy time H. always while I am driving.

10. 4. መጠይቆች በአማርኛ

እነዚህ ጥያቄዎች የደህንነት ቀበቶን በተመለከተ የታክሲ ሹፌሮችን እውቀት፣ አመለካከት እንዲሆም አጠቃቀምና ተያያዥ ነገሮችን በተመለከተ ለመመዘን የምንጠቀምባቸው ናቸው፡፡

ክፍል አንድ:-

1. እድሜ ሀ. 18-25 ለ. 26-35 ሐ. 36-59 መ. 60 እና ከዚያ በላይ
2. ጾታ ሀ. ወንድ ለ. ሴት
3. ወረዳ/ክ/ከተማ _____
4. ቀበሌ _____
5. የትውልድ ቦታ ሀ. ገጠር ለ. ከተማ
6. ሀይማኖት ሀ. ኦርቶዶክስ ክርስቲያን ለ. ሙስሊም ሐ. ፕሮቴስታንት
 መ. ካቶሊክ ሠ. ሎላ _____
7. ብሄር ሀ. አማራ ለ. ትግሬ ሐ. ኦሮሞ መ. ጉራጌ ሠ. ሌላ _____
8. የጋብቻ ሁኔታ ሀ፣ ያገባ/ች ለ. ያላገባ/ች ሐ. ሚስቱ የሞተችበት ወይም በሊየሞተባት መ. የተፋታ ወይም የተፋታች
9. የወር ገቢ ሀ. 999 እና በታች ለ. 1000 እና ከዚያ በላይ
10. የትምህርት ደረጃ ሀ. 9-10 ለ. 11-12 ሐ. ኮሌጅ የተከታተለ

መ. የኒቨርስቲ የተመረቀ

ክፍል ሁለት :- የደህንነትን ቀበቶ በተመለከተ የታክሲ ሹፌሮች እውቀት

11. ስለመንገድ ደህንነት መከላከያ ዘዴዎች ታውቃለህ ? ሀ. አዎ ለ. አላውቅም
12. ስለደህንነት ቀበቶ ሰምተህ ታውቃለህ ? ሀ. አዎ ለ. የለም
13. ጥያቄ 12 ላይ መልስህ አዎ ከሆነ የሰማህው መቼ ነው? ሀ. ከ1 አመት በፊት
 ለ. ከ2 አመት በፊት ሐ. ከ3 አመት በፊት መ. ከ4 አመት በፊት
14. ለጥያቄ 11 መልሶዎት አዎ ከሆነ የሰማህው ከምን ምንጭ ነው?
 ሀ. ከመገናኛ በዙሀን ለ. ከሚለጠፉ ፖስተሮች፣ ማሰታወቂያዎች
 ሐ. ከጤና ባለሙያዎች መ. ከትራፊክ ፖሊስ

ሠ.ከቤተሰቡ፣ ከጓደኛ፣ ወይም ከስራ ባልደረባ F. teachers while educating to have driving license

15. ለጥያቄ 13 መልስህ አዎ ከሆነ የምታውቃቸው የትራፊክ መንገድ ደህንነት መጠበቂያ ዘዴዎች የትኞቹ ናቸው? ሀ. ፍጥነት መቀነስ ለ. ጠጥቶ አለማሽከርከር ሐ. የመንገድ ደህንነት ቀበቶ መጠቀም መ. በሚያሽከረክሩ ጌጌቤ የሞባይል ስልክ አለመጠቀም ሠ. አደንዛዥ ዕጾችን አለመጠቀም ወይም አለመውሰድ

16. የደህንነት ቀበቶ በትራፊክ አደጋ ለሚደርሰው ግጭት መጠን እንደሚቀንስ ታውቃለህ? ሀ. አዎ ለ. አላውቅም

17. የደህንነት ቀበቶን ማድረግ ጠቅሙ ምንደነው? ሀ. በጉዞ ላይ የሚደርሰውን ውዝዋዜን ይቀንሳል ለ. ለአጭር ጉዞ አያስፈልግም ሐ. ምቹት ይሰጣል መ. በተሽከርካሪ ግጭት ጊዜ ከመኪናው ወይም ከተሽከርካሪው ወጥቶ ለለመሄድ ይከላከላል ሠ. ባደጋ ጊዜ የአደጋውን መጠን ይቀንሳል

18. በመኪና አደጋ ጊዜ ወይም በተሽከርካሪ አደጋ ጊዜ የደንነት ቀበቶ አለማድረግ የአደጋውን መጠን እንደሚጠምረው ታውቃለህ? ሀ. አዎ ለ. አላውቅም

ክፍል 3:- ስለደህንነት ቀበቶ ያላችሁን አመለካከት በተመለከተ

19. ሁሉም አሽከርካሪዎች አንተንም ጨምሮ የመኪና አደጋ ወይም የመንገድ ተሽከርካሪ አደጋ

ሊደርስባችሁ ይችላል ሀ. በጣም እስማማለሁ ለ. እስማማለሁ ሐ. አልስማማም

መ. በጣም አልስማማም

20. የደህንነት ቀበቶ ማድረግ ወይም መልበስ በትራፊክ አደጋ ጊዜ የሚደርስን አደጋ ክፉነት

ይቀንሳል

ሀ. በጣም እስማማለሁ ለ. እስማማለሁ ሐ. አልስማማም መ. በጣም አልስማማም

21. የመንገድ ደህንነት ቀበቶ ያደረጉ ወይም የለበሱ የታክሲ አሽከርካሪዎች ካላደረጉት ያነሰ አደጋ

ሊገጥማቸው ይችላል ሀ. አዎ ለ. አይደለም

22. የመንገድ ደህንነት ቀበቶ በሽፌሮች ላይ ወይም በታክሲ አሽከርካሪዎች ላይ አደጋ

አለው

ሀ. በጣም እስማማለሁ ለ. እስማማለሁ ሐ. አልስማማም መ. በጣም አልስማማም

23. በማሽከርከር ጊዜ ተጠንቅቀህ ካሽከረከርክ የደህንነት ቀበቶ ጥቅም የለውም ወይም አያስፈልግም

ሀ. በጣም እስማማለሁ ለ. እስማማለሁ ሐ.አልስማማም መ.በጣም አልስማማም

24. በአብዛኛው የትራፊክ አደጋ ጊዜ የደህንነት ቀበቶ ማድረግ ባሽከርካሪዎች ላይ የመደርሰውን አደጋ መጠን ይቀንሳል ሀ. በጣም እስማማለሁ ለ. እስማማለሁ ሐ.አልስማማም መ. በጣም አልስማማም

25. በድንገተኛ የትራፊክ አደጋ ጊዜ አሽከርካሪዎች ወይም ሹፌሮች በመንገድ ደህንነት ቀበቶ ተተብትበው ይያዛሉ ሀ. በጣም እስማማለሁ ለ. እስማማለሁ ሐ.አልስማማም መ. በጣም አልስማማም

26. የታክሲ አሽከርካሪዎች የመንገድ ደህንነት ቀበቶ የሚያደርጉት ወይም የሚሰብሱት ለትራፊክ ፖሊስ ለማሳየት ሲሉ ብቻ ነው ሀ. አዎ ለ አይደለም

ክፍል አራት፡- የመንገድ ደህንነት ቀበቶ አጠቃቀማቸውን በተመለከተ

27. Level of driving experience A. secondary B. tertiary C. fourth D. fifth

28. ምን ያክል የማሽከርከር ልምድ አለህ/ሽ/ዎት ሀ.1-2 ለ.3-5 ሐ. 6-10 መ. 10 እና ከዚያ በላይ

29. ታክሲ ወይም የምታሽከረክረው ታክሲ የመንገድ ደህንነት ቀበቶ አለው ሀ አዎ ለ.የለውም

30. ለጥያቄ 29 መልስዎት/ህ አዎ ከሆነ ትጠቀሙዎለህ ወይም ትሰብሰባለህ ሀ. አዎ ለ. የለም

31. ለጥያቄ 29 መልስዎት/ህ አዎ ከሆነ ስታሽከረክር ምን ያህል ጊዜ ትጠቀማለህ ሀ. ሁል ጊዜ ለ. በተደጋጋሚ ሐ. አብዛኛውን ጊዜ መ. አንዳንድ ጊዜ ወይም አልፎ አልፎ ሠ. በቀን አንዴ ብቻ

32. በምታሽከረክርበት ጊዜ የሰህንነት ቀበቶ የምትጠቀሙ ለምንድን ነው ሀ. ምክንያቱም ህጉን ስለምፈራ ለ. ለመከላከያ ስለሚጠቅመኝ ሐ. ሌሎች ሲሰብስቡ ስለማይ መ. የትራፊክ ፖሊስ ቅጣትን በመፍራት

33. ለ 30ኛው ጥያቄ አይደለም ከሆነ ለምን ሀ. ህመም ስለሚያስከትል ለ. ምቹት

ስለማይሰጠኝ ሐ. አደገኛ ስለሆነ መ. ለአጭር ጉዞ ስለማያስፈልግ ሠ. ሌሎች ሲጠቀሙት ወይም ሲያደርጉት ስለማላይ ረ. ስለምረገው ሰ. መጠቀም ስለማልፈልግ

34. የመንገድ ደህንነት ቀበቶን የምታደርገው በቼ ነው ሀ. ቀን ለ. ጥዋት ሐ. ምሽት መ. ቀኑን መሉ ሠ. ትራፊክ ፖሊስ በአካባቢው በሚኖርበት ሰአት ረ. በሙቀት ሰአት ሰ. በዝናባማ ሰአት. H. while I am driving

