

**ADDIS ABABA UNIVERSITY COLLEGE OF HEALTH
SCIENCES SCHOOL OF PUBLIC HEALTH**



**ROLE OF PERSONALITY AND RISKY DRIVING BEHAVIOR ON ROAD
TRAFFIC ACCIDENTS AMONG PUBLIC TRANSPORT DRIVERS IN**

ADDIS ABABA, ETHIOPIA: 2019.

BY: TEYIBA KEMAL (BSc)

**A THESIS TO BE SUBMITTED TO ADDIS ABABA UNIVERSITY, SCHOOL OF PUBLIC
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List of Abbreviations

BAC	Blood Alcohol Estimation
Epi-Data	Epidemiological data
LISR	Linear Structural Relation
NDS	Naturalistic Driving Studies
RDB	Risky Driving Behavior
RTA	Road Traffic Accident
RTC	Road Traffic Crash
RTIs	Road Traffic Injuries
SEM	Structural Equation Modeling
SHPRP	Strategic Highway Research Program
WHO	World Health Organization

Abstract

Background: Road traffic accident is one of the top ten leading causes of death in world-wide. Every year 1.35 million peoples around the world die as a result of road traffic collisions. It's the result of contribution of many factors including environmental, vehicle and human factors and from all factors human factors contribute the major role for the cause of road traffic accident. There is no much evidence how the personality of drivers affects driving behavior and as well as its contribution on accident.

Objective: To assess the relationship between of personality and risky driving behavior and their role on road traffic accidents among the public transport drivers in Addis Ababa, Ethiopia 2019.

Methods: Institutional based cross sectional study design was conducted from January 01 to February 30, 2019 G.C. Using random selection three hundred seventy seven public transport drivers were selected from operated terminals. Data were collected by trained data collectors through interview using standardized questionnaire. The collected data were entered in Epi-data version 3.1 software and exported to Stata version 14.0 statistical software for analysis. Bivariate and multivariable logistic regressions were used to know the final predictors with a cut of point of P-value < 0.05 level of significance. Structural equation modeling program was applied to assess the relationship between personality and risky driving behaviors.

Result: Totally 374 drivers participated in the study with response rate of 99.2%. The overall magnitude of risky driving behavior the study participants was 49%. Those had anger personality and speeding behavior had increased odds of road traffic accident. Two of personality trait were found positively significant with risky driving behaviors, driver anger ($\beta = 0.24$, $P= 0.000$) and sensational seeking ($\beta = 0.13$, $P=0.000$) with 58% total variance. Both personality and risky driving behaviors directly predicted road traffic accident with 23% of variance.

Conclusion and recommendation: The findings of the study show, anger and speeding had important contributor to accident and personality had significant association with risky driving behavior. And both personality and risky driving behavior had strong effect accident. And transport authority should design strategy and promote that helps to reduce speeding.

Key words: Personality, Risky Driving Behavior, Road Traffic Accident.

1. Introduction

1.1 Background

Road traffic accidents (RTA) are a major public health problem over worldwide. Every year 1.35 million people lost their lives due to traffic accidents. On average daily about 3700 and millions of people were killed and injured respectively on the world. The overall global road traffic fatality rate is estimated about 27.5 per 100,000 populations. It's three times higher in low-income countries than high-income countries (1).

Due to urbanization, industrialization, rapid motorization, and unsafe driving, the risks of accidents have increased contributing a large burden of mortality and morbidity, especially in developing countries (3). Evidence shows that low and middle-income countries have higher road traffic fatality rates than that of high-income countries. Nearly 90% of the world's fatalities on the roads occur in there at low and middle-income countries, with only 48% of the world's registered vehicles (2). From those of developing countries 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) (4).

In Africa the number injuries and deaths due to road traffic have been increasing from time to time. The fatalities rate were 24.1 per 100 000 at 2013 increased 26.6 per 100 000 population in the year 2015 (4,5). African countries deaths by road traffic injuries are 40% higher than all other low and middle income countries and 50% higher than the world average. About 2,400 individuals die from an injury which means 28.3 per 100,000 population die will occur due to road traffic crash in Africa (6-8).

Ethiopia is a country with a small number of vehicle and higher number of death, about 708,416 vehicles were registered in 2016 and 26.7 deaths per 100,000 population (1). About 3% of the Ethiopian population met a traffic accident, which implies about 3 million people who met traffic accident in 2015 with much number of seriously injured which is about 2 in 10 (18 %) of respondents were as a result of road traffic accident (9). As the study conducted in central Ethiopia, 2,335 collisions were registered between 2007 to 2012 among these collisions, 389 (16.7%) resulted in death, 316 (13.5%) brought about severe injuries, 290 (12.4%) caused slight injuries, and 1,316 (56.4%) caused property damage (10).

Addis Ababa accounts majority of accidents and injury from the whole country, which is approximately more than 21% of the fatal accidents, 42% of the injury accidents, and 65% of the total accidents, on average at least one person dies and 8 persons are injured every day (11,12).

Road Traffic Accident is a result of several factors like vehicular, roadway and human factors and human factor is the commonest. Personality traits have long been recognized as important individual factors that are closely linked with risky driving behaviors and traffic accidents (13).

1.2 Statement of the problem

Road traffic accident is the result of a complex interaction between several inter-dependent factors representing human related (drivers and other road users); environmental related (road design, road layout, pedestrian facilities, road side protection, weather and light conditions); and vehicle related (technical defects and in-vehicle crash protection) (14).

The human factors appear in many literatures as the most common determinants of road traffic. Variety of personality characteristics have a strong relationship with risky, aggressive and competitive driving behaviors and crash involvement. About 10 to 20 % of the variance in crashes and up to 35% in risky driving practices was explained by driver's personality. Risk acceptance is also associated with an eight-fold increased risk of having a crash that resulted in serious injury (15).

Risky driving behaviors (RDBs) known that it have a direct effect, while personality factors have an indirect effect on the occurrences of accident but had major contribution on RDBs. Personality traits such as antagonism and negative affectivity depression and normlessness and altruism were also effective in predicting speeding, aggressive and ordinary violations in driving (16,17).Evidences shows that personality factors had an impact on road accidents via their effects on actual driving-related behaviors although the path coefficients in predicting accidents were relatively weaker than those predicting RDBs and habits (18).

On the review of McDonald and Davey study found that the prevalence of personality disorders, especially antisocial personality disorder and hostility, was greater in accidents victims than it was for the general population (19). Every personality traits had different degree of effects on dangerous driving behavior. Sensation seeking was confirmed to be significantly associated with RDBs with ranged from 30 to 40%. And he concluded that sensation seeking also influences RDBs and alcohol consumption, which in turn, have an effect on heightened collision rate (20). Study conducted on Norway, indicates that personality explained 39% of the total variance in RDBs and 20% of the variance in accident and risky driving behaviors exerted a strong and significant direct effect on accident involvement 41% (21).

1.3 Rational of the study

The aim of this study is to elucidate the relationship between personality and risky driving behaviors and their role on accident. Knowing their contribution on road traffic accident can open up the possibility of early identification of those more likely to be involved in accidents and this will reduces the occurrence of accident. However there're some studies previously done on the personality and risky driving behavior, but not clearly putted how both personality and risky driving contribute on accident and there's no such study done in our country that examine the relationship between personality and risky driving behaviors and their contribution road traffic accident.

1.4 Significance of the study

The results of this study could be used as a baseline material for relevant stakeholders to design and implement an effective prevention and redaction of road traffic accident and will shows line for them to do more on human factors, which have major role on the occurrence of road traffic accident. Also strongly determine the nature obstacles of ineffective road traffic accident prevention and this will helps to draw the attention to focus human factors which has not focus in the previously.

2. Literature Review

2.1 Prevalence of risky driving behavior

Among causes of road traffic accident, human factors are the most prominent contributing factors for the occurrence of accidents and drivers' errors takes the majority of the blames. Drivers' errors that are hazardous include driving too fast, failing to give way, improper overtaking and following too close and it's estimated around 70 to 80% of all traffic accidents are due to human error, mainly drivers' errors (22).

According to telephone survey in America most of the adolescents (91.8%) reported regularly (at least once/trip) engaging in at least one of the eight distracted driving behavior. The most commonly reported behaviors were looking for something in the vehicle, eating or drinking something, using an electronic device for music, and dealing with passengers. Adolescents engaged frequently in texting;/cell phone behaviors, with 48% reporting texting and 68% reporting talking on a telephone at least once in a trip (23). On the study's of Sullman and Peter, more than half (57.3%) of the participants used a mobile phone at least occasionally while driving (24).

A study conducted in Australia among youth novice drivers approximately 14% of participants reported drink driving and 3% reported drug driving. And most participants reported driving up to 10 km/h, half of them 10-20 km/h and nearly one third by more than 20 km/h above the posted speed limit and half of the participants reported 'racing out' of intersections when the light changed to green, and cornering too quickly, and one quarter of participants reported speeding at night on poorly lit roads. One third reported speaking on a handheld mobile and four in five participants reported driving when they knew they were tired. The majority of the participants also reported driving faster if they were in a bad mood, and that their driving was affected by their emotions (25).

Based on a cross sectional study conducted on Aberrant Behaviors and Road Accidents among Iranian Truck Drivers, the most frequencies aberrant behaviors had the highest frequency among truck drivers includes: Misjudge the speed of oncoming vehicle when overtaking, deliberately disregard the speed limits late at night or very early in the morning, ignore 'give way' signs, and narrowly avoid colliding with traffic having right of way (26).

A study was carried out in Iraq among medical students in Erbil, showed that the most frequent risky driving behaviors among them were playing loud music (35.9%), speeding (30.4%), allowing the front seat passenger to not wear a seat belt (27.9%) and using a non-hands-free mobile phone (27.7%). Participants perceived that driving after a mild to moderate intake of alcohol (80.1%), not wearing a seat belt (76.0%), drunk driving (72.5%), racing with other cars (72.0%) and driving while sleepy (71.2%) were the most risky behaviors (27).

With results of study done Ghana shows, the influences of drivers/riders in road traffic crashes in between 2001 and 2011 shows that the errors committed by drivers/riders at the time of the traffic accident had positive significant road traffic accident, the major errors were: inattentive of rule, too fast, too close, no signal, improper overtaking, improper turning, fatigued/asleep, loss control and other, with the percentage of 36.29%, 1.47%, 26.91%, 9.59%, 2.29%, 0.53%, 2.03%, 1.91% and 0.24% respectively. Total the result shows that 48.86% of the traffic accident within this period could be attributed to the fault of the drivers/riders (28).

A descriptive study conducted in Amhara region, reported that almost 84% of road traffic accidents were faults attributed to the drivers while vehicles and pedestrians faults' accounted for 7.6% each and the environment shared only 1%. From drivers' faults, the five major accident factors, in order were: failure to give priority to pedestrians (32.1%), speeding (31.5%), driving on the wrong side of the road (10.7%), failure to maintain distance between vehicles (4.1%) and failure to give priority for other vehicles (3.8%) (29).

A cross sectional quantitative study conducted in Mekele town, northern Ethiopia shows that 148 (42.3%) of drivers were using mobile phone while driving and 28 (9.7%) had an experience of drinking alcohol and driving within the last 12 months, Of the total of 247 respondents of house car and taxi, 97 (62.6%) of house car and 58(37.4%) of taxi were unfasten their seat belt while driving. In general, 233 (66.6%) of the drivers were found to be risk groups (30).

A study was carried out on taxi drivers, 22% of them received mobile calls while driving, approximately one-third of the drivers reported a history of ever using alcohol (n = 250, 35.1%). Out of these, 73% reported having operated their taxi within 3 hours of drinking alcohol. Only 9% of the drivers reported a habit of chewing the stimulant plant Khat while driving (31).

2.2 Socio-economic, Driving Experience and Risky Driving Behavior

As the study done in Italy on socio-economic and driving experience factors affecting drivers' perceptions of traffic crash risk shows that the parameters of socio-economic are related to the five risky driving behaviors also had correct signs and significant coefficients at (0.1% level), It's observed that Personal Conditions While driving men has more weight of risky driving behaviors than women ($p < 0.04$), opposite occurs with the variable safe distance women are better ($p < 0.088$). In the case of differences between drivers having differing monthly incomes per household, several risky driving behaviors tended to have lower weight for drivers with 1001–2000 euro/month per household than drivers earning more than 2000 euro/month per household these were, speed limits ($p < 0.088$) and passing rules ($p < 0.100$). In regards to driving experience in terms of number of years holding a driving license, it's worth noting that Passing Rules had less weight for drivers holding a license between 0 and 7 years than drivers holding a license from 8 to 22 ($p < 0.004$). Additionally, the associated weight of Speed Limits and Distracted Driver is lower for more experienced drivers (holding a license over 22 years) than drivers holding a license between 8 and 22 years (32).

2.3 Environmental Factors Influencing Driving Behavior

Driving pattern could be affected by several factors and from those factors, environmental factors are one of its which include: road design, road layout, pedestrian facilities, road side protection, weather light conditions and others. Weather is the most important influence on the crash rates of all drivers, as Canadian suggested that young drivers who drove above the speed limit in intemperate weather crashed more frequently (33). On the study conducted on road between Harar and Dire Dawa, many of the accidents 107(64.5%) occurred on undivided two-way narrow roads and large number 143(86.1%) of the accidents occurred on damaged road and only 23 (13.9%) occurred on non-damaged road (34).

2.4. Relationship between personality, driving behavior and accident involvement

Many studies that concern with road traffic accidents have consistently shown that personality attributes play a major important role in predicting crash involvement. The same is true in the study of In Burns and Wilde (1995) showed that a “High Risk Personality” profile was associated with speeding and careless driving among professional taxi drivers, whereas excitement seeking was related to traffic rule violation (35).

In the study carried out in Norwegian drivers, normlessness, driver anger and Sensation seeking were also associated with risky driving special Sensation seeking was the strongest predictor for risky driving ($\beta=0.31$). Risky driving exerted a strong and significant direct effect on accident involvement ($\beta=0.41$). The personality variable sensation seeking, normlessness and Driver anger, ($\beta=0.20$), ($\beta=0.13$), ($\beta=0.09$) was associated on accident involvement respectively. And its concluded with that personality explained 39% of the total variance in risky driving and 20% of the variance in accident involvement and risky driving exerted a strong and significant direct effect on accident involvement ($\beta=0.41$) (21).

On the study employed in China, about 36% of the variance in emotional violation and 21% of the variance in deliberate violations were explained by driving anger and 37% of such incidents were reported to occur directly after the report of a near accident, and 48% of near accidents were followed by reports of anger (36 ,37). Stress and sensation seeking were significantly correlated with RDBs and driving experience and risky driving behaviors directly predicted accident risk and accounted for 15% of its variance (38, 39).

According to study in Oman show that a significant difference in the crash involvement by violation driving behaviors ($p=0.015$) and students involved in crashes (Mean=2.11) reported higher levels of violations compared to those not involved in crashes (Mean =1.98) and Error-related driving behaviors was also associated with crash involvement ($p=0.028$) (40).

The study carried out in central Ethiopia show that careless driving caused 13.1% and 27.1% of the fatal and the nonfatal RTCs, respectively. It was found that RTCs caused by driving above the speed limit (AOR =5.3) and failing to give priority for other vehicles and pedestrians (AOR =5) were significantly associated with RTC fatality. Careless driving (AOR = 1.78) and pedestrian errors (AOR =3.9) also increased fatal although not statistically significant (10).

2.5 Concept framework

which is developed based on the summary of our literature review that show how socio-economic factors, environmental factors and personality had role in risky driving behavior and personality and risky driving behavior have role for the occurrence of crash or road traffic accident.

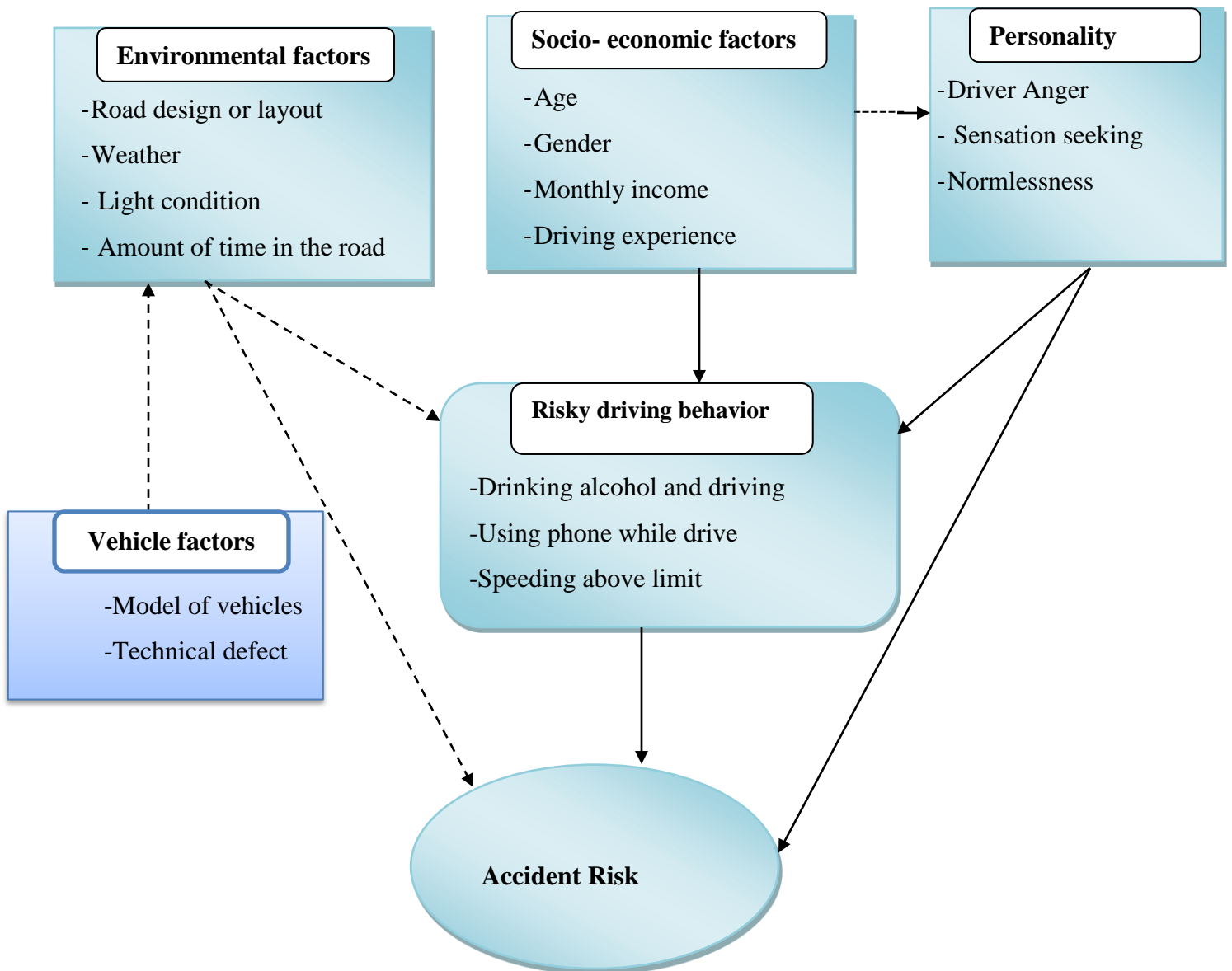


Figure 1:- Conceptual framework of the study

Research Questions

1. What is the magnitude of risky driving behavior?
2. Does personality and risky driving behaviors have relation?
3. What is the role of personality and risky driving behavior on road traffic accident?

3. Objectives

3.1 General Objective

- To evaluate the relationship between of personality and risky driving behavior and their contribution on road traffic accidents among Public transport drivers in Addis Ababa, Ethiopia 2019.

3.2 Specific Objectives

1. To determine the prevalence of Risky Driving Behavior among Public transport drivers in Addis Ababa, Ethiopia 2019.
2. To assess the relationship between Personality and Risky Driving Behavior among Public transport drivers in Addis Ababa, Ethiopia 2019.
3. To evaluate the contribution of personality and risky driving behavior on the occurrence of road traffic accident among Public transport drivers in Addis Ababa, Ethiopia 2019.

4. Methodology

4.1 Study design and period

The study was employed by institutional based cross sectional study design to assess the relationship between personality and risky driving behavior and their contribution on road traffic accident from January 01 to February 30, 2019 G.C.

4.2 Study area

The study was conducted in Addis Ababa which is located at heart of the country with population of 3.4 million and with the current population growth rate of 2.5 % the city population is estimated to reach 5 million after 10 years, with rapid urbanization 15% in 2005 to 24.1% in 2025. Addis Ababa is a city with an area of 540 km² is divided into 10 sub-cities and 116 woredas. The city is the country's political and economic center, the seat of Head Offices of African Union and United Nations Economic Commission for Africa. As a report of Road Transport Authority of Ethiopia, up to June 2010 E.C there are about 553,938 vehicles registered in Addis Ababa which means more than 70% of vehicles of the country. Currently, taxis, city bus and private cars altogether cover 30% of the urban mobility, that is, 26% bus, 70% taxis and 4 % private cars, while 70% of urban mobility on foot. Commonly there are three types of public transports vehicles found in the city; code 01, code 03 and city bus both the private and public, with 6,083, 6,924 and 1,236 vehicles respectively. And within the city there are about 163 existing terminals found in all sub-cities and from these 80 terminals are marks as area that mainly traffic crowded occurs.

4.3 Source and Study Population

4.3.1 Source population: - The source population was all public transport drivers operating in Addis Ababa, Ethiopia and the required sample size were drawn from this population.

4.3.2 Study population: - The study population was those public transport drivers operating in randomly selected terminals.

4.4 Inclusion and Exclusion criteria

4.4.1 Inclusion criteria: - All public transport drivers those who had at least one year driving experience and found in Addis Ababa city during the study period were the candidates of the study.

4.4.2 Exclusion criteria: - whose were not found in the study area during data collection period due to work or for others reasons out of city or terminals were excluded.

4.5 Sample size

1. For the first objective to assess the prevalence of risky driving behavior.

A single population proportion formula is going to be applied which is, $n = \frac{z^2 p(1-p)}{d^2}$ Where,

- n = the number of drivers to be studied,
- z = Standard score corresponding to 95% confidence interval which is 1.96,
- d = desired level of precision/Marginal error (0.05) and
- P = Proportion in the target population to have been risky driving behavior that have been done in mekele (67%) (30).

$$n = \frac{z^2 p(1-p)}{d^2} = n = \frac{1.96^2 \cdot 0.67(1-0.67)}{(0.05)^2} = 339$$

Considering a non-response rate of 10%, the sample size was **377**.

2. For the second objective to assess the relationship between personality and RDBs.

Using single population proportion formula with the same assumptions in the above and using ($P=80\%$) study done in Durban, South Africa (41).

$$n = \frac{z^2 p(1-p)}{d^2} = n = \frac{1.96^2 \cdot 0.85(1-0.85)}{(0.05)^2} = 230$$

Considering a non-response rate of 10%, the sample size was **255**.

3. For the third objective to evaluate the contribution of personality and driving behavior on road traffic crash.

Using double population proportion formula

$$n_1 = \frac{\left\{ Z_{\alpha/2} \sqrt{\left(1 + \frac{1}{r}\right)} + Z_{\beta} \sqrt{P_1(1 - P_1) + \frac{P_2(1 - P_2)}{r}} \right\}^2}{(P_1 - P_2)^2}$$

With the assumptions of,

- P1- 21 % (Proportion of personality and risky driving behaviors of drivers without accident) (39).
- P2- 15% (Proportion of personality and risky driving behavior of drivers with accident) (39).
- Pooled proportion $(p_1 + 1 - rp_2) / (1 + r) = 0.14$ (14%)
- $\alpha = 0.05$ probability of committing type 1 error (1.96)
- $\beta = 20\%$ probability of rejecting a true difference
- $r =$ the proportion of n_1 to n_2 is 1 to 1

$n_1 = 112$ and $n_2 = 224$ since the proportion of n_1 to n_2 is 1 to 1 and considering a non-response rate of 10%, the sample size becomes 249.

The sample size for this study was **377** which were calculated in the first objective due it's highest than others.

4.6 Sampling procedure

The sample was taken from the total number of public transport divers operating in the whole sub cities of Addis Ababa. From the overall 10 sub-cities we had selected three sub-cities randomly and then from each sub-city we selected one terminal. The terminals were selected based on coverage or with transport activities, which mean those have much flow of vehicles or drivers and in addition those have crowd for traffic activities from the others terminals found in the city, with this assessment, Yeka (Megenagha wuste), Arade (Kentiba office) and Lideta (Mexico) sub-cities and terminals names respectively. The drivers were disturbed to selected terminals equally.

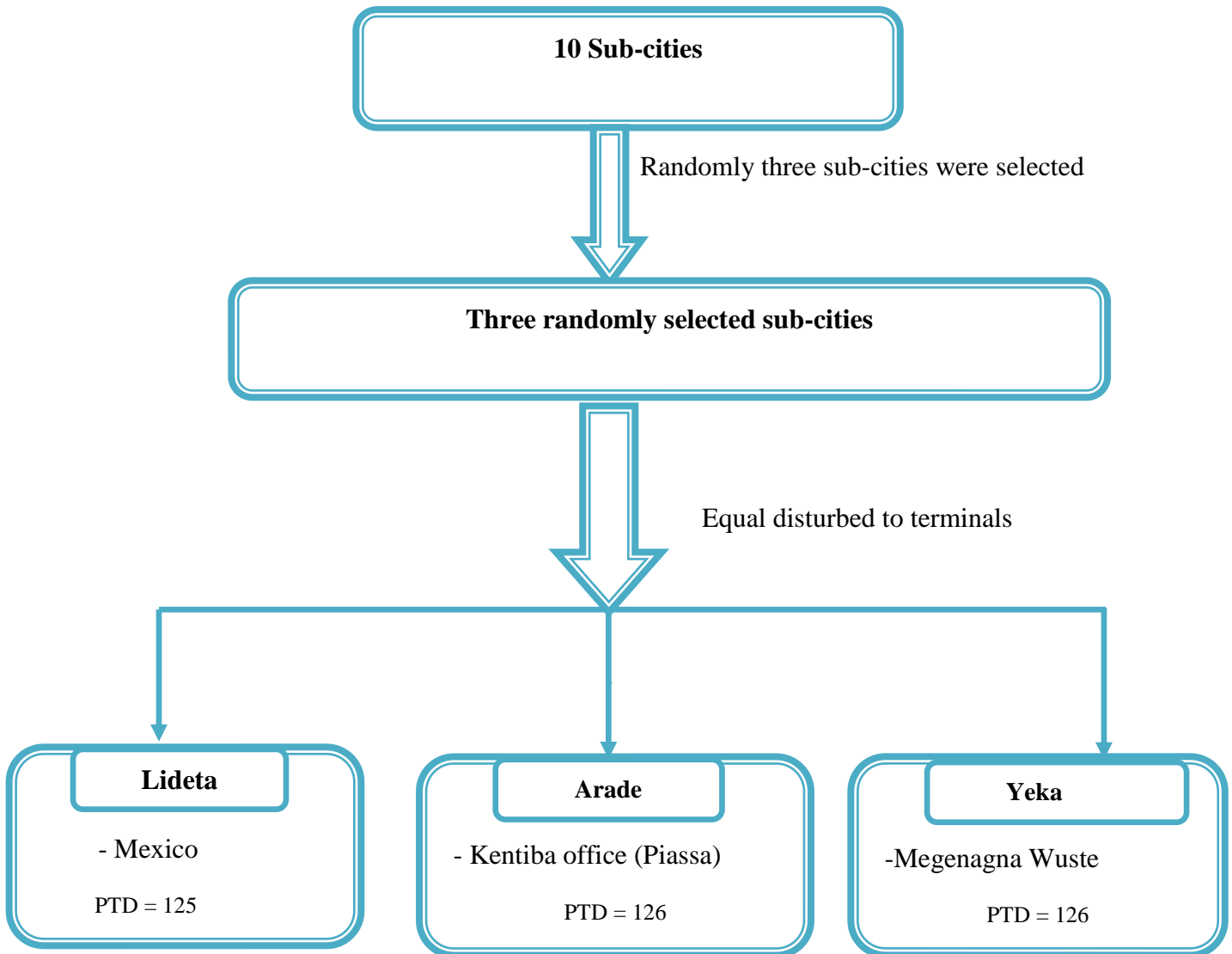


Figure 2:- sampling producer that shows how the samples are selected.

4.7 Variables

4.7.1 Dependent Variable: - Road Traffic Accident.

4.7.2 Independent Variables:

1. Socio-economic and demographic: - (age, educational level, marital status and driving experience)
2. Risky driving behavior:- (using cell phone while driving, driving after having alcohol and speeding above limit)
3. Personality: - (anger, sensation seeking and normlessness).

4.8 Operational definitions

Risky Driving Behavior: -in this study risky driving behaviors were defined; if a respondent has experienced any two of the three behaviors these are, driving after having alcohol, speeding above limit and using cellphone while driving.

Anger: -were measured by responses of 7 items, which had 3 multiple choices (often, sometimes and never). Those drivers who answered above or equal to 4 of the items with value of “Never” were considered as driver no anger personality and else considered as driver with anger personality.

Sensation seeking: - were measured by responses of 8 items, which had 3 multiple choices (often, sometimes and never). Those drivers who answered above or equal to 5 of the items with value of “Never” were considered as driver no sensation seeking personality and rest considered as driver with sensation seeking personality.

Normlessness: - were measured by responses of 3 items, which had 3 multiple choices (often, sometimes and never). Those drivers who answered above or equal to 2 of the items with value of “Never” were considered as driver no normlessness personality and rest considered as driver with normlessness personality.

Road Traffic Accident: - in this study it were defined as an accident that occurs between vehicles, between vehicles and pedestrians, between vehicles and animals, or between vehicles and fixed obstacles within the past one year and accounted by them self.

Public Transport Drivers: - in this study public transport drivers are those drivers which are ‘permanently driving public transport like; code 01, code03, higher, sheger and anbesa buses were included.

4.9 Data collection procedures

A Standardized questionnaire that is adopted from the Manchester driving behavior questionnaire (MDBQ) were used to measure risky driving behavior of the drivers and for the personality test we reviewed different literatures, driving anger expression was measured using the 14 item driving anger scale (DAS), normlessness were measured using Kohn and Schoolers (1983) normlessness scale, which consist of 4 items, and for sensation seeking was measured using Zuckerman (1994) which consist 10 items. All items were answered on three-point scales ranging from “Often to Never”. Accident involvements were recorded by self-reported with the past 1 year. Required information was collect through interview by the trained data collectors using the questioners and the principal investigator was responsible for co-ordination and supervision of the overall data collection process. Before starting the interview clear explanation on the purpose, benefit and risk of the study were given and informed consent was obtained for all of Participants. The place and time were when the drivers are free or at the time of waiting for their order since they’re public transport drivers.

4.10 Quality assurance

First the questionnaire were developed in English and then translated into Amharic and back to English by different experts to check for its consistency. Five percent or 19 of the questionnaires were pre tested in other drivers, found at Jamo terminal those didn’t included in the main study for the accuracy and validity. Based on the result of pretest, questions were revised; mostly the personality part tried to make contextual to drivers and those found unclear or confusing were removed prior to the actual study time. The data were collected by three data collectors, who’s graduated with degree by public health, nursing and biology respectively and in addition two of them had experienced more one time on data collection. Two days intensive training was given for all data collectors, principal investigator and supervisor.

Totally three data collectors, one principal investigator and one supervisor were participated to conduct the study and during the time of data collection there was supervision on the data collection process each day. Also after data collection the data completeness and consistency

were rechecked by supervisors and principal investigator before transfer into computer software. None overlapping numerical code were given for each question and the data were cleaned and entered into Epidemiological data (Epi-data) version 3.1. Any format with a defect was rejected from the study.

4.11 Data management and Data analysis

The data collected that comes from the field was being encoded and entered, using Epidemiological data (Epi-data) version 3.1 statistical software and analyzed using Stata version 14 statistical package. Data cleaning was performed to check for frequencies, accuracy, and consistencies and missed values. Any logical and consistency error identified during data entry were corrected after revision of the original completed questionnaire. A descriptive analysis was performed to describe the characteristics of the study participants. Binary logistic regression was applied for all variables to find the independent predictors of dependent variable (Road Traffic Accident). A multivariate logistic regression was used to know the final predictors of Road Traffic Accident among the independent variables. Those variables with a P-value of 0.2 in the bivariate model were considered for the final multivariate model and independent variables that had statistically significant association with the dependent variable ($P < 0.05$) in the multivariate analysis were considered as the final predictors. Structural equation modeling was applied to estimate the relationship between personality, and risky driving behavior. Before applying the model the assumption of the SEM; large sample size, multivariate normality and correct model specification were checked. And in SEM analysis there are about 4 steps: the first step model specification, we had developed our model depends up on the previous study, the second one is model identification; before estimating the model we had checked that whether all factors are scaled or matrices, in third step we estimated for our model and on this study each of the impact coefficients was estimated using the maximum likelihood estimates method, after we had estimated we checked for model fit; the indicated considered good fit was checked the probability chi-square (>0.05) the goodness-of-fit index ($GFI \geq 0.90$), the adjusted goodness-of-fit index ($AGFI \geq 0.80$), the comparative fit index ($CFI \geq 0.90$), the normed fit index ($NFI \geq 0.90$), the incremental fit index ($IFI \geq 0.90$).

4.12 Ethical Considerations

To conduct the study, an ethical clearance and supporting letter of ethical approval was sought before starting data collection from research ethics committee of Addis Ababa University College of Health Sciences School of Public Health and also approval and supportive letters was obtained for Addis Ababa Road Transport Authority, in addition there were supportive letter from city bus associations. Written informed consent was obtained from respondents after explanation was given on the purpose, procedure, potential risks and benefits of participating and the right to withdraw from the study at any time throughout their interview. Confidentiality of study participants were assured and maintained by explaining, the information obtained from them will not be disclosed to a third party ne other than members of the study team.

5. Result

5.1 Descriptive statistics

5.1.1 Socio demographic characteristics of the study subjects

Out of the sampled 377 public transport drivers, a total of 374 participated in this study with a response rate of 99.2%. Mean (SD) of age of the respondents was 33.4 ± 7.2 in which 78.88 % were between the age of 25-44 and total range of 20 to 59. There were 366 (99.2%) males and 3 (0.8%) female respondents. More than half 257 (68.72%) of the respondents were Orthodox religion followed by Muslim 62 (16.58%). Majority 249 (66.58%) participants were married and secondary school 166(44.39%). The average monthly income of the respondents was 6,018.11 Eth birr (SD ± 2283.3). The mean driving experiences was 7.71 years (SD ± 5.23). Most of the participants were employee 247(66.04%) and usually they spent 10.87 hours (SD ± 2.0) per day on work.

Table 1: - Socio-demographic characteristics of drivers, Addis Ababa Ethiopia 2019

(N=374).

Characteristics	Road Traffic Accident						P-value
	Yes		No		Total		
	n	%	n	%	n	%	
Age in years							
20-25	12	13.95	30	10.42	42	11.23	0.068
25-44	70	81.40	225	78.13	295	78.88	
44-59	4	4.65	33	11.46	37	9.89	
Religion							
Orthodox	48	55.81	209	72.57	257	68.72	0.015
Muslim	21	24.42	41	14.24	62	16.58	
Protestant	17	19.77	36	12.50	53	14.17	
Others	1	0.55	1	0.52	2	0.53	

Marital status							
Single	30	34.88	81	28.13	111	29.68	
Married	51	59.30	198	68.75	249	66.58	0.522
Divorce	5	5.81	9	3.13	14	3.74	
Educational level							
Primary	7	8.14	31	10.76	38	10.16	
Secondary	42	48.84	124	43.06	166	44.39	
College	34	39.53	113	39.24	147	39.3	0.667
University and above	3	3.49	20	6.94	23	6.15	
Monthly income in birr							
1000-3000	10	11.63	45	15.63	55	14.71	
3000-6000	47	54.65	152	52.78	199	53.21	
6000-9000	23	26.74	67	23.26	90	24.06	0.629
>9000	6	6.98	24	8.33	30	8.02	
Driving experience in years							
1-5	44	51.16	124	43.06	168	44.92	
5-10	26	30.23	81	28.13	107	28.61	0.072
>10	16	18.60	83	28.82	99	26.47	
Vehicle ownership							
Owner	20	23.26	101	35.07	121	32.35	
Employer	65	75.58	182	63.19	247	66.04	0.066
Others	1	1.16	5	1.74	6	1.6	

5.1.2 Vehicles Characteristics of the participated on study

On this study more than 196 (52.41%) the vehicles were found between 1998-2007 year of manufactured. And the vehicles modules of year were range from 1980-2018 G.C, with 2001(\pm 8.1) mean and SD respectively. Most of the vehicles were minibus 242 (64.71%), which is followed by bus 84 (22.46%).

Table 2- Vehicles characteristics of public transport drivers, Addis Ababa Ethiopia 2019 (N=374).

Characteristics	Road Traffic Accident						p-value
	Yes		No		Total		
	n	%	N	%	N	%	
Module of vehicle (G.C)							
1980-1998	23	26.74	88	30.56	111	29.68	0.702
1998-2007	48	55.81	148	51.39	196	52.41	
2007-2018	15	17.44	52	18.06	67	17.91	
Type of vehicle							
Sedan/automobile	7	8.14	41	14.24	48	12.83	0.107
Bus	18	20.93	66	22.95	84	22.46	
Minibus/minivan	61	70.93	181	62.85	242	64.71	

5.1.3 Risky Driving Behaviors of the study subjects

In this study, 182 (48.66%) of the respondent had risky driving behaviors. Among all the total participants, 51 (13.64%) of them were often drove over the speed limit in areas where it was unlikely that there would be policeman with speed radar. About 55(14.7%) of drivers were drove speedily at night on roads without sufficient lighten. And about 204 (54.54%) of them were make or receive a call using mobile phone while driving vehicle. From the total respondents, 71 (18.98%) were drove after having alcohol.

On study 34(9.09%) of drivers drove while the traffic light on red. About 96 (25.67%) of the respondents, drove by chewing or after chewing khat. From overall risky driving behaviors, the most often practiced were carrying too many passengers 89(23.8%), driving speedily to cross the road when the traffic light to be turn to red 76(20.32%), followed by driving over the speed limit in areas unlikely policeman with radar camera 51(13.64%).The least frequent risky driving behaviors included sending or reading a text message while driving 1(0.27%) and driving when the traffic light on red 2(0.53%).

Within the period of the past 3 months before the study conducted, about 216(57.75%) of public transport drivers had at least one experience of punishment or warning by traffic police for violating traffic rules and regulations. And more than half 172 (79.63%) of drivers punished due to not following the traffic rule and regulation, these are; carrying too many passengers, Stopping at restricted areas and speeding above limit.

Table 3: Risky Driving Behaviors of public transport drivers, Addis Ababa Ethiopia 2019 (N=374).

Types of behaviors	Road traffic accident						p-value
	Yes		No		Total		
	N	%	N	%	N	%	
Speeding							
Yes	60	69.77	128	44.44	188	50.27	0.000
No	26	30.23	160	55.56	186	49.73	
Violation							
Yes	61	70.93	128	44.44	189	50.53	0.000
No	25	29.07	160	55.56	185	49.47	
Error							
Yes	56	65.12	141	48.96	197	52.67	0.009
No	30	34.88	147	51.04	177	47.33	

5.1.4 Personality characteristics of the study subjects

More than half 220(58.83%) of the public transport drivers, make flash light or make sound to other drivers when they get anger and 137(36.63%) them drove faster than you was at the time they get anger. Around 183(48.93%) of public transport divers they believe it okay driving over speed limit as long as they don't cause accident. 124 (33.16%) of drivers wants to have a new and exciting ways of driving, even if it's scary and from the total participants 288(77.01%) of they are happy with their driving professional. Totally 97(25.94%), 160(42.78%) and 279(74.60%) were considered as having anger, normlessness and sensation seeking personality respectively.

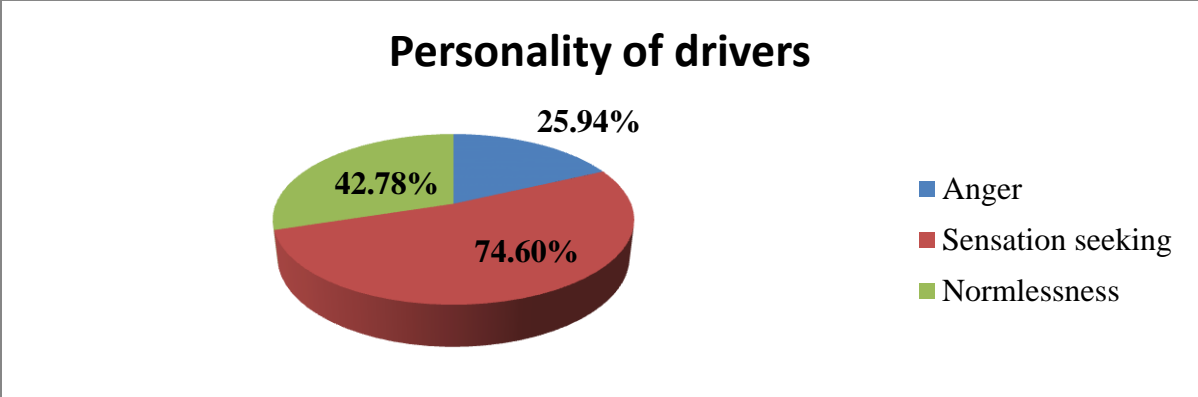


Figure 3: - Personality of public transport drivers, Addis Ababa Ethiopia 2019.

5.1.5 Road Traffic Accident Characteristics of the study subjects

Among the total, 374 public transport drivers 177 (47.33%) of them had experience of accident while driving a vehicle in the past one year. And from the overall accident 89 (50.28%) accidents were accounted by others drivers and 86 (48.59%) of accidents were accounted by themselves. About 117(66.1%) experienced at one time, 55(31.07%) two times and 5(2.82%) three and more times involved in accident, with 129(73.3%), 40(22.7%) mild to moderate accidents respectively.

More than half 114(64.41%) accidents were occurred at street road and 36(20.34%) were accidents occurred in curved road. From the total 177 accidents, 65(36.72%) were happened on morning and same number with accident occurred over afternoon 65(36.72%).

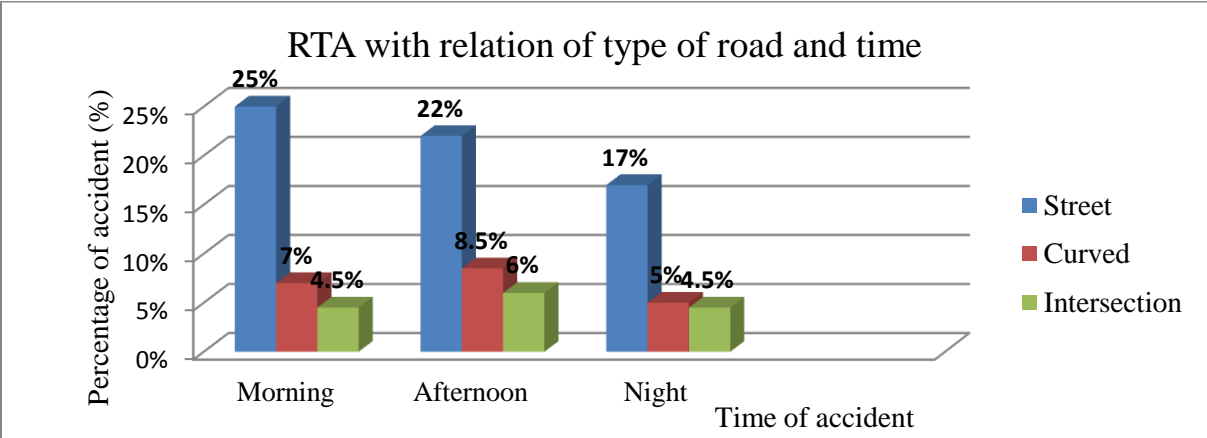


Figure 4: - The relation between type of road and time of accident of public transport drivers, Addis Ababa Ethiopia 2019.

5.2 Bivariate logistic regression analysis

5.2.1 Socio-demographic characteristics

From all socio-demographic independent variables analyzed in the bivariate logistic regression there's no statistically significant association was found with road traffic accident.

Table 4:- Socio-demographic characteristic public transport drivers & road traffic accident Addis Ababa Ethiopia 2019 (N=374).

Characteristics	Road Traffic Accident				COR CI (95%)
	Yes		No		
	n	%	n	%	
Age in years					
20-25	12	13.95	30	10.42	1.00
25-44	70	81.40	225	78.13	0.77(0.37-1.59)
44-59	4	4.65	33	11.46	0.30(0.08-1.04)
Marital status					
Single	30	34.88	81	28.13	1.00
Married	51	59.30	198	68.75	0.69(0.41-1.16)*
Divorce	5	5.81	9	3.13	1.5(0.46-4.83)
Educational level					
Primary	7	8.14	31	10.76	1.00
Secondary	42	48.84	124	43.06	1.5(0.61-3.65)
College	34	39.53	113	39.24	1.33(0.53-3.29)
University and above	3	3.49	20	6.94	0.66(0.15-2.87)
Driving experience in years					
1-5	44	51.16	124	43.06	1.00
5-10	26	30.23	81	28.13	0.90(0.51-1.58)
>10	16	18.60	83	28.82	0.54(0.28-1.02)*

5.2.2 Risky driving behaviors of public transport drivers

During the bivariate logistic regression analysis statistically significant association was found for cellphone, alcohol and speeding in which cellphone users while driving were found to have 2.85 times higher odds of road traffic accident than not users, COR(95%CI) = 2.85 (1.68-4.85) and P-value = 0.000. Those had habit of driving after having alcohol have 2.53 times higher odds of accident than not COR (95%CI) = 2.53 (1.45-4.43) with P-value = 0.001 and the third behavior was speeding, in which those drivers driver above speed limit have 5.05 times higher odds of road traffic accident than not users , COR(95%CI) = 5.05 (2.43-10.50) and P-value = 0.000.

Table 5:- Risky driving behaviors of public transport drivers & road traffic accident Addis Ababa Ethiopia 2019 (N=374).

Characteristics	Road Traffic Accident				COR CI (95%)
	Yes		No		
	n	%	n	%	
Speeding					
Yes	77	89.53	181	62.85	5.05(2.43-10.50)*
No	9	10.47	107	37.15	1.00
Cellphone					
Yes	63	73.26	141	48.96	2.85(1.68-4.85)*
No	23	26.74	147	51.04	1.00
Alcohol					
Yes	27	31.40	44	15.28	2.53(1.45-4.43)*
No	59	68.60	244	84.72	1.00

* = statistically significant

5.2.3 Personality of public transport drivers

Drivers with personality of anger had 5.34 times higher odds of road traffic accident than those drivers with no anger personality COR (95% CI) = 5.34 (3.17-8.99) and P-value = 0.000. Sensational seeking was also significantly associated of which those had sensational seeking personality time had increased odds of accident than not, COR (95% CI) = 3.64 (1.74-7.59) and P-value = 0.001. Public transport drivers with normlessness personality had 2.11 times higher odds of accident than those not normlessness personality, COR (95% CI) = 2.11(1.29-3.44) and P-value = 0.003.

Table 6:- Personality of public transport drivers & road traffic accident Addis Ababa Ethiopia 2019 (N=374).

Characteristics	Road Traffic Accident				COR CI (95%)
	Yes		No		
	N	%	n	%	
Anger					
Yes	46	53.49	51	17.71	5.34(3.17-8.99)*
No	40	46.51	237	82.29	1.00
Sensational seeking					
Yes	77	89.53	202	70.14	3.64(1.74-7.59)*
No	9	10.47	86	29.86	1.00
Normlessness					
Yes	49	56.98	111	38.54	2.11(1.29-3.44)*
No	37	43.02	177	61.46	1.00

* = statistically significant

5.3 Multivariate logistic regression analysis

In the multivariate model, variables with P-value < 0.2 on the bivariate regression analysis were entered to the multivariate model. Married marital status, driving experience with >10 years, using cellphone, driving after having alcohol, sensation seeking and normlessness were significantly associated with road traffic accident in the bivariate analysis but their association disappeared in the multivariate model after being adjusted for other predictor variables.

In the final model of the multivariate regression, those drivers with behavior of speeding and those drivers with anger personality were the variables that were significantly associated with road traffic accident. Concerning risky driving behaviors those drive above speed limit had 2.80 times higher odds of road traffic accident than those drive with speed limit within the AOR (95% CI) = 2.80 (1.21-6.49). While the effect of other predictor variables was controlled drivers with anger personality had 3.45 times higher odds of road traffic accident than those no anger personality, AOR (95% CI) = 3.45 (1.89-6.28).

Table 7:- Personality and risky driving behavior determinants of road traffic accident among public transport drivers, Addis Ababa Ethiopia 2019 (N=374).

Characteristics	Road Traffic Accident				COR CI (95%)	AOR CI (95%)
	Yes		No			
	n	%	n	%		
Marital status						
Single	30	34.88	81	28.13	1.00	1.00
Married	51	59.30	198	68.75	0.69(0.41-1.16)	0.96(0.52-1.74)
Divorce	5	5.81	9	3.13	1.5(0.46-4.83)	1.52(0.42-5.51)
Driving experience in years						
1-5	44	51.16	124	43.06	1.00	1.00
5-10	26	30.23	81	28.13	0.90(0.51-1.58)	0.82(0.43-1.54)
>10	16	18.60	83	28.82	0.54(0.28-1.02)	0.98(0.46-2.11)

Speeding							
Yes	77	89.53	181	62.85	5.05(2.43-10.50)	2.08(1.21-6.49)*	
No	9	10.47	107	37.15	1.00	1.00	
Cellphone							
Yes	63	73.26	141	48.96	2.85(1.68-4.85)	1.47(0.80-2.70)	
No	23	26.74	147	51.04	1.00	1.00	
Alcohol							
Yes	27	31.40	44	15.28	2.53(1.45-4.43)	1.18(0.60-2.30)	
No	59	68.60	244	84.72	1.00	1.00	
Anger							
Yes	46	53.49	51	17.71	5.34(3.17-8.99)	3.45(1.89-6.28)*	
No	40	46.51	237	82.29	1.00	1.00	
Sensational seeking							
Yes	77	89.53	202	70.14	3.64(1.74-7.59)	2.13(0.96-4.74)	
No	9	10.47	86	29.86	1.00	1.00	
Normlessness							
Yes	49	56.98	111	38.54	2.11(1.29-3.44)	0.84(0.46-1.53)	
No	37	43.02	177	61.46	1.00	1.00	

* = statistically significant

5.4 Structural equation modeling of personality and risky driving behavior

First we performed a structural equation model analysis to investigate the relationship between personality traits (i.e. driver anger, sensational seeking and normlessness) and risky driving behaviors (i.e. speeding, error and violation) and based upon modification indices we added correlations between two variables to the model and then retested. And all factors loading of each latent variable were statistically significant except normlessness.

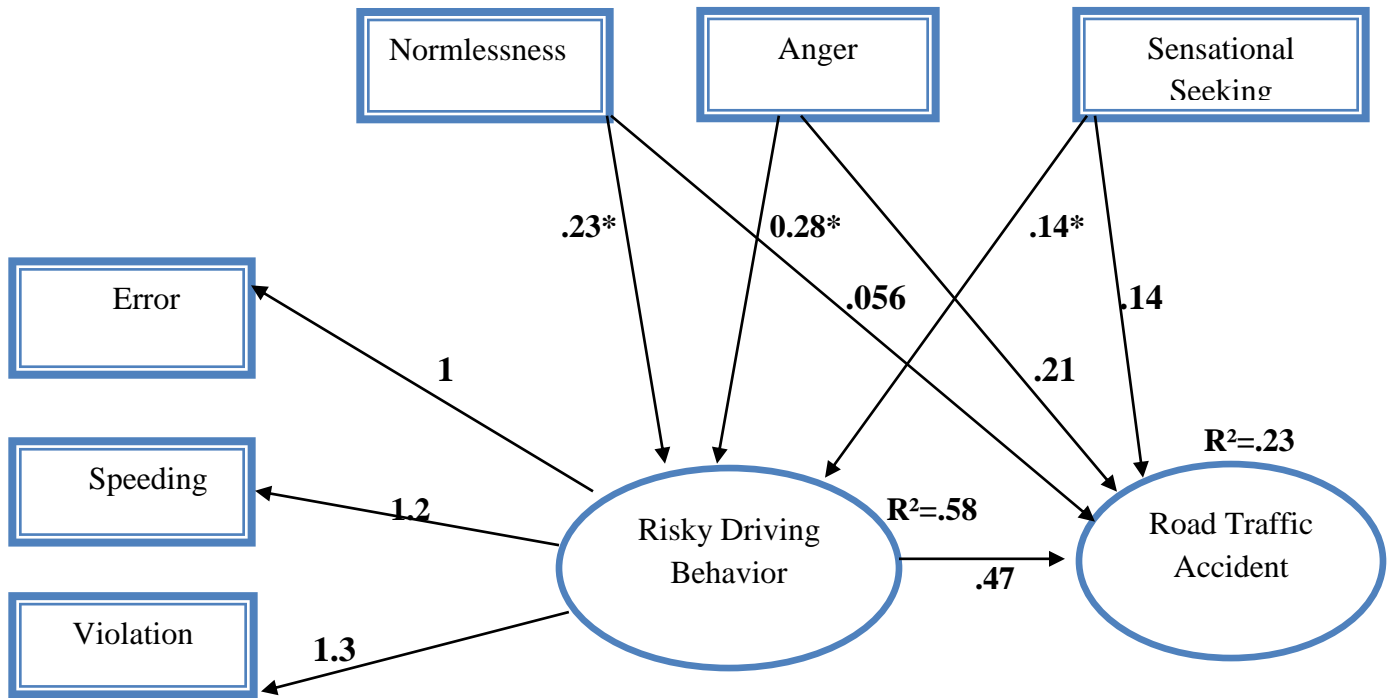
The model fitness were tested and revealed adequate fit indices for model with different model tests these were; the probability chi-square (0.89), the comparative fit index (CFI= 1.00), the Tucker-Lewis index (TLI= 1.02), root mean square error of approximation (RMSEA= 0.00) and standardize square root mean residual (SRMR= 0.01).

Table 8:-Covariance matrices between risky driving behaviors, personality traits and road traffic accident that derived from SEM analysis.

Variables	1	2	3	4	5	6	7
Error	-0.000						
Speeding	0.000	0.000					
Violation	-0.000	-0.000	0.000				
Accident	-0.010	0.005	-0.000	0.000			
Normlessness	-0.002	-0.000	0.002	0.000	0.000		
Anger	0.004	-0.002	0.000	0.000	0.000	0.000	
Sensational seeking	0.002	0.002	-0.003	0.000	0.000	0.000	0.000

Based upon result of structural equation modeling the estimating model and standardizing path coefficients were done, with this the two personality traits (i.e. driver anger and sensational seeking), three risky driving behaviors (i.e. speeding, error and violation) were highly related among each other's ($p < 0.05$). And the model revealed that risky driving behaviors are significantly associated with road traffic accident ($\beta = 0.46$, $P = 0.021$).

Two of personality trait were found positively significant with RDBs, driver anger ($\beta = 0.24$, $P = 0.000$) and sensational seeking ($\beta = 0.13$, $P = 0.000$). It was found that the indirect effect of the three personality traits on road traffic accident were significant, normlessness ($\beta = 0.12$, $P = 0.022$), and sensational seeking ($\beta = 0.064$, $P = 0.037$). The amount of variance in RDBs accounted for by such personality traits as driver anger, sensational seeking and normlessness was 58%. Based on the analysis of structural equation model shows the relationship between personality and RDBs had positive association and as well as both personality and RDBs had positive contribution on accident.



* = statistically significant.

Figure 3: - The final structural equation model of the study with significant standardized path coefficients.

The final SEM equations were:-

$$\text{Risky Driving Behaviors} = 0.14(\text{Sensational Seeking}) + 0.28(\text{Anger}) + 0.23(\text{Normlessness}) + 0.045 (\text{predicated error}) \text{ R-squared} = 0.58$$

$$\text{Road Traffic Accident} = 0.466(\text{RDBs}) + 0.21(\text{Anger}) + 0.14(\text{Sensational Seeking}) + 0.056 (\text{Normlessness}) + 0.059 (\text{predicated error}) \text{ R-squared} = 0.23$$

6. Discussion

The aim of this cross sectional study was to assess the relationship between personality and risky driving behavior and their contribution on road traffic accidents. For this purpose we recruited 374 public transport drivers. About 182 (48.66%) of the study subjects had risky driving behaviors. Speeding and anger personality are the final predictors of road traffic accident. Personality traits were found positively significant with risky driving behaviors and risky driving behaviors were significantly associated with accident. Both personality and risky driving behaviors directly predicted accident with 23% of its variance.

According to the finding from this study the prevalence of risky driving behaviors of public transport drivers was 49 % this proportion was lower when compared to other studies done in Ethiopia. The study conducted in north part of Ethiopia shows little lower when compared to with study with the overall prevalence of 67% (30). In this study found that 204 (54.5%) of them were using mobile phone while driving vehicle, speeding above limit 258 (69%) and 71 (19 %) had an experience of drinking alcohol and driving. This higher compared to with the study carried in Iraq speeding (30.4%) and using a non-hands-free mobile phone (27.7%) but with drunk driving (72.5%) lower (26).

This study found that those drivers with anger personality had 3.45 times higher odds of accident. This is similar finding with the study conducted on Chinese drivers, Arrival-blocking and hostile anger was the strongest predictor of crash risk (36). This finding is consistent with the study of British, found that a strong association between the number of near accidents and occasions of anger a person experiences while driving (37). This would be in the case those drivers with anger personality don't not follow the rule and regulation of traffic, due to they wants to expires their feeling on driving behaviors and this may lead them to accidents.

Speeding found significantly associated with road traffic accident, drivers those drive over speed limit had 2.08 times had higher odds of accident than driver not speedily drove. This finding same with the conducted in Amhara, reported that speeding accounted for 31.5% of all road traffic accidents (29). And this finding will be support with the study conducted in central Ethiopia, excessive speeding significant variable to crash (10).

Two of personality traits had positive association with risky driving behaviors, particularly with sensation seeking ($\beta=0.13$). This result have common finding with the study in Norway, those who scored high on sensation seeking reported more frequent risky driving compared to those who scored low on these variables and they were more often involved in both speeding and ignorance of traffic rules, sensation seeking ($\beta =0.31$) (21). Also on the study of Burns and Wilde had similar finding with our study, that excitement seeking was related to traffic rule violation (35).

Based on the finding of this study those drivers considered with the personality of anger had strong relation with for risky driving behaviors with ($\beta=0.24$). This is nearly similar result with the study's' of Hilde and Rundmo, driver anger ($\beta =0.25$) were associated with risky driving (21). Also the study done in Beijing, China shows support the finding of this study, driver Anger was a significant predictor of risky driving ($\beta=0.145$) (38).

Totally the two personality traits explained an overall 58% of contribution on risky driving behaviors. This is similar finding with the study conducted in Norwegian drivers, with that personality explained 39% of the total variance in risky driving (21). As well as this finding is concurrent with study done in china, the amount of variance in risky driving behaviors accounted for by such personality traits was 21% (39). This shows that the personalities of public transport drivers had more than half of contribution on road traffic accident.

In other hand this study shows that both risky driving behaviors and personality had 23% positive contribution on road traffic accident. This finding is consistent with Norway study; found that risky driving exerted a strong and significant direct effect on accident involvement 41% (21). This finding is in keeping with the study of Da Tao and Rui Zhang; found that risky driving behaviors, license tenure and daily driving time and explained 15% of the total variance in accident risk (39). This implies that both personalities' of the drivers and their driving behavior had role for occurrence of road traffic accident.

7. Strength and Limitation

Strength

- The study was done on public transport drivers; they're the population group that mainly causes road traffic accident.
- In addition to logistic regression, structural equation model was applied to test the relationship.
- The study tried to include major types of public transport vehicles.

Limitation

- A convenient sampling method was used in this research, which might have biased the representativeness of the sample.
- The majority of study population was male, young and minibus vehicle drivers, for this difficult to generalized other driver groups.
- Behaviors were measured of based upon self-report, which may affected by social desirability bias.

8. Conclusion

The study finding shows that the proportion of the public transport drivers with risky driving behaviors and road accident is higher in Addis Ababa. Speeding and anger personality were final significant predictors of road traffic accidents. Personality had significant association on risky driving behaviors. Two of personality traits tested in this study (anger and sensation Seeking) had significant association with risky driving behavior. Especially those drivers with anger personality had higher odds of doing risky driving behaviors and this shows that drivers those react for their feelings goes to risky driving behaviors.

Each risky driving behavior has its own role on road traffic accident but those had participated on excessive speeding had had higher odds of accident than driver not speedily drove. It's known that as increase speed it lead to accident. As well as risky driving behavior personality had significant association with accident, those drivers had anger personality had higher odds of road traffic accident. Overall both personality and risky driving behavior had strong effect on road traffic accident.

9. Recommendation

Based on the evidence, the study recommends the following issues to be given attention by concerned body so as to enhance safety road and for reducing of road traffic accidents among drivers.

For road transport authority

- The authority should design strategy and promote that helps to reduce the excessive speed like making breaker for the road or others.
- Design some training and interventions programs for public transport drivers about how their personality had effect on their driving behavior and as well how risky driving behaviors had effect on road traffic accident.

For traffic polices

- More focus and attention should be given for public transport drivers to enforce to obey traffic rules special speeding.
- Traffic polices should work more at the time transportation activities gets crowed special in morning time and at street road.

For researchers

- Further large cohort studies are needed to identify the impact of personality and risky driving behavior on RTCs.

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11. ANNEXES

Annex 1: Information sheet

Hello, My name isI am here to have an interview with you on behalf of Teyiba Kemal. She is a student of Addis Ababa University School of public health conducting a research on “Role of Personality and Risky Driving Behavior on Road Traffic Accidents among Public Transport Drivers in Addis Ababa, Ethiopia” for partial fulfillment of masters of public health. She received permission from Addis Ababa university school of public health to conduct this study.

You are selected randomly to participate in this study because you are a public transport driver with more than one year driving experience. Your participation in this study is voluntary. If you agree to participate in the study, you will have face to face interview to answer some questions about yourself, your personality, your driving behaviour and your accidental history. The interview with you will take about 30 minutes. It is your right to be willing to participate in the study or not. If you are willing, you have the right to stop at any time or withdraw without giving any reason which you will not be subjected to any ill-treatment. Refusing or not to be the part of the study will not have any problem on your work.

Participating on this study has no direct financial or other things benefits. But relevant information that you will produced for us will be helpful in the prevention of Road Traffic Accident. It also helps policy makers, and researchers to give appropriate attention on issue.

The information that you provide will be kept confidential by not keep a record of your name or address only using code numbers and locking the data. Only the members of the study team will have the access to the non-coded data and the data will not be used for purposes other than the study. Your willingness and active participation is very important for the success of this study.

If you need any further information or explanation regarding to the study, you can have this address to contact.

Name: - Teyiba Kemal

Tel no:- +251933205670 or E-mail:-teyibakemal34@gmail.com

Annex 2: English version Questionnaire

PART ONE: SOCIO DEMOGRAPHIC INFORMATION

No	Question	Possible response	Code
101	Sex	1. Male 2. Female	
102	Age (In full year)	-----	
103	Religion	1. Orthodox 2. Muslim 3. Protestant 5 Others (specify)-----	
104	Marital status	1. Single 2. Married 3. Divorce 4. Other (specify)-----	
105	Education level	1.Primary (1-8) 2.Secondary (9-10) 3. College 4. University and above	
106	Daily income (In birr)	-----	
107	Driving experience (In year)	-----	
108	Commonly time spent on work in a day (hour)	-----	
109	Vehicle ownership	1. Self 2. Employer 3.Others (specify)-----	
110	Vehicle type	1. Sedan/ Saloon 2. Bus 3. Minibus/ Minivan 4. Others (specify)-----	
111	The Module of vehicle (year of manufactured)	-----	

PART TWO: - RISKY DRIVING BEHAVIORS OF DRIVERS AND FACTORS LEADS TO ROAD TRAFFIC ACCIDENT.

No.	Statements	Possible response	Code
201	You drove over the speed limit in areas where it was unlikely that there would be a policeman with speed radar.	1. Often 2. Sometimes 3. Never	
202	You went 10–20 km/h over the speed limit (e.g.62 km/h in a 50 k zone, 112 km/h in a 100 k zone).	1. Often 2. Sometimes 3. Never	
203	You speed up when the traffic light went orange before entering the crossroad	1. Often 2. Sometimes 3. Never	
204	You drove speedily to off crossroad when the traffic light to be turn to red	1. Often 2. Sometimes 3. Never	
205	You drove when the traffic light on red	1. Often 2. Sometimes 3. Never	
206	You drove speedily at night on roads without sufficient lightening	1. Often 2. Sometimes 3. Never	
207	While driving, you make call or receive a call on a mobile that you held in your hands.	1. Often 2. Sometimes 3. Never	
208	while driving you send or read a text message	1. Often 2. Sometimes 3. Never	
209	You drove after you drink alcohol.	1. Often 2. Sometimes 3. Never	
210	You drove chewing or after chewing chat.	1. Often 2. Sometimes 3. Never	
211	When you drive you wear your seatbelt.	1. Often 2. Sometimes 3. Never	
212	You wear a seatbelt even if it's for a short trip.	1. Often 2. Sometimes	

		3. Never	
213	You did an illegal U-turn.	1. Often 2. Sometimes 3. Never	
214	You overtook on the car that on left-hand side.	1. Often 2. Sometimes 3. Never	
215	You drove with many passengers which is more than legally allowed to carry too.	1. Often 2. Sometimes 3. Never	
216	While driving by turn your face you talk with behind or back passengers.	1. Often 2. Sometimes 3. Never	
217	You stop at restricted areas to carry or bring down the passengers	1. Often 2. Sometimes 3. Never	
218	You to notice pedestrians when turning into a side street.	1. Often 2. Sometimes 3. Never	
219	You entered to road, without leaving them sufficient space for the back vehicle	1. Often 2. Sometimes 3. Never	
220	While driving, you change your direction without showing signs	1. Often 2. Sometimes 3. Never	
221	You started your work without taking into account the physical and emotional well-being.	1. Often 2. Sometimes 3. Never	
222	At the time you driving , You drove too close to the vehicle in front	1. Often 2. Sometimes 3. Never	
223	You drove in the road to 'No entry'.	1. Often 2. Sometimes 3. Never	
224	You check rear-view mirror before a maneuver	1. Often 2. Sometimes 3. Never	
225	Have you got punished in the past 3 months?	1. Yes 2. No	Skip 226 if "no"

226	<p>If “Yes” with which of it?</p> <p>Possible more than one response</p>	<ol style="list-style-type: none"> 1. Not wearing seatbelt 2. Talking with cell phone while driving 3. Speeding above limit. 4. Driving after having alcohol 5. Others (specify)----- 	
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PART THREE: PERSONALITY TEST

No.	Statement	Possible Response	Code
301	When you get angry, you flash light or make sound at other drivers	<ol style="list-style-type: none"> 1. Often 2. Sometimes 3. Never 	
302	When you get angry, you drove faster than you was.	<ol style="list-style-type: none"> 1. Often 2. Sometimes 3. Never 	
303	When you get angry, you drove slow down to frustrate the other driver	<ol style="list-style-type: none"> 1. Often 2. Sometimes 3. Never 	
304	When you get angry, you follow right behind the other driver for a long time	<ol style="list-style-type: none"> 1. Often 2. Sometimes 3. Never 	
305	When you get angry, you purposefully block the other driver from doing what they wants to do.	<ol style="list-style-type: none"> 1. Often 2. Sometimes 3. Never 	
306	When you get angry, you do to other drivers what they did to you.	<ol style="list-style-type: none"> 1. Often 2. Sometimes 3. Never 	
307	When you get angry, you try to cut in front of the other driver.	<ol style="list-style-type: none"> 1. Often 2. Sometimes 	

		3. Never	
308	You drove over speed limit as long as you don't cause accident.	1. Often 2. Sometimes 3. Never	
309	While driving, you talk to cellphone using headphone.	1. Often 2. Sometimes 3. Never	
310	You give way for the pedestrians when green light is turned	1. Often 2. Sometimes 3. Never	
311	You want to have a new and exciting ways of driving, even if it's scary	1. Often 2. Sometimes 3. Never	
312	Before start your daily routine, you take account of your vehicle safety.	1. Often 2. Sometimes 3. Never	
313	While driving, sometimes you do things that are not allowed for funny	1. Often 2. Sometimes 3. Never	
314	Are you happy by your driving professional	1. Yes 2. No	
315	You have tendency of changing your emotion or interests frequently	1. Often 2. Sometimes 3. Never	
316	You think that you should have to try anything new once, even if it's dangerous.	1. Often 2. Sometimes 3. Never	
317	Whatever the case, you would like to try out new innovations in life	1. Often 2. Sometimes 3. Never	

318	You like people whose have wild of uninhibited.	<ol style="list-style-type: none"> 1. Often 2. Sometimes 3. Never 	
-----	---	--	--

PART FOUR: ACCIDENT INVOLVEMENT

No	Questions	Possible response	Code
401	Have you had ever faced road traffic accident or crash in the past 1 year?	<ol style="list-style-type: none"> 1. Yes 2. No 3. I don't remember 	If "No" or don't remember" skip this part at all
402	How many times?	<ol style="list-style-type: none"> 1. One time 2. Two times 3. Three and more times 	
403	What kind of accident it was? If it's more than one choose the worst accident of all	<ol style="list-style-type: none"> 1. Sever (serious injury) 2. Moderate (minor Injury plus property damage) 3. Mild (property damage only) 	
404	By the law who were taken too accounted for occurs of accident?	<ol style="list-style-type: none"> 1. Your-self 2. Other driver 3. Pedestrians 	
405	Where did the accidents happen?	<ol style="list-style-type: none"> 1. Street road 2. Curved road 3. Intersection 4. Others(specify)----- 	
406	At what time it happen?	<ol style="list-style-type: none"> 1. Morning (12- 6) 2. Afternoon (6- 12) 3. Night time (12-12) 	

Thank you very much!

Annex 3: Amharic version of information sheet

አዲስ አበባ ዩኒቨርሲቲ

ህብረተሰብ ጤና ሳይንስ ኮሌጅ

የመጠየቂያ /መረጃ ቅፅ /

ጤና ይስጥልኝ፤ ስሜ _____ ይባላል። የመጣሁት በአዲስ አበባ ዩኒቨርሲቲ ህብረተሰብ ጤና ሳይንስ ተማሪ የሆነችውን ጠይባ ከማልን ወክዬ ነው። የሁለተኛ ድግሪ መመረቂያ ጥናቷን የምትሰራው “ Role of Personality and Risky Driving Behavior on Road Traffic Accidents among Public Transport Drivers in Addis Ababa, Ethiopia” ጥናቱን ለማድረግ ከአዲስ አበባ ዩኒቨርሲቲ የህብረተሰብ ጤና ትምህርት ክፍል ይህን ጥንኦት እንድትሰራ ፍቃድ አግኝታለች።

እርስዎ የተመረጡት ምክንያት ከ1 አመት በላይ የማሽከርከር ልምድ ስላሉትና በህዝብ ትራንስፖርት አገልግሎት ላይ ስለሚሰሩ ነው። እርሶ በዚህ ጥናት ላይ ምትሳተፊት መረጃ በመስጠት ነው፤ ይህም የሚሆነው ሙሉ ለሙሉ ፍቃደኛ ከሆናችሁ ብቻ ነው። ማለትም በዚህ ጥናት ላይ የመሳተፍ ወይም አለመሳተፍ ሙሉ መብት አሎት እንዲሁም ለመሳተፍ ፈቃደኛ ከሆኑ በኋላ በፈለጉት ጊዜ ማቋረጥ ወይም ማቆም ይችላሉ፤ ይህም በጥናቱ አለመሳተፍ የሚደርስበት ጉዳት የለም፤ ለመሳተፍ ከተስማሙ ጥናቱ ላይ 30 ደቂቃ የሚፈጅ ቃለ መጠይቅ አለ።

ከዚህ ጥናት የተሰበሰበው መረጃ ሙሉ ሚስጥራዊነቱ የተጠበቀ ይሆናል፤ መጠይቁ ላይ ስምዎንም ሆነ ስለ እርስዎ የሚገልፅ ነገር መፃፍ አያስፈልግም፤ ከጥናት ቡድኑ ውጪ ማንም የተሰበሰበውን መረጃ ማግኘት አይችልም። እንዲሁም መረጃው ከጥናቱ አላማ ውጪ ለምንም አንጠቀምበትም። የእርስዎ ጥያቄዎችን በትክክል መመለስ የጥናቱ ዓላማዎች ተደራሽ እንዲሆኑ ስለሚያደርግ በፈቃደኝነትና በትእግስት ለጥያቄዎቹ ሀቀኛ መልስ እንዲሰጡ በትህትና ይጠየቃሉ።

ስለ ጥናቱ ጥያቄ ወይም ተጨማሪ መረጃ ከፈለጉ በዚህ አደራሻ መጠየቅ ይችላሉ።

ስም:- ጠይባ ከማል

ስልክ ቁጥር:-0933205670

ኢሜል:-teyibakemal34@gmail.com

Annex 4: Amharic version of questionnaire

ክፍል አንድ: ስለ አኗኗር ሁኔታ

ቁ.	ጥያቄ	መልስ	ክፍል
101	ጾታ	1.ወንድ 2.ሴት	
102	እድሜ	-----	
103	ሃይማኖት	1. ኦርቶዶክስ 2. ሙስሊም 3. ፕሮቴስታንት 4. ሌሎች (ይግለጹ)-----	
104	የጋብቻ ሁኔታ	1.ያላገባ/ች 2.ያገባ/ች 3.የፈታ/ች 4. ሌሎች (ይግለጹ)-----	
105	የትምህርት ደረጃ	1.አንደኛ ደረጃ (1-8) 2.ሁለተኛ ደረጃ (9-10) 3.ኮሌጅ 4. ዩኒቨርሲቲ እና በላይ	
106	ዕለታዊ ገቢ (በብር)	-----	
107	ስንት አመት አሽከርካሪዎል (በአመት)	-----	
108	በቀን በአማካይ ስንት ሰዓት በስራ ላይ ይወለሉ (ሰዓት)	-----	

109	የተሽከርካሪ ባለቤቶች	1. የራስ 2. ተቀጣሪ 3. ሌሎች (ይግለጹ)-----	
110	የተሽከርካሪ ዓይነት	1. ታክሲ (አውቶሞቢል) 2. አውቶብስ 3. ሚኒቦስ 4. ሌሎች (ይግለጹ)-----	
111	የተሽከርካሪ ሞዴል (የተመረጠ አመት)	-----	

ክፍል ሁለት : አደገኛ የመንዳት ልምምድ እና የመኪና አደጋ ምክንያቶች

ቁ.	ጥያቄ	መልስ	ኮድ
201	ራዳር የያዘ የትራፊክ ፖሊስ በማይኖርበት ቦታዎች ከፍጥነት ገደብ በላይ ያሽከረክራሉ	1. ብዙ ጊዜ 2. አንዳንድ ጊዜ 3. በጭራሽ	
202	ከ10-20ኪሎ ሜትር በሰአት ከፍጥነት ገደብ በላይ ያሽከረክራሉ	1. ብዙ ጊዜ 2. አንዳንድ ጊዜ 3. በጭራሽ	
203	መስቀለኛ መንገድ ስይገቡ የትራፊክ መብራት ብርቱካናማ ሲሆን ፍጥንቶን ጨምረው ያሽከረክራሉ	1. ብዙ ጊዜ 2. አንዳንድ ጊዜ 3. በጭራሽ	
204	የትራፊክ መብራት ወደ ቀይ ሊቀየር ሲል ከመስቀለኛ መንገድ ለመውጣት በፍጥነት ያሽከረክራሉ	1. ብዙ ጊዜ 2. አንዳንድ ጊዜ 3. በጭራሽ	
205	የትራፊክ መብራት ቀይ እያበራ ሳለ ያሽከረክራሉ	1. ብዙ ጊዜ 2. አንዳንድ ጊዜ 3. በጭራሽ	

206	ማታ ያለበቂ ብርሃን በፍጥንት ያሽከረክራሉ	1. ብዙ ጊዜ 2. አንዳንድ ጊዜ 3. በጭራሽ	
207	እያሽከረከሩ በተንቀሳቃሽ ስልክ ያወራሉ	1. ብዙ ጊዜ 2. አንዳንድ ጊዜ 3. በጭራሽ	
208	እያሽከረከሩ የአጭር ጽሑፍ መልእክት ይልካሉ ወይም ያነባሉ	1. ብዙ ጊዜ 2. አንዳንድ ጊዜ 3. በጭራሽ	
209	አልኮል ጠጥተው ያሽከረክራሉ	1. ብዙ ጊዜ 2. አንዳንድ ጊዜ 3. በጭራሽ	
210	ጭት እየቃሙ ወይም ቅመው ያሽከረክራሉ	1. ብዙ ጊዜ 2. አንዳንድ ጊዜ 3. በጭራሽ	
211	በሚያሽከረከሩ ጊዜ የደህንነት ቀበቶዎን ያስራሉ	1. ብዙ ጊዜ 2. አንዳንድ ጊዜ 3. በጭራሽ	
212	ለአጭር ጉዞ ቢሆንም የደህንነት ቀበቶዎን ያስራሉ	1. ብዙ ጊዜ 2. አንዳንድ ጊዜ 3. በጭራሽ	
213	ህገ-ወጥ "U-turn" ያደርጋሉ	1. ብዙ ጊዜ 2. አንዳንድ ጊዜ 3. በጭራሽ	
214	በእርሶ በግራ ባለ ተሽከርካሪ ላይ ይደርባሉ	1. ብዙ ጊዜ 2. አንዳንድ ጊዜ 3. በጭራሽ	
215	ከተፈቀደው መጠን በላይ ተሳፋሪዎች ጭነው ያሽከረክራሉ	1. ብዙ ጊዜ 2. አንዳንድ ጊዜ 3. በጭራሽ	
216	እያሽከረከሩ ፊቶን አተረው ከጎን ወይም ከጀርባ ካለ ተሳፋሪ ጋር	1. ብዙ ጊዜ 2. አንዳንድ ጊዜ	

	ያወራሉ	3. በጭራሽ	
217	በተከለከለ ቦታ ላይ አቁመው ተሳፋሪ ይጫናሉ ወይም ያወርዳሉ	1. ብዙ ጊዜ 2. አንዳንድ ጊዜ 3. በጭራሽ	
218	የመንገዱን ጥግ ሲይዙ እግረኛ መኖሩ አለመኖሩን ያስተውላሉ	1. ብዙ ጊዜ 2. አንዳንድ ጊዜ 3. በጭራሽ	
219	ከጀርባ ላለ ተሽከርካሪ በቂ ቦታ ሳይተዉ ወደ መንገዱ ይቀላቀላሉ	1. ብዙ ጊዜ 2. አንዳንድ ጊዜ 3. በጭራሽ	
220	ሲያሽከረክሩ ምልክት ሳያሳዩ አቅጣጫዎን ይቀይራሉ	1. ብዙ ጊዜ 2. አንዳንድ ጊዜ 3. በጭራሽ	
221	ለእለቱ ስራ የአካል እና የስሜት ብቁነትዎን ከግምት ሳይስግቡ ስራዉን ይጀምራሉ	1. ብዙ ጊዜ 2. አንዳንድ ጊዜ 3. በጭራሽ	
222	በሚያሽከረክሩ ጊዜ ፊት ለፊት ካለተሽከርካሪ በጣም ቅርብ በመሆን ያሽከረክራሉ	1. ብዙ ጊዜ 2. አንዳንድ ጊዜ 3. በጭራሽ	
223	በሚያሽከረክሩ ጊዜ መግባት በተከለከለበት መንገድ ላይ ያሽከረክራሉ	1. ብዙ ጊዜ 2. አንዳንድ ጊዜ 3. በጭራሽ	
224	ከመንሳቶዎ በፊት የኋላ መመልከቻ መስታወት ይጠቀማሉ	1. ብዙ ጊዜ 2. አንዳንድ ጊዜ 3. በጭራሽ	
225	እርሶ ባለፈው ሶስት ወር ውስጥ ተክሶው ያዉቃሉ	1. አዎ 2. አይ	አይ ከሆነ መልስ 226 ያዘላሉ
226	አዎ ከሆነ መልስ ፣ በየትኛው ነው (አንድ በላይ መልስ ይቻላል)	1. ቀበቶዎን በልማስረዎት 2. ስልክ በማወራት	

		3. በፍጥነት በማሸከረክራ 4. አልኮል ጠጥቶ በማሸከረክራ 5. ሌሎች (ይግለጹ)-----	
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ክፍል ሶስት-የግለሰብነት

ቁ	ጥያቄ	መልስ	ኮድ
301	ሲናይዱ መብራት ወይም ድምፅ ሌሎች አሸከርካሪዎች ላይ ያደርጋሉ	1. ብዙ ጊዜ 2. አንዳንድ ጊዜ 3. በጭራሽ	
302	ሲናይዱ በፊት ከሚያሸከረክሩበት ፍጥነት በላይ በፍጥነት ያሸከረክራሉ	1. ብዙ ጊዜ 2. አንዳንድ ጊዜ 3. በጭራሽ	
303	ሲናይዱ ሌላውን አሸከርካሪ ለማበሳጨት ቀስ ብለው (ፍጥነታዎን በጣም ቀንሰው) ያሸከረክራሉ	1. ብዙ ጊዜ 2. አንዳንድ ጊዜ 3. በጭራሽ	
304	ሲናይዱ ለረዥም ጊዜ ከሌሎች አሸከርካሪዎች ጀርባ ይከተላሉ	1. ብዙ ጊዜ 2. አንዳንድ ጊዜ 3. በጭራሽ	
305	ሲናይዱ ሆን ብለው ሌላ አሸከርካሪ ማድረግ የሚፈልገውን ነገር እንዳያደርግ ያሸከረክራሉ	1. ብዙ ጊዜ 2. አንዳንድ ጊዜ 3. በጭራሽ	
306	ሲናይዱ ሌሎች አሸከርካሪዎች በእርሶ ላይ ያደረጉትን ለማድረግ ይፈልጋሉ	1. ብዙ ጊዜ 2. አንዳንድ ጊዜ 3. በጭራሽ	
307	ሲናይዱ በሌላው አሸከርካሪ በፊት ለመቁረጥ ይሞክራሉ	1. ብዙ ጊዜ 2. አንዳንድ ጊዜ 3. በጭራሽ	
308	አደጋ እስካላስከተሉ ድረስ ከፍጥነት ገደብ በላይ ያሸከረክራሉ	1. ብዙ ጊዜ 2. አንዳንድ ጊዜ 3. በጭራሽ	
309	እያሸከረከሩ በኤርፎን ወይም ከእጅ ነፃ አማካኝነት ስልክ	1. ብዙ ጊዜ 2. አንዳንድ ጊዜ	

	ያናግራሉ	3. በጭራሽ	
310	አረንጓዴ መብራት በርቶ ለእግረኞች ቅድሚያ ይሰጣሉ	1. ብዙ ጊዜ 2. አንዳንድ ጊዜ 3. በጭራሽ	
311	አዳዲስ እና አስገራሚ የአነጻጽ ስልቶች እንዲኖረዎታ ይፈልጋሉ ምንም ያህል አስፈሪ ቢሆንም	1. ብዙ ጊዜ 2. አንዳንድ ጊዜ 3. በጭራሽ	
312	የእለት ስራዎን ከመጀመርዎ በፊት የመኪናዎን ደህንነት ከግምት ያስገባሉ	1. ብዙ ጊዜ 2. አንዳንድ ጊዜ 3. በጭራሽ	
313	በሚያሽከረክሩበት ጊዜ አንዳንድ ለመሰቅ ወይም ለመዝናናት ብለው ያልተገቡ ነገሮችን ያደርጋሉ	1. ብዙ ጊዜ 2. አንዳንድ ጊዜ 3. በጭራሽ	
314	በማሽከርከር ሙያዎ ይደሰታሉ	1. በጣም 2. ብዙ አይደለም 3. በጭራሽ	
315	ስሜቶን /ፍላጎቶን/ ቶሎ ቶሎ የመቀየር ዝንባሌ አለዎት	1. በጣም 2. አንዳንድ ጊዜ 3. በጭራሽ	
316	ምንም ነገር አይገኝ ቢሆንም አንዴ መሞከር አለብኝ ብለው ያስባሉ	1. በጣም 2. አንዳንድ ጊዜ 3. በጭራሽ	
317	ምንም ይሁን ምን በህይወቶ አዳዲስ የለውጥ ሀሳቦች / ተግባራቶች ን/ መሞከር ይወዳሉ	1. በጣም 2. አንዳንድ ጊዜ 3. በጭራሽ	
318	ከማህበረሰቡ ውጣ ያለ አስተሳሰብ ያላቸው ሰዎች ደስ ይሉታል	1. በጣም 2. አንዳንድ ጊዜ 3. በጭራሽ	

ክፍል አራት : የመኪና አደጋ

ቁ	ጥያቄ	መልስ	ኮድ
401	ባለፉት 1 አመት የተሸከርከረ አደጋ አጋጥሞት ያቃል?	1. አዎ 2. አይ	አይ ከሆነ መልሱ ይህን ክፍል ያዘለሉ
402	ምን ያህል ጊዜ አጋጥሞታል?	1. አንድ ጊዜ 2. ሁለት ጊዜ 3. ሶስት እና ከዛባይ	
403	ምን ዓይነት አደጋ ነበር? ከአንድ በላይ ከሆነ ከባድን ያምረጡ	1. ከባድ (ከባድ ጉዳት) 2. መካከለኛ (አነስተኛ ግጭት እና የንብረት መጥፋት) 3. ትንሽ (የንብረት መጥፋት)	
404	በህጉ መሰረት ለአደጋው ተጠያቂ ማን ተደረገ?	1. እራስዎ 2. ሌላ አሽከርካሪ 3. መንገደኛ	
405	አደጋው የተከሰተው የትነው?	1. ዋና መንገድ 2. መጠማዘዥ መንገድ 3. መተላለፊያ መንገድ 4. ሌሎች (ይግለጹ)-----	
406	አደጋው መቼ ነው የተከሰተው?	1. ጠዋት (ከጠዋቱ12- ቀን 6) 2. ከሰዓት (ከቀን 6 - ማታ12) 3. ማታ ጊዜ (ከማታ12 - ጠዋቱ12)	

በጣም እናመሰግናለን!

Principal investigator's curriculum vitae

1. Personal information

- Full name: **TEYIBA KEMAL KEBEDE**
- Sex: Female
- Date of birth: August 1, 1996 G.C
- Place of birth: West Arsi, Shashemene.
- Marital status: Single
- **Current address:** Addis Ababa

Mobile No.:+251-933-205670

E mail: teyibakemal34@gmail.com

2. Languages

L a n g u a g e	L i s t e n i n g	S p e a k i n g	R e a d i n g	W r i t i n g
A f a n O r o m o	Excellent	Excellent	Excellent	Excellent
A m h a r i c	Excellent	Excellent	Excellent	Excellent
E n g l i s h	Excellent	Excellent	Excellent	Excellent

3. Educational Back ground

- University: BSc degree in Public Health Officer from Dilla University (From 2013 to 2017G.C)
- Certificate on scientific writing and communication
- Diploma certificate in information and communication technology
- Preparatory school: Hawi Boru Academy (From 2009 to 2012 G.C)
- Primary and Secondary school: Mission catholic (From 2001 to 2008 G.C)

4. Work experience and Competencies

- **As Intern:** at Dilla University Referral hospital and OPD clinician in health center at Dilla districts for 12 months.
- **As clinician professional:** at Atnasia Internal Medicine Specialty clinic found in Addis Ababa for 2 years.

❖ Technical skills and competencies

- Work in team and individually to maintain quality management.
- Develop and maintain strong collaborative relationships with partner staff, grantors and all stake holders.
- Complete and timely reporting skill for evidence based decision making.
- Very good team working sprit.
- Very good computer skills (MS- word, excel, access, power point)
- Very good experience on data entry and analysis softwares like Epidata, SPSS, Stata and Open code.

5. Hobbies

- Reading self-help books, watching movies and motivational speech and helping people who need my hand.

6. References

6.1. Dr. Moges Teshome (Medical Doctor, Internist)

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6.2. Dr. Teferi Abeza (PHD in public health specialty in environmental health)

Mobile: +251911361607

Primary advisor's Curriculum Vitae

Personal Information

Name: Teferi Abegaz (PhD)

Date of birth: December 31, 1978 GC

Place of birth: South Wollo, Hike

Marital status: Married

Nationality: Ethiopian

Education

✚ **PhD in public health:** Addis Continental Institute of Public Health and Hawassa University September 2011-June 2014.

Research interests: Injury, Road safety, Occupational Safety and Health

Dissertation: *Epidemiology of Road Traffic Accidents: Trends, Reporting Completeness and Crash Severity in Ethiopia*

✚ **Masters degree in public health (Environmental Health Specialty):** Addis Ababa University, 2005-2007 GC.

✚ **BSc degree in environmental health sciences:** Jimma University, 2002-2005 GC.

✚ **Diploma in Sanitary Science:** Jimma Institute of Health Sciences, 1995-1997 GC

Service and Affiliations

- March 2018 till now as an assistant Professor of Public Health, Addis Ababa University, School of public Health (Currently MPH Program Coordinator)
- June 2014 GC to February 2018 as an assistance professor of Public Health and Postgraduate coordinator of the school of public and environmental health, Hawassa University.
- August 1, 2008- June 9, 2014 GC, as a lecturer in Hawassa University.
- August 7, 2007- July 30, 2008 GC, as a lecturer and dean, health science faculty in Jijiga University
- October 2000-Augest 2002GC, as environmental health expert of Shebedino District Health Office
- January 1998-september 2000 GC, as health inspector and water and sanitation coordinator in Bensa District Health Office, Sidam Zone.

Teaching and Mentoring

- ✚ Giving lecture on Epidemiology, Research Method, Scientific Writing, Environmental Health, Occupational Health for different postgraduate students
- ✚ Primary Advising for MPH, Field Epidemiology, Emergency surgery, Resident students
- ✚ Co-Advising PhD student in public health
- ✚ Mentoring field epidemiology students

References

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LETTER OF DECLARATION

I, undersigned MPH student hereby declared that this is entirely my original work and I am the sole author of this thesis titled “Personality and Risky Driving Behavior and their Contribution on Road Traffic Accidents among Public Transport Drivers in Addis Ababa, Ethiopia” To the best of my knowledge this thesis contains no material previously published by any other person except where due acknowledgment has been made. All other’s ideas and words used to support my thesis development have been properly cited according to the good scientific practice. This thesis has been accepted as a partial fulfillment of the requirement for the degree of master in Public Health, which has never been presented and submitted in a whole or in part, in this or any other University for the award of degree, diploma or other qualification certificates.

I have attempted to identify all the risks related to this research that may arise in conducting it, obtained relevant ethical/safety approval, and acknowledged my obligations and the rights of participants. This thesis has been submitted in printed and electronic form. I hereby conform that the content of both printed version and electronic version are the same. I understand that the provision of incorrect information may have legal consequences.

Name:- Teyiba Kemal Kebede (BSc.)

Date of submission: October 30, 2019

Signature: _____

Approval of the Primary Advisor

This thesis work has been submitted for examination with the approval of my University primary advisor

Name of the Primary Advisor: - Dr. Teferi Abegaz (PhD)

October 31, 2019

Signature

Date