TRAFFIC KNOWLEDGE OF DRIVERS IN JORDAN

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تعتمد كلية الدراسات العليا
هذه النسخة من الرسالة
التوقيع ..... التاريخ .....

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ABSTRACT

This study handles the subject of the traffic awareness in Jordan. It aims to study a group of variables affecting the traffic awareness in the Jordan Kingdom. This study covered cities in Jordan such as: Amman (the capital), Al-Zarqa and Irbid. The factors studied involved twelve variables, including: age, gender, license category, social status, salary, year of obtaining license, accidents number and type.

Six hundred drivers were randomly selected from the above-mentioned cities. They were given questionnaires with twenty-five questions. Results were concluded and the relations between the variables and the traffic awareness were found out based on the analysis of variance (ONE_WAY ANOVA) by using the statistical software; It was found out that there is a relation between the driver age and the traffic awareness level and there are other relation connecting the license year of issue and the traffic awareness level. The study came up with several recommendations including: reducing the license duration validity to be five years instead of ten and obliging the drivers to have the theoretical test upon the license renewal.

1 Introduction

1.1 Introduction

One of most noticeable stories in the media these days is that for every 11 hours in Jordan, one person is killed as a result of a traffic accident. A close look at the statistics reveals that 818 people were killed in 2004 from traffic accidents, 2,451 people had serious injuries and 14,276 people escaped with minor injuries. Furthermore, the statistics reveals there is an accident every 7.5 minutes in this country.

Contrary to what the average person believes, compared to other countries, Jordan does not have large traffic movement to justify the high accident fatality and injury rates stated above. Therefore it seems that the high accident rate must be due to other factors. Some possible factors contributing to the traffic accidents could include the drivers' low level of traffic knowledge or the lack of traffic enforcement and observation on the part of police department and/or the geometric design of the roads. Recent data and research suggests that the largest influence determining the number of the traffic accidents on the road are a result of deficient traffic and driving knowledge by the drivers coupled with lack of constant educational refreshment offered to the licensed drivers.

The Jordan Traffic Institute has recently held conferences in order to concentrate on ways of improving drivers' awareness and knowledge. Its findings were broadcast on jordanina

television and radio. This research is focused on the subject of how traffic knowledge can play a role in reducing traffic fatalities and injuries by raising the awareness of drivers.

1.2 Study objectives

The main objective of this research is trying to minimize accident's rate in Jordan by considering the traffic knowledge as a safety problem in Jordan. Specific objectives include:-

1- Evaluating the existing level of traffic knowledge of drives in Jordan using a questionnaire consisted of 25 questions which were selected from Jordanian written driver's license examination.

2- Studying the different variables that could affect the knowledge level of drivers; such as the drivers' history of accidents, the year of obtaining the driving license, the driver's age, gender, category of the driving license, vehicle driven classification, social status, vehicle category, type of the accident, driver's education, salary and geographical place.

3. Comparing drivers' traffic knowledge among different Jordanian cities.

The major contribution of this study is that:

1- It surveys 600 different drivers in three different cities in Jordan. While other studies survey 55 such as study was conducted by Awad.W and Rasoul.M.

2- Data obtained in this research was evaluated based on 12 different factors while other used 6 factors.

3- The questions of the questionnaire were selected in cooperation with the Jordan Traffic Institute.

4- It determines if there is any relations exist between the level of driver knowledge and the number of accidents made in the past.

The thesis consists of five chapters; chapter one is general introduction, chapter two discusses the related literature where twenty studies were conducted on traffic awareness. Chapter 3 shows the way of collecting the data for this study including the adopted questionnaire. Chapter four shows the survey results for this questionnaire and the different relationships between the traffic awareness and the other factors affecting it. The last chapter presents the different conclusions obtained from the results and states some recommendations.

2 Literature Review

A study was conducted by Awad.W and Rasoul.M (1998); to investigate drivers' traffic knowledge in Jordan proper traffic legislation is essential to provide smooth and safe traffic operation for societies in the 2l century and to keep pace with global economic competition. An experiment was conducted in which 55 subjects with current driver licenses were administered a test comprised of 25 questions selected from the actual Jordanian Driver's license exams. Statistical analyses were then conducted on the results. It was found that a shocking 96.4% of the drivers in this study failed to pass the simulated written driver's license exam, with professional drivers scoring worse than non-professional drivers. Based on the findings, recommendations were made regarding Jordanian public policy governing driver licensing, including more frequent retesting of drivers, a higher standard of knowledge of traffic rules, and a nationwide program to assess the relationship between driver knowledge, driver behavior, and crash and fatality rates.

However, the current research dramatically illustrates one crucial factor, which may well be contributing to Jordan's traffic fatality rate. Fully 96.4% of the licensed drivers' in this study failed to pass a simulated Jordanian written driver's license examination. Such an appalling, widespread lack of knowledge about elementary traffic rules and regulations represents a potentially substantial assault on traffic safety in Jordan.

While neither age nor length of driving experience was related to such knowledge, both level of education and type of driver (professional versus non-professional) were. These findings indicated that professional drivers, primarily bus and taxi cab drivers, i.e. the group of drivers to whom the safety of the public is most entrusted, demonstrated significantly less knowledge of basic traffic rules and regulations than non-professional drivers.

A study was conducted by AL-Omari and Barqawi (2000); to measure driver understanding of traffic control devices which are an important part of traffic knowledge the main purpose of this study was to investigate the efficiency of traffic signs in Jordan through measuring their comprehension by the driver population. A survey form, consisting of 30 selected traffic signs (warning, regulatory, and guide signs), was distributed to 1017 persons in Jordan with respect to the following demographic and socioeconomic characteristics: age, gender, education, the year of obtaining the driving license, category of the driving license, type of vehicle they drive, practice of driving, nationality, area of residence place, involvement in previous accidents, drivers problems and a sample of people who do not have a driving license.

The drivers who got the licenses "in the 1970s or before" scored the worst with comprehension level of 50.79 %. The drivers who got their driving licenses "in the 1980s" had a comprehension level of 62.02 % and those who got their driving licenses "in the 1990s" had a comprehension level of 64.71 %.

One factor for these scores is that when the years pass, the person starts to forget the meaning of the traffic signs, especially signs which are rarely seen on the roads. The comprehension levels for the age categories: 18-24, 25-30, 31-40, 41-50, 51 + were 65.76, 64.88, 64.06, 56.93 and 47.38 % respectively. It can be seen that the youngest drivers (18-24) had the highest comprehension level. As they become older, they tend to forget the meanings of some traffic signs with lower comprehension levels of 64.88 and 64.06 % for the age groups 25-30 and 31-40 respectively. The trend continues, reaching a comprehension level of 56.93 % for the age group 41-50 and 47.38 % for the age group 51 and older.

The "females" category had a comprehension level of 65.64 % which was slightly higher than that for the "males" category that had a comprehension level of 63.42 %.Among all the previous categories, the ones found to best recognize most of the traffic signs correctly were the "Ph.D. graduates", followed by the "MS graduates", and then the "tourists". On the ether hand, "people who do not have driving licenses" got the worst scores, followed by the "illiterates and primary school graduates" and then the "51 years old or older" category.

Among the 30 selected signs, the ones that were classified as the most unknown to drivers were the "uneven road" sign; followed by the "side obstacle ahead" marker, and then the "low flying aircraft" sign. The results of this study showed that there is a real need to redesign, modify and improve some of the traffic signs and to educate drivers to better understand the meanings of all traffic signs.

A study was conducted by Salim.J and Al-brahim.M (2000); to measure traffic knowledge of repeated violation drivers who participated in a course of points for drivers who have repeated violations. This study considered four factors; age, sex, license classification and scientific qualification. In general it noted the weakness of traffic knowledge level, where 79% of drivers had weakness in understanding traffic rules and 13.7% had an acceptable understanding of traffic rules. The weakness of understanding traffic rules could the reason for the increase in the rate of different traffic violations.

This study did not find any relation between any of the four factors and traffic knowledge of repeated violation drivers. There was an increase in traffic knowledge by drivers of repeated violations after they had finished the course in the Jordan Traffic Institute. The rate of acceptable traffic knowledge level increased from 13.7% to 29.8 %, and the weakness level decreased from 79% to 16% after they finished the course. They found that 75% of those taking the course didn't make any violations for four months because of the increased level of traffic knowledge by those drivers.

A study was conducted by Tarawneh.M, Tayeh.L and Al-Shoubaki (2002); as part of a graduate project to measure traffic knowledge of 200 Jordanian drivers. Twenty five questions were selected from the Nebraska Road User Manual to evaluate their traffic knowledge. This study showed 74.6% of Jordanian drivers failed to answer correctly the questions of the questionnaire. It has depended on six factors; age, sex, education level, license classification, the year of obtaining the driving license and violation points. By using chi-square test, found no significant relationship among all the variables except for violation points which has been found to be correlated with the level of drivers' knowledge.

A study was conducted by Robert E. Dewar, Donald W. Kline and H (1995); to evaluate the level of comprehension of virtually all the symbolic highway signs in the U.S. Manual on Uniform Traffic Control Devices among young, middle- aged, and elderly drivers. The specific study described here is one of a larger set of studies that examined not only symbol comprehension but also visibility distance under day, night, and night-with-glare conditions, reaction time, glance legibility. The dramatic increase in the number, as well as the proportion, of elderly (typically defined as those over 65) people in the U.S.A that has occurred over the past few decades will continue for some time to come.

Data indicates that the percentage of people in the U.S.A over 70 who had driver licenses has doubled from the early 1950s to 1984. In the research for this study, Dewar et al examined comprehension levels of virtually all (85) of the symbols in the U.S. Manual on Uniform Traffic Control Devices as a function of age. New versions of 13 of these symbols, as well as 5 "novel" symbols, were also tested. Drivers in Texas, Idaho, and Alberta, Canada, participated in the studies. This study confirms what previous research has shown: older drivers have poorer understanding of traffic symbols than younger drivers do.

A Study was conducted by Lic. Maria Cristina Isoba (1991); to measure the relationship between the theoretical known knowledge and behaviors in traffic, the hypothesis was that the high accident rate originating mainly from the lack by information of the population regarding safe behavior in traffic, is the result of a total lack of traffic education, both systematically and occasionally, in elementary and high schools in Argentina, and a lack of training of drivers, who got their licenses with little more than complying with administrative requirements and, sometimes, by showing a basic control over their vehicle in a closed course.

Information was gathered by means of surveys made among drivers over 18-years-old touching some key topics (traffic lights, seat belts, alcohol, speeding, circulation on bicycles, helmet use when riding motorbikes, causes of accidents, etc.). These surveys consisted of two sets of questions with multiple choice answers: "Diverse topics on security and traffic education," given to 628 drivers, from August to October 1991, and "Food habits and driving," given to 612 drivers, from May to July 1992, in the city of Buenos Aires and outskirts. This information was compared with numerous systematic observations made in traffic of specific behaviors on each one of these topics.

There were five systematic observations carried out in 1991, 1992, and 1995 which involved over 30,000 circulating vehicles, in the same area. The most important issues on surveying drinking and driving showed that 92% of those surveyed knew that "drinking a couple of glasses of wine or any other alcoholic drink affects the reflexes needed to drive." However, in a survey of food habits and driving 83% admitted to "driving after drinking alcohol." 76% knew that "driving at a higher speed than stipulated" increased the risk of traffic accidents. However, in a survey on their habitual speed when driving in highways, 45% admitted to driving at "130 km/h or more on highways." 71% of those surveyed with children in cars answered that "little children are unsafe in front seats". However, 42 % of parents carried their children on the front seat of the car. 67% of the population knew that "the seat belt protects the occupants of vehicles in traffic accidents," but only 3% of this same population wore seat belt at that time.

A study was conducted by University of Bahrain (2003); to study the relationship between drivers' understanding of posted signs in three of the Gulf Cooperation Council (GCC) states, Bahrain, Qatar and the United Arab Emirates (UAE), and some of their safety related characteristics. These characteristics are: driving experience, accident involvement, experience per accident, citations received in the last 3 years on speed limit violations, and seat belt usage. A total of 28 posted signs were investigated. These were categorized as warning and regulatory. To achieve the above goals a questionnaire, specially prepared to collect the necessary data, was distributed to over 6000 drivers in the three states. Over 2820 (47%) responded. Comprehension of posted signs for drivers with many years of driving experience proved to be significantly better than those with lesser experience. However, the results revealed no significant influence on their accident involvements, even when the effect of age was incorporated or experience per accident ratios, or speed citations. Further, the seat belt usage was also found to increase with understanding of posted signs.

A study was conducted by University of Bahrain (2002); to investigate the role of age, marital status, gender, nationality, educational background and monthly income in drivers' comprehension of traffic signs. The populations sampled here were from five Arabian Gulf Countries. A total of 28 symbolic warning and regulatory signs were investigated. A questionnaire specially prepared to collect the necessary data was distributed to over 9000 drivers in the five countries. 4774 responded (53%). The results indicated substantial problems with the level of comprehension among the drivers about the traffic signs. The percentages of drivers who correctly identified the regulatory signs and warning signs were around 55% and 56%, respectively.

Age, gender, education and income played major roles in determining drivers' comprehension of signs, whereas marital status had no significant effect. Drivers who were young, female, those with lower levels of education or lower incomes understood the signs significantly worse than drivers who were older, male, with higher levels of education or higher incomes. Drivers from Europe and USA were significantly better than Asian and Arab drivers. These findings are believed to be important for the designers of road signs for international applications.

A study was conducted by Luchemos Por La Vida is a nongovernmental organization (2002); which gathered information by means of a survey of adult users of public roads (drivers) about their knowledge on several key subjects like traffic lights, safety belts, drinking and driving, speeding, bike riding, helmet use for motorbike riders, and causes of accidents. This information was cross-related with the results of systematic observations of some specific behaviors in traffic. The results showed that there was a contradiction between the "theoretical" knowledge (which was superficial and not systematic) and the real behavior of road users. On the other hand, the study of the correlation between serious traffic violations committed and records taken by the enforcement authorities showed important deficiencies in the enforcement system.

From the information, the conclusion was that the knowledge which most of the population has about traffic safety is superficial, fragmented, incomplete, and is not put into practice. This knowledge is not reflected in road use behavior. The serious lack of control and law enforcement aggravates the situation creating a virtual condition of "anarchy" where each individual is left to himself or herself, without clear directions, to determine how to behave in traffic.

A study was conducted by Ka-hung Lai (2002); to examine driver comprehension of the traffic information that is presented in three formats, namely, the numerical format, the description format, and the switch-on-light format. A stated preference survey with well designed attributes regarding travel conditions and comprising a total of 475 successful cases for Hong Kong drivers has been conducted for this purpose.

Binary log it models with respect to drivers' traveling preferences of two designated routes under different traffic conditions were developed and found to have considerably high goodness-of-fit statistical values. The final models were specified with 11 variables. The explanatory variables employed in the models include those referring to respondents' socioeconomic background and those characterizing the transport network. Based on the findings, it is possible to conclude that drivers have different comprehension of the formats for presenting traffic information on variable message signs, and the message formats can induce biases toward a route in drivers' decision-making process.

A study was conducted by Laapotti S, Keskinen E, Rajalin S. (2001); to evaluates how the traffic behaviors of young drivers and their attitudes toward traffic regulations have changed over the last 23 years, and particularly, whether the differences in attitudes and behavior between male and female drivers have changed. The study was conducted in 2001, and it replicated a traffic attitude survey administered in 1978. The same survey was used, enabling comparison between the years. The number of respondents was 3158 in 1978 and 2759 in 2001. The comparison revealed several differences regarding the background factors, attitudes, and driving style of novice drivers.

Most obvious changes in the drivers' background were the changes in education level (higher today), driver training (more private training today), and exposure/experience in terms of kilometers (more today). The summary variable measured that the young drivers showed more negative attitudes toward traffic rules and safe driving in 2001 compared to 1978. Female drivers drove less than males and evaluated their driving skill lower. Female drivers were less involved in accidents and they committed less traffic offenses than males. Female drivers showed a more positive attitude toward traffic safety and rules than males. The difference in traffic attitudes and behavior between males and females in 1978 compared to 2001 remained the same or even increased somewhat.

A study was conducted by Vogel K, Kircher A, Alm H, Nilsson L.(2003); to evaluate the skill to predict the development of traffic situations. A stop-controlled intersection was filmed over several days, and 12 scenes with varying traffic complexity were selected. In half of the scenes, the traffic rules were violated, in half of the scenes, the rules were observed. A total of 36 participants were asked to watch the scenes and predict how the scene would most likely develop in the 2s after the film was paused. Additionally, the participants rated how certain they were about their prediction, and how complex and dangerous they assessed the scenes to be. With the method used here, experienced drivers were not found to make more correct predictions of situational development, and no difference in skill to predict could be found between genders. Nevertheless, more experienced drivers were more certain in their judgments and evaluated the situations on average as less complex and dangerous than did less experienced drivers.

Scenes in which the traffic rules were violated were more difficult to predict correctly. The scenes in which the participants predicted violations were rated as more complex and dangerous. It is concluded that the low-cost method used here is more useful for examining which scenes are generally easy or difficult to predict and how they are experienced subjectively than to investigate differences in performance for different driver categories.

A study conducted by Egli M, Hartmann H, Hess R. (1977); The question whether a person with epilepsy qualified for a driving license must be examined from the point of view of the individual as well as that of the community. The general public should be protected against unduly high risks from epileptic drivers, whereas the patient has a right to live as normal a life as possible, which includes driving an automobile. Too rigid criteria for obtaining the license increase the number of persons who evade medical control and drive "illegally". To require physicians to report their epileptic patients to the authorities would be counterproductive; it would also destroy the personal confidence between physician and patient which is so essential for successful treatment.

Epileptic persons endanger safety on the road only slightly: 0.1-0.3% of all traffic accidents are due to epileptic seizures. In contrast, abuse of alcohol plays a major role in 6-9% of all accidents, whereas 80-90% is attributable to evident mistakes by the driver. Epileptic patients under regular medical supervision who are licensed on grounds of approved criteria do not cause more accidents than the general population. A dangerous group is, however, those with mental alterations (organic or reactive) and particularly patients with aggressive and expansive-compensatory traits, as well as those driving without permission.

Prognostic criteria as to the further course of the disease are paramount for the assessment of qualification for the license. The following rules have proved their worth: 2 years freedom from seizures (with or without therapy), no abnormalities specific for epilepsy in the EEG, no serious mental changes, regular medical supervision and treatment must be guaranteed. Departures from these rules should be confined to exceptional cases with the consent of a physician specialized in epileptology. The same holds for admission to higher categories of driving license, the only practical eventuality being category D (Lorries), and even this only in rare cases. It will scarcely ever be possible to license a person who has at some time had epilepsy for professional passenger transportation. The attitude of the physician who first sees the seizure patient is often decisive. It is important that he recognizes the problem, objectively informs his patient and from the very outset gives him realistic advice in order to avoid false decisions, particularly regarding his professional career.

A study conducted by Macdonald S, Mann RE, Chipman M, Anglin-Bodrug K.(2004); prior research has shown that those with alcohol problems have significantly elevated rates of traffic events (i.e. traffic violations and collisions) than licensed drivers from the general population and that treatment is associated with reductions in alcohol-related collisions. However, very little research exists on traffic events and the impact of treatment for cannabis or cocaine clients. The objectives of this research are: (1) to determine whether clients in treatment for a primary problem of alcohol, cannabis or cocaine have significantly elevated rates of traffic events than a matched control group of licensed drivers; and (2) to assess whether a significant reduction in traffic events occurs after treatment for each client group compared to a control group.

Driver records of patients admitted to substance abuse treatment in 1994 for a primary problem of alcohol (n = 117), cannabis (n = 80) or cocaine (n = 169) were accessed from the Ministry of Transportation for Ontario, Canada. A comparison group of 504 licensed drivers frequency matched by age, sex and place of residence, was also randomly selected. Data was collapsed into two 6-year time periods: 1988-1993 (i.e. before treatment) and 1995-2000 (i.e. after treatment). Six repeated measures analysis of variance tests were conducted where traffic violations and collisions of three treatment groups (i.e. alcohol, cannabis or cocaine) and a control group were compared before and after treatment. All three treatment groups had significantly more traffic violations than the control group and no significant interactions between time period and group membership were found.

For collisions, there was a significant interaction between the alcohol and control groups and between the cocaine and control groups. The average number of collisions for the alcohol and cocaine groups decreased after completing treatment, whereas the number for the control group was stable over the same time periods.

Neither the interaction term nor the between group effect was significant in the comparison of the cannabis and control groups. When rates of collisions were calculated based on the period that each driver had a valid license, the interaction term was still significant for the comparison of the alcohol and control groups but not for the cocaine and control groups. The results contribute to existing literature by demonstrating that cocaine and cannabis clients have a higher risk of traffic violations than matched controls and that reduction in collision risk was found after treatment for the alcohol and cocaine groups.

A study conducted by Jimenez-Moleon JJ, Lardelli-Claret P, Luna-del-Castillo Jde D, Garcia-Martin M, Bueno-Cavanillas A, Galvez-Vargas R.(2004); To assess the separate effects of age, sex, and experience on the risk of drivers aged 18-24 years being actively involved in a car collision in Spain from 1990 to 1999. For this matched case-control study, data were obtained from the Spanish Register of Traffic Crashes with Victims held by the General Directorate of Transport. The study population comprised all drivers involved in car collisions in which only one of the drivers committed a traffic infraction. Drivers who committed infractions constituted the case group while non-infracting drivers involved in the same collision were their corresponding matched controls.

Drivers with incomplete or inconsistent data were excluded and a total of 123,586 cases and 140,482 controls were studied. Crude and adjusted (for the effect of potential confounders) odds ratio (OR) were obtained for each combination of driver age (from 18 to 24 years old), sex and years in possession of a driving license (from 0 to 7). For each category of age and years in possession of a driving license, OR estimates for men were usually higher than those for women. In men, crude and adjusted OR significantly decreased with increasing number of years in possession of a driving license for each age group.

A similar but less clear trend was also observed for female drivers. After adjustment for the effect of the number of years in possession of a driving license, driver age did not seem to be strongly associated with the risk of being actively involved in a car collision. Results suggest that the effect of inexperience is more important than that of age in explaining the higher risk of being involved in a traffic crash in the youngest drivers.

A study conducted by Blows S, Ivers RQ, Woodward M, Connor J, Ameratunga S, Norton R.(2003); To quantify the association between vehicle age and risk of car crash injury. Data from a population based case-control study conducted in the Auckland region in 1998/99 was used to examine the adjusted risk of car crash injury or death due to vehicle age, after controlling for a range of known confounders.

Cases were all cars involved in crashes in which at least one occupant was hospitalized or killed anywhere in the Auckland region, and controls were randomly selected cars on Auckland roads. The drivers of the 571 case vehicles and 588 control vehicles completed a structured interview.

Vehicles constructed before 1984 had significantly greater chance of being involved in an injury crash than those constructed after 1994 (odds ratio 2.88, 95% confidence interval (CI) 1.20 to 6.91), after adjustment for potential confounders. There was also a trend for increasing crash risk with each one year increase in vehicle age after adjustment for potential confounders (odds ratio 1.05, 95% CI 0.99 to 1.11; p = 0.09). This study quantifies the increased risk of car crash injury associated with older vehicle year and confirms this as an important public health issue.

A study Lam LT, Norton R, Woodward M, Connor J, Ameratunga S.(2004); This study was conducted to investigate the effects of passenger carriage, including the number of passengers and the ages of passengers, on the risk of car crash injury. The study utilized data obtained from a case-control study conducted in the Auckland region of New Zealand between 1998 and 1999.

Cases were car drivers who involved in crashes in which at least one occupant was hospitalized or killed. Controls were selected from a cluster random sample of car drivers on the roads in the same region.

Self-report information on the numbers of passengers carried and their ages at the time of crash or at the time of the roadside survey, as well as potential confounding factors, was obtained from the drivers, or a proxy, using an interviewer-administered questionnaire. A total of 571 cases (93% response rate), including 195 younger drivers (aged <25 years), and 588 controls (79% response rate), including 94 younger drivers participated in the study. After adjusting for other risk factors, the odds of car crash injury among younger drivers was 15.55 times (95% CI 5.76-42.02) for those who carried two or more same age passengers, and 10.19 times (95% CI 2.84-36.65) for those who carried two or more other age passengers, compared with unaccompanied drivers.

In comparison, no increase in risk was observed for older drivers who carried two or more passengers regardless of age. The carriage of two or more passengers, irrespective of the ages of passengers, significantly increases the risk of car crash injury among younger drivers. Passenger restriction as part of the graduate licensing system was discussed in the light of these results.

A study conducted by Zhang W, Huang YH, Roetting M, Wang Y, Wei H.(2006); Driving safety has become an extremely severe problem in China due to rapid motorization. Unless more effective measures are taken, the fatality risk and the total fatalities due to road traffic accidents are expected to continue to increase. Therefore, focus group discussions were conducted to explore driver attitudes and safe driver characteristics.

The results were then compared with a similar study conducted with US drivers. Although similarities were found, differences were of more importance. The Chinese drivers concentrate more on driving skills and capabilities, whereas the US drivers concentrate more on practical safe driving guidelines. Then direct field observations were conducted for the Chinese drivers to empirically investigate the issues discovered.

The use of safety belts, running lights, headlights, and turn signals were observed to investigate the drivers' behaviors. Results show that the safety belt use ratio is about 64%, running light use is nearly zero during rainy and snowy weather, headlights use after sunset is substantially delayed, and only about 40% of drivers use turn signals to indicate their intention to change lanes. These findings indicate that the authorities need to take appropriate countermeasures to change the views of the Chinese drivers regarding driving safety and their unsafe driving behaviors. Improvement of training content and methods as well as police enforcement would be recommended.

A study conducted Blantari J, Asiamah G, Appiah N, Mock C.(2005); the goal was to evaluate the effectiveness of recent televised advertisements conducted by the National Road Safety Commission in Ghana. These concerned speeding and alcohol-impaired driving and were targeted towards commercial drivers. Focus group discussions were conducted with 50 commercial drivers in four cities. Discussions addressed coverage, clarity and appropriateness of messages, including suggestions for improvements. Most discussants indicated that the messages were clear and appropriate. Television reached all participants in this urban group. However, they felt that other modes of communication, such as flyers and radio, should also be used to reach drivers who did not own televisions. A particular problem was language.

The advertisements had been in English and Akan (the most common vernacular language). Participants wanted the messages diversified into more of the major Ghanaian languages. Some participants were unclear on the behavior that the advertisements were telling viewers to take.

Participants advocated greater involvement by police in road safety and called for laws banning the sale of alcohol at bus stations. The advertisements reached and were understood by most of the target audience. Opportunities for strengthening the messages included using other media; increasing the number of languages; and stressing the change in behavior being recommended. Overall road safety activities would be strengthened by increasing accompanying law enforcement activities related to speed and alcohol-impaired driving. To the authors' knowledge this is the first formal evaluation of a road safety social marketing programme in a low-income sub-Saharan African country. This evaluation will hopefully assist Ghana and other similar countries in strengthening road safety work.

A study conducted by Ruangkanchanasetr S, Plitponkarnpim A, Hetrakul P, Kongsakon R.(2001); to identify the prevalence of risk behaviors and related risk factors in adolescents in Bangkok, Thailand. Youth risk behavior survey questionnaires were collected from 2311 adolescents in 8 schools, 13 communities and 2 Juvenile Home Institutions from January to February 2001. Their mean age was 15.5 +/- 1.8 years, and 59% were female. Risk factors of interest were gender, parental marital status, socioeconomic status, family relationship, parental drug addiction, peer group, loneliness, self-esteem, and school performance. Multiple logistic regressions were used to identify significant risk factors associated with each risk behavior.

The risk behaviors leading to traffic accidents were rarely or never having worn a seat belt (30.6%) or helmet while bicycling (66.9%) and while motorcycling (50.1%), riding with drivers who had consumed alcohol (18.8%), and driving after consuming alcohol (12.1%).

The studied group carried weapons (8.5%) and has been involved in a violent event (31.5%). Among 13.9% who were assaulted, 6.7% needed hospitalization; rape was reported by 2.4%. Depression was reported by 19.9%, with 12% having suicidal tendencies and 8% attempting suicide. The lifetime use vs. heavy use prevalence of substance abuse, respectively, was: 15.4% and 3.5% for smoking, 37.3% and 1.7% for alcohol, 37.8% and 4.6% for amphetamine use, and 37.9% and 0.1% for other drugs.

Among the 10% who have had sexual intercourse, 1% was homosexual, 7.1% have never used a condom, and 2.1% resulted in pregnancy. Being male was a risk factor for every untoward behavior except depression. Other risk factors included poor self-esteem, poor school performance, and early school leaving. Factors relating to the family included a low socioeconomic status, poor relationships, broken families, and parental substance abuse. Socioenvironmental factors included being in a gang and loneliness. Some risk behaviors started at younger than 8 years old. Schools and media were given as the sources of information regarding sex, human immunodeficiency virus infection, and substance abuse. The prevalence of six major-risk behaviors in adolescents in Bangkok was significantly high. Several risk factors were identified, the knowledge from which may help to form preventive measures in this population.

3 Survey Methodology

3.1 Introduction

Questionnaire is an inexpensive way to gather data from a potentially large number of drivers. Often it is the only feasible way to reach a number of drivers large enough to allow statistical analysis of the results. A well-designed questionnaire is used to effectively measure traffic knowledge. It was distributed in three different cities, Amman the capital, Irbid and Al-Zarqa. Each questionnaire consisted of 25 questions which were selected from the Jordanian Road User Manual in cooperation with the Jordan Traffic Institute which played a major role in the selection of questions of the questionnaire.

3.2 Sampling

The survey data were gathered from 600 drivers to obtain logical results for various subgroups. A sample of 200 questionnaires was distributed in each city in places such as bus stations, shopping malls, parking lots and universities. A multiple choice questionnaire format with factors sheet was distributed in different cities in Jordan.

These cities were selected by referring to the accident numbers during 2004 as reported by Jordan Traffic Institute, Table (3.1).

Table (3.1) Accident numbers in the selected governorate

Governorate	Number of Accidents	Number of Fatalities	Number of Slight Injuries	Number of Sever Injuries
Amman	46045	229	58411	728
Irbid	6702	115	2729	386
Al-Zarqa	6172	108	1703	328

3.2.1 Survey contents

The survey contained two main sections:

A. The first section is the factors sheet paper (see Fig.3.1)

B. The second section is a multiple choice questionnaire format which contained 25 questions which were selected from the Road User Manual in cooperation with the Jordan Traffic Institute. The 25 questions are described on page 26.

A. Factors sheet paper

Age…… **City……**

Gender

☐ Male ☐ Female

Category of the driving license

☐Second ☐ Third ☐ Fourth ☐ Fifth ☐ Sixth

The year of obtaining the driving license…….

Education

☐ Uneducated ☐ Tawjaihi ☐ B.S/Diploma ☐ Graduate studies

Number of accidents

☐0 ☐1 ☐2 ☐3+

Social status

☐Single ☐ Married ☐ Widow ☐ Divorced

Vehicle category

☐ Passenger cars ☐ Mini bus ☐ Buses ☐ Dual purpose vehicle

Vehicle registered plate

☐Public ☐ Privet ☐ Rental ☐ Governmental

Salary

☐ Unemployed ☐ 100-200 ☐ 201-300 ☐ 301+

Notes

Accidents reason……

Fig (3.1) Factors sheet paper

B. Description of the questionnaire

The questions of the questionnaire were selected in cooperation with the Jordan Traffic Institute. Twenty-five questions were selected to cover the most important topics that affect accidents and important issues of driver's awareness in Jordan such as:-

1. Motorists' rights and duties.
2. Pedestrians' rights; right of way rules.
3. Signals and markings.
4. Driving ethics.
5. Traffic signs.

The first question touches on the driver behavior when he\she parks his/her car on a downhill. The question was, "if you park your care on downhill, what is the direction of the front wheel?". The choices offered were:

1. To street
2. To curb
3. Forward

The second question was about driving in foggy weather. In our country some drivers use flasher lights. The question was, "what light must be used in fog?". The choices offered were:

1. Flashers
2. High lights
3. Low lights

The third question touches on the topic of driving in snow weather. The question was, "what is the best way to avoid a crash?" .The choices offered were:

1. Add weights
2. Increase the speed
3. Decrease the speed and increase follow up distance

The fourth question was about traffic signals. The question was, "what do you do when you see a red flasher signal?". The choices offered were:

1. Decrease speed
2. Allow others to move
3. Stop

The fifth question deals with intersections. The question was: "if two vehicles meet at an intersection and one wants to go to the right and the second one wants to go to the left; which one can cross the intersection first? .The choices offered were:

1. Vehicle going to the left
2. Vehicle going to right
3. Vehicle going to straight a way

The sixth question deals with misunderstanding of traffic signals. The question was, "what is the meaning of the yellow light when it comes after green at signalized intersections?". The choices offered were:

1. The driver should stop before the stop line if and only if his/her driving speed will not make an accident
2. The driver should not stop before stop line and should continue driving
3. The driver should stop and allow the vehicles in other side to move

Question number seven was about the stop sign. The question was "what is the meaning of Stop sign?". The choices offered were:

1. Stop and do not move until you are sure there are no vehicles on the streets
2. The driver must stop if, and only if, there are vehicles. Then he can move
3. The driver must stop if there are pedestrians on roads. If not, he can move

Question number eight was about the speed limit sign (see Fig 3.2). The question was," what does this sign mean". The choices offered were:

1. Upper speed limit
2. End of the allowable speed
3. lower limit of allowable speed

Fig (3.2) Shows the sign of question number eight

Question number nine was about overtaking trucks (see Fig.3.3). The question was, "what does this sign mean". The proposed answers were:

1. Forbidden for trucks to overtake trucks
2. Overtaking is not allowable
3. Passenger cars overtaking is forbidden

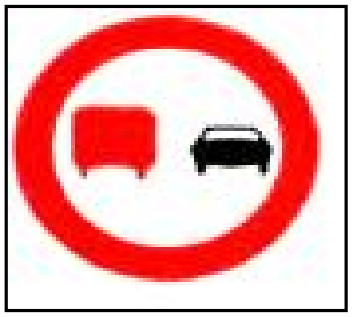

Fig (3.3) Shows the sign of question number nine

Question ten was about school sign. The question was, "which sign means pay attention at a school zone area?".

1. 
2. 
3. 

Question number eleven was about directional arrows. The question was," which sign means move to the right?" .The choices offered were:

1. 
2. 
3. 

Question twelve was about using the hand break. The question was," The hand break is used for ". The choices offered were:

1. To stop the vehicle when a normal break fails
2. To decrease the speed
3. To secure the vehicle when it stops

Question thirteen was about where one is allowed to pass (over taken another vehicle) safely. The question was," It is not allowed to overtaking any vehicle on". The choices offered were

1. On a hill
2. On a discontinuous line on the street
3. When there is no vehicle on road

Question fourteen deals with the misunderstanding about the fastest lane. Some drivers believe the right lane is the fastest lane. The question was; "what is the fastest lane on highway?" .The choices offered were:

1. Right lane
2. Left lane
3. Middle lane

Question fifteen was about the traffic rules on a roundabout. The question was," who has the right of the way on a roundabout?". The choices offered were:

1. Driver in the roundabout
2. Driver who wants to enter the roundabout
3. There are no rights on the roundabout

Question sixteen was about the sequence one must take before the driver turns switch on his/her car. The question was," what do you must check before you turn on switch your vehicle? ". The choices offered were:

1. Check the doors
2. Check the flashers
3. Look in the mirror to be sure the road is empty

There is a misunderstanding of where to stop at intersections. Question number seventeen was, "when you arrive at an intersection, where should you stop?".

1. On the stop line
2. Before the stop line
3. After the stop line

Question number eighteen was about first-aid and the driver's behavior when an accident occurs. The question was, "if a fire accident happens and there is an injury (burned people) what will you do?". The choices offered were:

1. Check all injuries and be sure the injured are breathing then do first-aid
2. Call the ambulance and take away injury from the accident place
3. Try to take off burned clothes which are fixed to the burned body

Question nineteen was about mechanical parts of vehicle. There are a lot of drivers who do not know the mechanical parts of his/her car. The question selected was "what is the radiator for?". The choices offered were:-

1. Cool the engine
2. Water pump
3. Burn oil

The biggest violation the police are concerned about, it is using of the seat belt especially in the Jordan capital. Question twenty was about the violation cost of drivers not wearing seat belt. The question was, "How much does the seat belt violation cost?" The choices offered were:

1. (10-20) JD
2. (15-30) JD
3. (50-100) JD

Question number twenty-one was selected to cover pavement markings. The question touches on the important issue of traffic accidents due to incorrect overtaking. The question was, “when combing between solid line and dash line?”. The choices offered were:

1. Forbidden to passing
2. Allow to carefully pass cars when solid line is on his/her left side
3. Allow to pass carefully to the cars when the dash line is near to left side

Question twenty-two touches important issue, vehicles which are stopping at so near distance from an intersection. The question was, "what distance is it allowed to stop a vehicle near an intersection?”. The choices offered were:

1. 15 m from intersection
2. Less than 15 m from intersection
3. 15 m away from a hydrant

Again the questionnaire comes back to pavement marking but from a different view. The question was, "what is the meaning of a continuous solid line in the center of the street?" The choices offered were:

1. To allow the pedestrian to cross the street
2. To Force the vehicle to stop before it resumes moving
3. To forbidden the passing by a car

Question twenty-four is on a popular behavior of the drivers, changing travel from right lane to left lane. The question was, "if you wish to change lane from right lane to left lane you must":

1. Travel immediately using the correct signal and increase speed appropriate with left lane speed
2. Travel carefully with using the correct signal and increase speed appropriate with left lane speed
3. Travel carefully using the correct signal and decrease speed appropriate with left lane speed

The last question of the Questionnaire was about intersection traffic rules. How the driver behaves at a signalized intersection when the electricity is cut off. The question was, "when there is a problem at a signalized intersection what you should do?". The choices offered were:

1. Increase your vehicle speed and then cross the intersection
2. Decrease of the vehicle speed and then cross the intersection
3. Stop at the intersection and apply traffic rules

3.2.2 Sample size

Determining sample size is a very important issue because samples that are too large may waste time, resources and money, while samples that are too small may lead to inaccurate results. A computing required sample size for survey to be analyzed by ANOVA is quite complicated. In our survey, it was determined on 95% confidence level with a standard deviation equal 15. We determined the standard deviation of this survey by estimating the maximum and minimum marks could the drivers get in the questionnaire. The maximum mark could the driver gets is 100 and the minimum mark is assumed to be 20. The minimum score will be answering 5 questions out of the 25 total. The range of this survey is assumed to be 80; we used thumb rule here. This thump rule stated that the range divided by 6 will be equal approximately to the standard deviation. In our study, we found that standard deviation is approximately 15 (80/6). This standard deviation is used to determine the sample size of this survey. A sample size is determined to within +/- 2 marks. Sample size was calculated by equation (3.1).

$$n = \left(\frac{z_{a/2} s}{d} \right)^2 \text{. ……..} \quad (3.1)$$

Where

$Z_{a/2}$ = the Z-value at 95%

s = standard deviation

d= error margin

$$n = \left(\frac{1.96 * 15}{2} \right)^2 \approx 385$$

The equation of the Sample size showed we needed about 385 questionnaires, but in fact 600 questionnaires were distributed to increase the accuracy of the research results. In accordance with Jordan Traffic Institute, the standard of 85% correct is the passing score on a Jordanian written driver's license examination. Results were categorized as pass or fail, using the 85% correct as the minimum for standard passing.

3.3 Data analysis

In this section, we will briefly discuss those elementary statistical concepts that provide the necessary foundations in statistical data analysis**.** This section has three primary elements will discuss:

1. Descriptive statistics
2. Analysis of variance (One-Way ANOVA**)**
3. Correlation

Data analysis was performed by using SPSS software and Excel sheets were used also to summarize data results.

3.3.1 Descriptive statistics

Descriptive Statistics are used to present quantitative descriptions in a manageable form. In this research study we may have lots of measures. Descriptive statistics help us to simplify large amounts of data in a sensible way. Each descriptive statistic reduces lots of data into a simpler summary. The common statistics calculated are the mean and the variance. The mean of a data set is simply the arithmetic average of the values in the set, obtained by summing the values and dividing by the number of values.

The mean can be calculated by using this equation:

$$\bar{X} = \Sigma x / n \quad \text{..... (3.2)}$$

Where

X: traffic knowledge marks of the drivers

n: number of the drivers in each group or level

$\bar{X}$: mean of traffic knowledge mark

The second important term will be used is the variance. The sample variance is the sum of the squared deviations from the mean divided by the number of observations minus one, the degrees of freedom or df.

$$s^2 = \frac{\Sigma(X - \bar{X})^2}{(n-1)} \quad \text{..... ..... (3.3)}$$

Where

X: traffic knowledge marks of the drivers

$\bar{X}$: mean of traffic knowledge marks

S= variance

3.3.2 Analysis of variance (One-way ANOVA)

One–way ANOVA analysis is a widely used concept used concept and frequently used in this research. In few words, One-Way ANOVA is a conventional way of displaying exactly which two means out of many others are significantly different and which ones are not.

To conduct this kind of analysis there are two kinds of variables; dependent variables and independent variables. Independent variables are those that are manipulated whereas dependent variables are only measured. The terms dependent and independent variables apply mostly in our research where; independent variables such as the drivers' history of making accidents, the year of obtaining the driving license, the driver's age, gender, category of the driving license, vehicle driven classification, social status, vehicle category, type of the accident, driver's education, salary and geographical place; whereas the dependent variable was traffic knowledge.

3.3.2.1 Dependent and Independent variables

The information were gathered from the survey analyzed by using "One-Way ANOVA". The collected data will reveal if there are relationship between traffic knowledge of the drivers (dependent factor) and the independent factors listed below:-

1. The drivers' age factor, the first independent factor is age of the drivers'. It was classified into six age groups: 18-20, 21-29, 30-39, 40-49, 50-59 and60+.

2. The second factor was gender. It was classified into two categories female and male.

3. The years when the driver obtained his/her license. This factor was classified into six groups: 1950+, 1960+, 1970+, 1980+, 1990+ and 2000+.

4. License classification which held by the drivers. It was classified into four groups: license category 3, license category 4, license category 5 and license category 6.

5. Vehicle registered plate factor was classified into four categories: public, private, rental and governmental.

6. Social status factor was classified into four categories: married, single, widow and divorced.

7. Vehicle category factor was classified into five categories: small passenger cars, mini bus, buses and dual purpose vehicle.

8. Drivers education factor was classified into four levels; uneducated, Tawjihi, B.S/Diploma and graduate studies.

9. Geographical place factor was classified into three categories; Amman, Al-Zarqa and Irbid.

10. Salary factor was classified into four categories: unemployed, 100-200, 201-300 and 300+.

11. Number of accidents factor was classified into four categories; no accidents, 1, 2, 3+.

12. Type of accident in this research depended on what had the driver written in his questionnaire, accident types was classified into seven categories; exceeding speed limit, failing to take care, incorrect overtaking, loss of control, no accidents, others, tail gating, using incorrect lane.

3.3.2.2 Post Hoc analysis and P- value

One-Way ANOVA is a statistical procedure that is an extension of the t-test, and it is used to compare three or more group means on one dependent variable. Generally, there are more than 5 subjects per group and no more than 6 groups or categories to compare.

Null hypothesis: there is no significant difference between groups (Mean1=Mean2=Mean3...).

Alternative hypothesis: at least one group mean is statistically different from another. Post-hoc tests are used to determine significant pairwise differences.

The Statistical Package for Social Sciences (SPSS) software was used to examine if there are relationships between traffic knowledge and all independent variables at 95% confidence level. Post Hoc Test, this test is an optional choice required for analysis and was used to determine which pair among the groups under study has expression means that are statistically different. Pairwise multiple comparisons test the difference between each pair of means, and yield a matrix where asterisks indicate significantly different group means at an alpha level of 0.05.

P-value is the probability (ranging from zero to one) that the results observed in a study. Convention is that we accept a P-value of 0.05 or below as being statistically significant. In the next chapter P-value will appear on ANOVA tables under the "Sig" column. P-value indicates the probability of obtaining a mean difference between the groups as high as what is observed by chance; the lower the P-value the more significant the difference between the groups. Tukey's honestly significant difference test is an option and was used to conduct post hoc tests in this research.

Correlation

Correlation is one of the most common forms of data analysis both because it can provide an analysis that stands on its own, and also because it underlies many other analyses, and can be a good way to support conclusions after primary analyses have been completed. Correlations are a measure of the linear relationship between two variables. A correlation coefficient has a value ranging from -1 to 1. Values that are closer to the absolute value of 1 indicate that there is a strong relationship between the variables being correlated whereas values closer to 0 indicate that there is little or no linear relationship. The sign of a correlation coefficient describes the type of relationship between the variables being correlated. A positive correlation coefficient indicates that there is a positive linear relationship between the variables: as one variable increases in value, so does the other. SPSS program was used to conduct all necessary correlation analyses.

4 Survey Results

4.1 Introduction

In accordance with Jordan's standard of 85% correct being the passing score on a driver's license exam, the results were categorized as pass-fail, using 85% correct as the standard for passing. In Amman, the average of driver marks was 75.74 % and standard deviation was 16.96. In Al-Zarqa, the average of driver marks was 76.06% and the standard deviation was 15.45. In Irbid, the average of driver marks was 76.04% and the standard deviation was 13.59. The results obtained by the survey shows there is a lack in driver awareness. The average marks in the selected cities are less than the passing mark. The percentages of drivers who passed (i.e., scored 85% or above) in the survey were as follows: Amman (the capital) was 33%, Al-Zarqa was 26% whereas in Irbid was 22%.

This chapter manifests questionnaire results. It was divided into two parts: the first part reveals the percentage for each question items and the second part reveals the descriptive statistics and One-Way ANOVA analysis tables of the independent factors with traffic knowledge. Six hundred questionnaires were collected; a huge data were obtained from the questionnaires that were entered by excel sheets and *A*rcview attribute tables were used to infer the results.

4.2 Questionnaire results

Question Number 1

The first question of the questionnaire was "what is the direction of the front wheel on a downhill?". The correct answer was "To curb"; 90% of the drivers answered correctly whereas 10% selected wrong answers. This reveals that most of drivers are cautious when they stop their vehicles on a downhill. If the drivers did not stop their vehicles in a correct way, the vehicle may crawl to the valley.

Question Number 2

The second question in the questionnaire was about driving in fog conditions. The new cars technology enables drivers to drive easily in fog circumstances. But not all drivers have new vehicles. Drivers in fog conditions must use low lights. In our country, some drivers use flasher lights.

By analyzing the questionnaire answer sheets, we found that 45% of drivers surveyed used flasher lights, 7% used high lights and 49% used low lights. This result leads us to conclude that more than half of questionnaire drivers didn't use the correct lights in fog conditions.

Question Number 3

One of the hardest conditions for the driver is driving in snowy weather. The question was "What is the best way to avoid a crash?" The correct answer for this question was "Decreasing the speed and increasing follow up distance". The questionnaire results were: 92% selected the correct answer whereas 6% selected "must add weight to their vehicles" and 2% selected "must increase the speed".

Question Number 4

The fourth question was about the red flasher signal. There is a misunderstanding about this kind of signals, especially with yellow flasher. The question was "what do you do when you see a red flasher signal?" The correct answer was "Stop." You must stop when you see a red flasher signal and apply traffic rules. The results of the questionnaire showed that 41 % selected the correct answer, whereas 39 % answered “decrease the speed” and 20 % answered “allow others to move”.

Question Number 5

Intersections are the most popular area for accidents. The type of intersection (signalized & unsignalized) plays a major role in accidents. This study has more than one question about the intersection rules but not on intersections configuration. This question is about the unsignalized intersection called “equal priority” intersection. The question of the questionnaire was "if two vehicles meet at an intersection and one wants to go to the right and the second one wants to go to the left, which one can cross the intersection first?" The correct answer was "Vehicle going to right." The questionnaire results were: 82 % of the drivers surveyed answered correctly, whereas 14 % selected "Vehicles going to the left" and 4% answered "Vehicle going straight a way".

Question Number 6

Question number six touched the most important issue about signalized intersections and the yellow light, which comes after the green light. The question was “what is the meaning of the yellow light when it comes after green at a signalized intersection?" The correct answer was "The driver should stop before the stop line if and only if his/her driving speed will not make an accident."

The questionnaire results were: 78 % of the drivers selected the correct answer, whereas 7% selected "The driver should not stop before stop line and should continue driving" and 16% selected "The driver should stop and allow the vehicles in the other side to move".

Question Number 7

Question number seven was about the Stop Sign. The question was "what is the meaning of Stop sign?" The correct answer was" Stop and do not move until you are sure there are no vehicles on the streets". The questionnaire results were: 91 % of the drivers surveyed in the questionnaire selected a correct answer, whereas 6 % answered "driver must stop if, and only if, there are vehicles then he can move ", and 3 % selected "the driver must stop if there are pedestrians on roads. If not, he can move".

Question Number 8

Question number eight was about the speed sign. A lot of drivers violate speed limits on highways or on local or Arterial streets. The study tried to measure drivers' understanding of speed signs. The question was "what does this sign mean?" The correct answer was: "upper speed limit". 83% of the drivers surveyed selected the correct answer, whereas 14% selected "end of the allowable speed" and 3 % selected "lower limit of allowable speed".

Fig (4.1) Shows the speed limit sign used in the questionnaire

Question Number 9

Question number nine was about the overtaking sign. According to the Jordanian Traffic Institute, the number of accidents caused by incorrect overtaking is 708 and the number of fatalities is 31 in 2004. The overtaking question is "what does this sign mean" The correct answer of question nine was: "Forbidden for trucks to overtake." The drivers, which the questionnaire covered, showed that 85 % selected the correct answer, whereas 9 % answered, “Overtaking is not allowable” and 6% selected “passenger cars overtaking is forbidden".

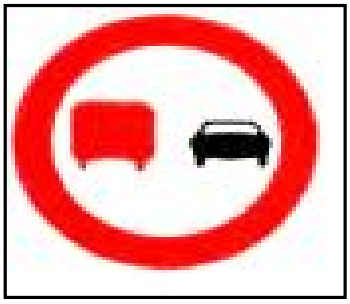

Fig (4.2) Overtaking sign was used in the questionnaire

Question Number 10

One of the biggest problems in our country now is the pedestrian accidents or collision accidents especially in residential areas and rural area. One of the most important areas is the school zone at the rush hours. Some drivers don’t care when they see the signs of pedestrian or children on the road (school zone area). The questionnaire selected 3 different signs and asked the drivers to choose the correct one. The question of the questionnaire was “which sign means pay attention at the schools zone area?" The correct answer was this sign in fig (5.3), 89% of drivers selected the correct answer and 11 % selected two other signs.

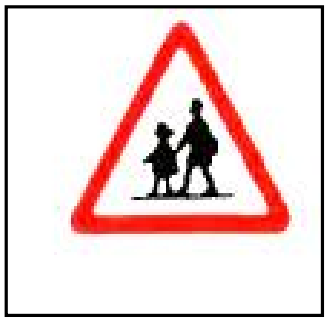

Fig (4.3) Shows the correct answer of question number 10

Question Number 11

Question number eleven was also about signs, but here the question asked about the directional arrows. There are some misunderstandings in this aspect. The question was "which sign means move to the right? ", 95% of drivers selected the correct answer, whereas 5% of the drivers selected two others signs.

Question Number 12

Question number twelve was about using hand brake. The questionnaire results were: 90% of drivers selected the correct answer, "To secure the vehicle when it stops", whereas 3% answered "to decrease speed" and 7% answered "To stop the vehicle when the normal brake fails".

Question Number 13

Question thirteen was about where overtaking is not allowable. There are about 12 places where overtaking is not allowable. This study measures driver knowledge about the overtaking issue.

The question on questionnaire was “It is not allowable to overtaking on”. The correct answer was "On a hill." The correct answer was "On a hill". The questionnaire results were: 83% selected the correct answer whereas 12% selected "On a dash line on the street" and 5% selected "When there is no vehicle on the road".

Question Number 14

Question number fourteen was about the fastest lane when you drive your car on any highway. There are some drivers who consider the right lane is the fastest lane and the left lane is the slowest lane. The question on the questionnaire was "what is the fastest lane on Highway?" The correct answer was "left lane." 74% selected the correct answer whereas 21% believe that the right lane is the fastest lane and 5% of the drivers believe the middle lane is the fastest one.

Question Number 15

Why do many congestion happen on roundabouts? Because misunderstanding of roundabout traffic rules. A traffic rule on roundabouts is an important issue in this study. The question was "who has the right of the way on a roundabout?" The correct answer was “Driver in the roundabout" .The questionnaire results were: 87% of drivers surveyed selected the correct answer, whereas 8% selected “Driver who wants to enter the roundabout" and 5% selected" There are no rights on the roundabout".

Question Number 16

Before the drivers turn on vehicles switch, they must check up two things: the first thing is the internal inspection like mirrors, doors, brakes and lights. The second thing is the external inspection like tires, engine oil, and brake oil. The questionnaire had a question about the internal inspections: “what must the driver do before he/she turns on the vehicle switch? “. The questionnaire results were: 72% of the drivers surveyed selected the correct answer and 28% selected two other choices.

Question Number 17

A stop line is an important mark in the intersection design. The driver should know where to stop at any intersection, some drivers stop on the stop line and others stop after the stop line. Those drivers who don't stop before stop line create a hazard for pedestrian on the sidewalk. This research showed that there are a lot of drivers who really don't know where to stop when they see a stop line. The question was "where should you stop?". The correct answer was "Before the stop line". The results of the questionnaire were: 65% selected the correct answer whereas 33% selected "On the stop line" and 2% selected “after the stop line.” From the above results, we see that 33% believe they must stop on the stop line and that can be a danger for the pedestrians.

Question Number 18

First medical aid is one of the most important issues that face the drivers on roads, when an accident that requires a first aid for injured passengers happens, before the ambulance arrives. Different types of accidents could happen, sometimes there are burned passengers and drivers, and sometimes they have broken legs or hands. The questionnaire had a question about first medical aid.

The question was “if a fire accident happens and there is an injury (burned people) what will you do?". The correct answer was "Call the ambulance and evacuate the burned person from the accident place". The results of the questionnaire were: 68% selected the correct answer, whereas 26% selected "Check all injuries and be sure the injured is breathing, then do first aid.", and 6% selected "Try to take off burned clothes stuck to the burned body."

Question Number 19

This question was about the mechanical parts of the vehicle. The question was "what is as radiator for?" The correct answer was" Cool the engine". The results of the questionnaire were: 90% selected the correct answer and 10% have selected two other answers.

Question Number 20

Seat belt is the most important thing that can reduce accident fatalities or injuries. Police in Jordan try to force all drivers to put the seat belt on in major or in minor roads to try to reduce injuries and fatalities in any accident. There was a question about seat belt violation the question was "How much does the seat belt violation cost?". The correct answer was JD (15-30), 58% selected the correct answer but as shown is a little percentage knows exactly how much the seat belt violation cost whereas 39% of the drivers selected JD (10-20) and 3% selected JD (30-50).

Question Number 21

The misunderstanding of Pavement marking on roads causes an increasing number of accidents, the questionnaire had question about it. The question was “when are the solid and dash lines combined?" the correct answer was". Allow the cars to pass carefully when the dash line is near the left side", 52% of drivers selected the correct answer the parentage of correct answers showed that drivers have a misunderstanding about combining dash and solid continuous lines, whereas 48% selected other answers on the questionnaire sheet.

Question Number 22

Stopping near intersections can create or share in the congestions and accidents too. This study tried to measure drivers' knowledge about the distance the drivers must stop away from any intersection. Twenty-sex of drivers surveyed selected the correct answer and 52% believed they could stop less than 15 (m) from intersection and 22% believed they could stop 15 (m) away from a hydrant.

Question Number 23

The question on pavement marking comes back again on the questionnaire, but there was a new question: “what is the meaning of a continuous solid line in the center of the street?" The correct answer was “To forbid the cars passing ", 72% selected the correct answer and 20 % believed that the solid continuous center line is used to allow the pedestrian to cross the street and 8% believed it is used to force the vehicle to stop before it resumes moving.

Question Number 24

Changing the lane from right to left was a question on the questionnaire. The correct answer was "Travel carefully using the right signal and increase speed to go along with the left lane speed". There was a former question about the fastest lane. The results of the questionnaire were: 8% of the drivers selected the right answer, whereas 72 % selected "Travel carefully using the right signal and decrease speed according to the left lane speed" and 20% selected “Travel immediately using the right signal and increase speed according to with left lane speed."

Question Number 25

Traffic rules on the un-signalized intersection on the questionnaire return as the last question. The question was "when there is a problem at a signalized intersection what should you do?" The correct answer of this question was “Stop at the intersection and apply traffic rules." 93% of the drivers selected the correct answer whereas 6% chose “Decrease the vehicle speed and then cross the intersection." Less than 1% believed you had to increase your vehicle speed and then cross the intersection. As shown, a lot of the drivers in Jordan knew the right traffic rules at the intersection when signals are not working or they are turned off.

Table (4.1A) Shows the correct answers of questions and the percentage of each answer

Question number	Answers percentage (%)		
	A	B	C
1	7	90	3
2	45	6	49
3	6	2	92
4	39	20	41
5	14	82	4
6	78	6	16
7	91	6	3
8	83	14	3
9	85	9	6
10	6	5	89
11	3	95	2
12	7	3	90
13	83	12	5
14	21	74	5
15	87	8	5
16	72	15	13
17	33	65	2
18	26	68	6
19	90	6	4
20	39	58	3
21	23	52	25
22	26	52	22
23	20	8	72
24	20	8	72
25	1	6	93

* The shadow cells present the correct answers

4.3 Analysis of the survey results

In this second part of this chapter we will deeply analyze and discuss all independent variables were mentioned in chapter number three. This analysis will depended on what was mentioned in chapter three, section (3.3) "data analysis" which was consisted of three main parts.

4.3.1 Analysis of driver's age factor

The age factor was divided into six age groups (18-20), (21-29), (30-39), (40-49), (50-59) and (60+). The statistical description of these groups was summarized in Table (4.1).

Table (4.1B) Statistical description of age groups and traffic knowledge

Groups	Number of drivers	Mean of traffic knowledge score	Standard deviation of score
18-20	19	70.74	16.27
21-29	294	77.74	14.47
30-39	135	76.24	15.33
40-49	100	76.28	11.60
50-59	42	65.24	21.30
60+	10	70.80	24.73
Total	600	75.95	15.38

Table (4.1) shows the mean and the standard deviation of the traffic knowledge for all age groups. The highest mean was for ages from 21 to 29 and the lowest one was for ages from 50 to 59. The table also shows the number of drivers surveyed in each group. The standard deviation of the age levels ranged from 14.47 to 24.73. The smallest variation was for age group (40-49) and the greatest variation was for age group (60+). By taking a close look, we can say the youngest drivers who represented approximately half of collected sample have good traffic knowledge by comparing them with others.

By using One-Way ANOVA analysis of the age factor it was found that there is a significant relationship between traffic knowledge and the age factor (see Table 4.2). By making a close look to the correlation between traffic knowledge and age, Table (4.3) reveals that there is an inverse correlation. This means that the younger drivers have good traffic knowledge than the older drivers (see Table 4.3).

Table (4.2) One –Way ANOVA analysis of age factor

ANOVA

Traffic_knowledge

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	6566.462	5	1313.292	5.777	.000
Within Groups	135031.8	594	227.326		
Total	141598.3	599			

Table (4.3) Shows the correlations between traffic knowledge and drivers age

Correlations

		Age	Traffic_ knowledge
Age	Pearson Correlation	1	-.015
	Sig. (2-tailed)	.	.717
	N	600	600
Traffic_knowledge	Pearson Correlation	-.015	1
	Sig. (2-tailed)	.717	.
	N	600	600

Post hoc was used to determine which age levels have a significant difference in traffic knowledge. The research found that there is a significant relation between traffic knowledge and age groups, pairwise comparison that post hoc performed showed that level (30-39) and (50-59) level is significantly different from all other groups (see Table 4.4).

Table (4.4) Post hoc (Tukey) analysis table of drivers' age factor

Multiple Comparisons

Dependent Variable: Traffic_knowledge

Tukey HSD

(I) Age	(J) Age	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
18-20	21-29	-7.005	3.569	.365	-17.21	3.20
	30-39	-5.500	3.694	.672	-16.06	5.06
	40-49	-5.543	3.773	.684	-16.33	5.24
	50-59	5.499	4.169	.774	-6.42	17.42
	60+	-.063	5.890	1.000	-16.90	16.78
21-29	18-20	7.005	3.569	.365	-3.20	17.21
	30-39	1.504	1.568	.930	-2.98	5.99
	40-49	1.461	1.745	.960	-3.53	6.45
	50-59	12.503*	2.487	.000	5.39	19.61
	60+	6.941	4.848	.708	-6.92	20.80
30-39	18-20	5.500	3.694	.672	-5.06	16.06
	21-29	-1.504	1.568	.930	-5.99	2.98
	40-49	-.043	1.989	1.000	-5.73	5.64
	50-59	10.999*	2.664	.001	3.38	18.62
	60+	5.437	4.941	.881	-8.69	19.56
40-49	18-20	5.543	3.773	.684	-5.24	16.33
	21-29	-1.461	1.745	.960	-6.45	3.53
	30-39	.043	1.989	1.000	-5.64	5.73
	50-59	11.042*	2.772	.001	3.12	18.97
	60+	5.480	5.001	.883	-8.82	19.78
50-59	18-20	-5.499	4.169	.774	-17.42	6.42
	21-29	-12.503*	2.487	.000	-19.61	-5.39
	30-39	-10.999*	2.664	.001	-18.62	-3.38
	40-49	-11.042*	2.772	.001	-18.97	-3.12
	60+	-5.562	5.305	.901	-20.73	9.61
60+	18-20	.063	5.890	1.000	-16.78	16.90
	21-29	-6.941	4.848	.708	-20.80	6.92
	30-39	-5.437	4.941	.881	-19.56	8.69
	40-49	-5.480	5.001	.883	-19.78	8.82
	50-59	5.562	5.305	.901	-9.61	20.73

*. The mean difference is significant at the .05 level.

4.3.2 Analysis of gender factor

The second factor analyzed was the gender factor. As known, the gender factor has two categories: male and female. The data sample has 81 females and 519 males in the three different cities in Jordan. As noted, the mean of the males is better than females (see Table 4.5).

Table (4.5) Statistical description of the gender factor and traffic knowledge

Gender levels	Number of drivers	Mean traffic knowledge score	Standard deviation of score
Male	519	76.12	15.732
Female	81	74.86	12.888
Total	600	75.95	15.37

Table (4.6) One –Way ANOVA analysis of gender factor

ANOVA

Traffic_knowledge

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	109.724	1	109.724	.464	.496
Within Groups	141488.6	598	236.603		
Total	141598.3	599			

One-Way ANOVA table revealed that there is no significant relationship between traffic knowledge and gender factor (see Table 4.6). Because P-value is greater than 0.05 at 95% confidence level we can believe there is no relationship between traffic knowledge and gender factor. So, it is not necessary to perform post hoc test.

4.3.3 Analysis of the year of obtaining the license

The factor number three analyzed was the years of obtaining the license. This was entered as a factor to study with traffic knowledge. Table (4.7) shows that the mean of old drivers is higher than mean of young drivers, but there is no enough data which enable us to say that the older drivers are better than the young drivers, specially for the years 1960+ and 1950+.

Table (4.7) Statistical description of the year of obtaining the licenses

Factor levels	Number of drivers	Mean of traffic knowledge score	Standard deviation of score
1950-1959	3	82.67	4.62
1960-1969	4	81.00	2.00
1970-1979	46	66.26	23.04
1980-1989	80	76.05	12.91
1990-1999	269	76.06	15.63
2000-2006	198	77.66	13.09
Total	600	75.95	15.37

By taking a close look to ANOVA table (see Table 4.8), we found that there is a significant relationship between the years of obtaining their licenses and traffic knowledge. The One-Way ANOVA table did not show which group has a significant difference with other groups. Post hoc was performed to show the significant difference between factor groups (see Table 4.8).

Table (4.8) One –Way ANOVA analysis of the years of obtaining the licenses

ANOVA

Traffic_knowledge

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4346.057	4	1086.514	4.710	.001
Within Groups	137252.2	595	230.676		
Total	141598.3	599			

Table (4.9) Post hoc (Tukey) analysis table of the year of obtaining the license

Multiple Comparisons

Dependent Variable: Traffic_knowledge

Tukey HSD

(I) year	(J) year	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
1950+	1970+	15.227	9.028	.443	-9.48	39.93
	1980+	6.617	8.932	.947	-17.82	31.06
	1990+	6.503	8.818	.948	-17.62	30.63
	2000+	5.010	8.835	.980	-19.16	29.18
1970+	1950+	-15.227	9.028	.443	-39.93	9.48
	1980+	-8.610*	2.738	.015	-16.10	-1.12
	1990+	-8.724*	2.339	.002	-15.12	-2.32
	2000+	-10.217*	2.404	.000	-16.79	-3.64
1980+	1950+	-6.617	8.932	.947	-31.06	17.82
	1970+	8.610*	2.738	.015	1.12	16.10
	1990+	-.114	1.934	1.000	-5.41	5.18
	2000+	-1.607	2.012	.931	-7.11	3.90
1990+	1950+	-6.503	8.818	.948	-30.63	17.62
	1970+	8.724*	2.339	.002	2.32	15.12
	1980+	.114	1.934	1.000	-5.18	5.41
	2000+	-1.493	1.422	.832	-5.38	2.40
2000+	1950+	-5.010	8.835	.980	-29.18	19.16
	1970+	10.217*	2.404	.000	3.64	16.79
	1980+	1.607	2.012	.931	-3.90	7.11
	1990+	1.493	1.422	.832	-2.40	5.38

*. The mean difference is significant at the .05 level.

Table (4.9) reveals that there is a significant difference between factor groups. The first significant difference was revealed between 1980+ level and 1970+ level, this significant relationship means that the drivers obtained their licenses in 1980+ are better than those who got them in 1970+. Also, the drivers who obtained new licenses were better than those who got them in 1970+. The correlation between traffic knowledge and the years of obtaining licenses are summarized in Table (4.10). By taking a close look on Table (4.10), we see that there is a positive correlation between traffic knowledge and the years of obtaining the licenses factor. This indicates that the drivers who get new licenses are better than drivers who obtained their licenses a long time ago.

Table (4.10) Shows the correlation between years of obtaining the licenses and traffic knowledge

Correlations

		year	Traffic_ knowledge
year	Pearson Correlation	1	.123**
	Sig. (2-tailed)	.	.003
	N	600	600
Traffic_knowledge	Pearson Correlation	.123**	1
	Sig. (2-tailed)	.003	.
	N	600	600

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

4.3.4 Analysis of the licenses types held by the drivers

The fourth factor analyzed with the traffic knowledge was license classifications. As mentioned in chapter three, this factor consists of four levels. The mean and standard deviation was calculated as shown in Table (4.11). From the mean, we can say that the drivers who have a sixth license category have a higher mean than other levels because they have been tested four times to get the 6th license category.

Table (4.11) Statistical description of licenses classifications factor

Factor levels	Number of drivers	Mean of traffic knowledge score	Standard deviation of score
Third	410	75.52	15.85
Fourth	88	76.09	14.06
Fifth	67	75.16	16.67
Sixth	35	82.06	7.340
Total	600	75.95	15.37

But this does not mean that there is a significant difference between 6th license category and other licenses. One-Way ANOVA was conducted on the data obtained from field collection, revealed that there is no significant relationship between traffic knowledge and license classifications. As Table (4.12) revealed, there is no significant relationship. So, we do not need to perform post hoc test to this factor.

Table (4.12) One –Way ANOVA analysis of licenses classifications factor

ANOVA

Traffic_knowledge

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1423.638	3	474.546	2.018	.110
Within Groups	140174.7	596	235.192		
Total	141598.3	599			

4.3.5 Analysis of vehicle registered plate classification

The fifth factor analyzed with traffic knowledge was vehicle registered plate. The abbreviations revealed in Table (4.13) mean as follows: "Gov": governmental plate, "Pr": private plate and "Pu": public plate (taxi and service and buses) and "Re" is rental cars.

Table (4.13) Statistical description of vehicle registered plate classification factor

Factor levels	Number of drivers	Mean of traffic knowledge score	Standard deviation of score
Governmental	12	56.67	17.87
Private	457	76.03	15.62
Public	128	77.88	12.83
Rental	3	58.67	4.62
Total	600	75.95	15.38

Table (4.13) shows the mean and the standard deviation of factor levels. By taking a close look to the means, we found that, the lowest mean was for governmental drivers then rental drivers. The level of highest mean was for public drivers. The standard deviation for this factor ranged from 4.619 to 17.87. The smallest variation was for rental drivers and the greatest variation was for governmental drivers.

By taking a close look to One-Way ANOVA table (see Table 4.14), we note that the value of the "Sig" column is less than 0.05. That means, there is a significant relation between vehicle register plates and traffic knowledge, but One-Way ANOVA table cannot reveal which group has a significant difference. Post hoc test was conducted to perform pairwise comparison between factor levels.

Table (4.14) One –Way ANOVA analysis of vehicle registered plates factor

ANOVA

Traffic_knowledge

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	5835.275	3	1945.092	8.539	.000
Within Groups	135763.0	596	227.790		
Total	141598.3	599			

Table (4.15) Post hoc (Tukey) analysis table of vehicle registered plate classification

Multiple Comparisons

Dependent Variable: Traffic_knowledge

Tukey HSD

(I) vehicle_type	(J) vehicle_type	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
GOV	Pr	-19.360*	4.414	.000	-30.73	-7.99
	Pu	-21.208*	4.557	.000	-32.95	-9.47
	Re	-2.000	9.742	.997	-27.10	23.10
Pr	GOV	19.360*	4.414	.000	7.99	30.73
	Pu	-1.849	1.509	.611	-5.74	2.04
	Re	17.360	8.742	.195	-5.16	39.88
Pu	GOV	21.208*	4.557	.000	9.47	32.95
	Pr	1.849	1.509	.611	-2.04	5.74
	Re	19.208	8.815	.130	-3.50	41.92
Re	GOV	2.000	9.742	.997	-23.10	27.10
	Pr	-17.360	8.742	.195	-39.88	5.16
	Pu	-19.208	8.815	.130	-41.92	3.50

*. The mean difference is significant at the .05 level.

Table (4.15) shows that there is a significant relation between puplic plate drivers (taxi, bus, service) and other factor levels. The P- value of this level is less than 0.05 which indicates there is a significant relation, but this does not mean that those drivers are applying the traffic rules.

4.3.6 Analysis of social status factor

The factor number six was analyzed is the social status. It has four levels: single, married, widow and divorced. The statistical description of social status factor is summarized in table (4.16). As revealed, the least mean among all, was the divorced drivers.

Table (4.16) Statistical description of the social status factor

Factor levels	Number of drivers	Mean of traffic knowledge score	Standard deviation of score
Divorced	5	51.20	25.67
Married	288	74.93	15.93
Single	304	77.30	14.24
Widow	3	77.33	18.47
Total	600	75.95	15.37

Table (4.16) shows the mean and standard deviation of social status factor. The highest mean was for single drivers who approximatly half of collected sample. The highest variation was for divorced drivers and the lowest variation was for single drivers. We can conclude that social problems can affect concentration of questioned drivers.

One-Way ANOVA was conducted to examine if there is a significant relation between social status with traffic knowledge. This research found out that, there is a significant relation between social status factor and traffic knowledge, as revealed in Table (4.17).

Table (4.17) One-Way ANOVA analysis of social status factor

ANOVA

Traffic_knowledge

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	3924.058	3	1308.019	5.662	.001
Within Groups	137674.2	596	230.997		
Total	141598.3	599			

Post hoc was performed to make pairwise compersion to know which level has a significant relation. Table (4.18) revealed that divorced drivers is less awareness drivers among all other drivers and there is no siginficant relation between married and single drivers . Simply, and as we see, the scoial problems can affect traffic knowledge.

Table (4.18) Post hoc table analysis of social status pairwise comparison between factor levels

Multiple Comparisons

Dependent Variable: Traffic_knowledge

Tukey HSD

(I) STATUS	(J) STATUS	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
D	M	-23.731*	6.856	.003	-41.39	-6.07
	S	-26.103*	6.853	.001	-43.76	-8.45
	W	-26.133	11.099	.087	-54.73	2.46
M	D	23.731*	6.856	.003	6.07	41.39
	S	-2.372	1.250	.230	-5.59	.85
	W	-2.403	8.820	.993	-25.13	20.32
S	D	26.103*	6.853	.001	8.45	43.76
	M	2.372	1.250	.230	-.85	5.59
	W	-.031	8.818	1.000	-22.75	22.69
W	D	26.133	11.099	.087	-2.46	54.73
	M	2.403	8.820	.993	-20.32	25.13
	S	.031	8.818	1.000	-22.69	22.75

*. The mean difference is significant at the .05 level.

4.3.7 Analysis of vehicle category factor

Vehicle category is the seventh factor analyzed in this research. It consists of four groups. Table (4.19) reveals the drivers who drive buses and trucks licenses have higher means than passenger cars drivers. As mentioned before, the drivers who drive public plates vehicles, have higher mean than those driver's who drive private plate vehicles in the vehicle registration plate factor.

Tabel (4.19) Statistical analysis of vehicle category factor

Factor levels	Number of drivers	Mean of traffic knowledge score	Standard deviation of score
Passenger car	490	76.15	15.34
Mini bus	81	73.04	15.92
Bus	21	80.95	13.50
Truck, Double	8	80.00	12.83
Total	600	75.95	15.37

One-way ANOVA was conducted to examine if there was a significant relation or not (see Table 4.20). The P-value is greater than 0.05. Therefore, there is no reason to believe that there is a significant relation between traffic knowledge and vehicle category. This means that there is no significant different between any factor levels. We do not need to perform a Post hoc test.

Table (4.20) One-Way ANOVA analysis table of vehicle category factor

ANOVA

Traffic_knowledge

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1363.032	3	454.344	1.931	.123
Within Groups	140235.3	596	235.294		
Total	141598.3	599			

4.3.8 Analysis drivers education factor

Drivers education in Jordan is an important factor to be studied. This factor has four groups. By taking a close look at Table (4.21) , we found out that graduate studies have higher mean if compared with other factor levels. The uneducated drivers have the worst marks in the questionnaire results.

Table (4.21) Statistical description of the drivers' education factor

Factor levels	Number of drivers	Mean of traffic knowledge score	Standard deviation of score
Uneducated	50	56.00	23.11
Tawjihi	233	73.22	15.12
B.A/Diploma	279	81.08	10.07
Graduate studies	38	81.26	10.56
Total	600	75.95	15.37

Table (4.22) One-way ANOVA analysis of drivers education factor

ANOVA

Traffic_knowledge

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	30039.669	3	10013.223	53.495	.000
Within Groups	111558.6	596	187.179		
Total	141598.3	599			

To examine whether there is a siginifcant relation, One-way ANOVA was conducted (see Table 4.22). ANOVA table reveals that there is a significant relation between drivers' education levels and traffic knowledge. By taking a close look at "Sig" column in Table (4.22) we notice that the P-value is less than 0.05.

In Table (4.23) we found that there is a significant relation between uneducated, Tawjaihi and B.S degree holders but there is no significant relation between B.S and Master or PhD drivers, but by referring to the statistical table above, we found out that the mean of graduate studies is higher than B.S drivers.

Table (4.23) Post hoc (Tukey) analysis table to make pairwise comparison between factor levels of drivers education

Multiple Comparisons

Dependent Variable: Traffic_knowledge
Tukey HSD

(I) EDUCATION	(J) EDUCATION	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
uneducated	Tawjihi,	-17.219*	2.132	.000	-22.71	-11.73
	B.S/Diploma	-25.075*	2.101	.000	-30.49	-19.66
	graduated studies	-25.263*	2.944	.000	-32.85	-17.68
Tawjihi,	uneducated	17.219*	2.132	.000	11.73	22.71
	B.S/Diploma	-7.856*	1.214	.000	-10.98	-4.73
	graduated studies	-8.044*	2.394	.005	-14.21	-1.88
B.S/Diploma	uneducated	25.075*	2.101	.000	19.66	30.49
	Tawjihi,	7.856*	1.214	.000	4.73	10.98
	graduated studies	-.188	2.366	1.000	-6.28	5.91
graduated studies	uneducated	25.263*	2.944	.000	17.68	32.85
	Tawjihi,	8.044*	2.394	.005	1.88	14.21
	B.S/Diploma	.188	2.366	1.000	-5.91	6.28

*. The mean difference is significant at the .05 level.

4.3.9 Analysis of Geographical place factor

The factor number nine is the geographical places. As mentioned before, the questionnaires were distributed into 3 cities: Amman the capital, Al-Zarqa and Irbid. Two hundred questionnaires were distributed in each city; Table (4.24) reveals the mean of traffic knowledge in each city. Unfortunately, the mean of different cities is so close that there is no big difference in the means of traffic knowledge for the cities surveyed.

Table (4.24) Statistical description of geographical places factor

Factor levels	Number of drivers	Mean of traffic knowledge score	Standard deviation of score
Al-Zarqa	200	76.06	15.45
Irbid	200	76.04	13.59
Amman	200	75.74	16.96
Total	600	75.95	15.37

Table (4.25) One-way ANOVA table of geographical places

ANOVA

Traffic_knowledge

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	12.853	2	6.427	.027	.973
Within Groups	141585.4	597	237.162		
Total	141598.3	599			

A close look at Table (4.25) shows that "Sig" column value (P-value) is higher than 0.05, which leads to the indication that there is no significant relation between any level of this factor and the traffic knowledge. Therefore, we do not need to perform a post hoc test.

4.3.10 Analysis of Salary factor

Salary factor, in this research, was classified into 4 levels or groups: unemployed, 100-200,201-300,300+. The questionnaire results were summarized in Table (4.26). The high mean among all was to the level four (300+).

Table (4.26) Shows statistical description of the salary factor

Factor level	Number of drivers	Mean of traffic knowledge score	Standard deviation of score
Unemployed	41	75.41	15.95
100-200	208	72.92	16.76
201-300	41	72.49	14.66
300+	310	78.50	13.04
Total	600	75.95	15.37

Table (4.27) Shows One- way ANOVA analysis table of salary factor

ANOVA

Traffic_knowledge

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4429.832	3	1476.611	6.416	.000
Within Groups	137168.5	596	230.148		
Total	141598.3	599			

Fortunately, there is a significant relation between traffic knowledge and salary (see Table 2.27). By making a close look at "Sig" column, we found out that, the P-value is less than 0.05, which leads us to say that there is a significant relation. We need to perform a Post hoc test to make pairwise comparison and determine which level has a significant difference.

Table (4.28) Post hoc (Tukey) analysis table to make pairwise comparison between factor levels of salary

Multiple Comparisons

Dependent Variable: Traffic_knowledge

Tukey HSD

(I) income	(J) income	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
100-200	201-300	.435	2.592	.998	-6.24	7.11
	300+	-5.580*	1.360	.000	-9.08	-2.08
	unemployed	-2.492	2.592	.772	-9.17	4.19
201-300	100-200	-.435	2.592	.998	-7.11	6.24
	300+	-6.015	2.521	.081	-12.51	.48
	unemployed	-2.927	3.351	.819	-11.56	5.71
300+	100-200	5.580*	1.360	.000	2.08	9.08
	201-300	6.015	2.521	.081	-.48	12.51
	unemployed	3.089	2.521	.611	-3.41	9.58
unemployed	100-200	2.492	2.592	.772	-4.19	9.17
	201-300	2.927	3.351	.819	-5.71	11.56
	300+	-3.089	2.521	.611	-9.58	3.41

*. The mean difference is significant at the .05 level.

One-Way ANOVA reveals that there is a significant relation between traffic knowledge and salary factor, but we need to conduct Post hoc to make pairwise comparison among group (see Table 4.28). We notice that the drivers of high salaries are better than others, but there is no significant difference between drivers whose salaries are JD 201-300 per month and unemployed drivers, too. Table (4.29) shows that there is a positive correlation between traffic knowledge and salary factor.

Table (4.29) Correlation table between salary and traffic knowledge

Correlations

		Traffic_ knowledge	income
Traffic_knowledge	Pearson Correlation	1	.146**
	Sig. (2-tailed)	.	.000
	N	600	600
income	Pearson Correlation	.146**	1
	Sig. (2-tailed)	.000	.
	N	600	600

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

4.3.11 Analysis Number of accidents factor

The factor number eleven, accident number, was analyzed by One-Way ANOVA. This factor has four levels as shown in Table (4.30). The highest mean belongs to drivers with 2 accidents. As noted, half of the drivers surveyed have no accidents. By having a close look at Table (4.30), we notice that the mean of the levels are close to each other.

Table (4.30) Shows statistical description of the accident number facto

Factor levels	Number of drivers	Mean of traffic knowledge of score	Standard deviation of score
No accidents	345	75.84	14.90
1	45	75.91	16.10
2	147	77.69	15.18
3+	63	72.51	17.47
Total	600	75.95	15.37

Table (4.31) Shows One- way ANOVA of the accident number factor

ANOVA

Traffic_knowledge

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	1194.387	3	398.129	1.690	.168
Within Groups	140403.9	596	235.577		
Total	141598.3	599			

One-Way ANOVA was conducted on accident numbers factor. Table (4.31) shows that there is no significant relation between accident numbers and traffic knowledge. This means that there is no significant relation between any factor levels and traffic knowledge then we do not need to perform Post hoc test.

4.3.12 Analysis of Type of accidents

The last factor in this research depends on accident types. It consists of eight categories: Exceeding Speed Limit, Failing to take care, Incorrect Overtaking, Loss control, No accidents, Tail Gating, Using Incorrect Lane and Others. The statistical description of accident types are shown in Table (4.32).

Table (4.32) Shows statistical description of accident type's factor

Factor levels	Number of drivers	Mean of traffic knowledge	Standard deviation of score
Exceeding speed limit	126	70.86	18.87
Failing to take care	35	76.23	11.02
Incorrect lane	39	81.03	13.16
Loss control	6	83.33	10.25
Tailing gating	42	85.05	4.76
Using incorrect lane	4	79.00	3.80
Others	3	88.00	2.33
No accident	345	75.84	14.90

Table (4.33A) One- way ANOVA of accident type's factor

ANOVA

Traffic_knowledge

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	8409.140	7	1201.306	5.340	.000
Within Groups	133189.2	592	224.982		
Total	141598.3	599			

There are eight groups in accident types. By having a look at "Sig" column, we notice the P-value is less than 0.05 (see Table 4.33). This means that there is a significant relation between traffic knowledge and accident types, this also means that there is a significant relationship between traffic knowledge and factor levels. The Post hoc was conducted to examine pairwise comparison between factor levels. We found that there is a significant relation between drivers who made no accidents and who exceed speed limit. There also a significant relation between incorrect overtaking and exceeding speed limit. There is a significant relation between tail gating and exceeding speed limit the last significant relationship is between tail gating and no accidents. The post hoc of this factor is found in appendix B.

Table (4.33B) Shows all factors and relationships with traffic knowledge

Factor	If there are a significant relationship
Age	Yes
Gender	No
Year of obtaining the license	Yes
license types held by the drivers	No
Vehicle registered plate	Yes
social status	Yes
Vehicle category	No
Drivers education	Yes
Geographical place	No
Salary	Yes
Number of accidents	No
Type of accident	Yes

5 Conclusions and Recommendations

5.1 conclusions

1. This research revealed that there is a lack in traffic knowledge of the drivers which were surveyed in Jordan. By referring to statistical description of research it was found that the mean of traffic knowledge score was 75.95 % and the standard deviation was 15.37. This mean of traffic knowledge approves there is a lack; this refers to drivers themselves and responsible establishments.

2. It was found that, there is a significant relationship between traffic knowledge and drivers age factor which the traffic knowledge of youngest drivers are better than older ones.

3. It was found that, there is an inverse correlation between traffic knowledge and age factor which mean, when age increase the traffic knowledge decrease. That mean the youngest drivers are better than older drivers.

4. It was found that, there is no relation between traffic knowledge and social status of the drivers which were surveyed.

5. It was found that, divorced drivers are less awrness drivers among all other drivers and there is no siginficant relation between married and single drivers.

6. It was found that, there is a significant relationship between the year of obtaining the license and the traffic knowledge.

7. It was found that, there is positive correlation between traffic knowledge and the year of obtaining the licensce. That mean the youngest drivers are better than older drivers.

8. It was found that, there is no relation between traffic knowledge and the license held by the drivers.

9. It was found that, there is no relationship between traffic knowledge and the geographical places in Jordan, the high accident number cities were a proximately have the same mean of traffic knowledge.

10. It was found that, there is no relationship between traffic knowledge and license classifications.
11. It was found that, the traffic knowledge of drivers who drive public vehicles was better than drivers drive governmental vehicles but there was not a significant difference between public and private drivers.

12. We found out that graduate studies have higher mean if compared with other factor levels, but there is no big difference between graduate studies and B.S.

13. It was found that, drivers who have B.S, Master, PhDs degrees have good traffic knowledge than non educated drivers.

14. It was found that, there is no relation between traffic knowledge and vehicle categories.

15. It was found that, there is a significant relation between traffic knowledge and salary factor. We found that "1-100" is less educated than second item "101-200". The most of the students who were surveyed in the study were selected "101-200". The drivers who taken above 300+ are more educated than other by looking the mean of those drivers.

16. It was found that, there is positive correlation between traffic knowledge of the drivers and drivers' salary. That mean, when the salaries of the drivers increase the traffic knowledge increase too.

17. It was found that, there is no significant relation between accident number and traffic knowledge.

18. By analyzing of question numbers with traffic knowledge we found that all drivers answered correctly except the question number four and twenty three.

19. The last thing we found that, there is a significant relation between traffic knowledge and type of accidents.

5.2 Recommendations

We have some recommendations which we hope to be useful in enhancing the traffic knowledge of drivers in our country:

1. First recommendation about renewing licenses there is a number of notes:-

a. The period of license type 3 is ten years we recommend to be 5 years and make a theoretical test every time the drivers renew his/her license.

b. Try to force all the drivers to make a theoretical test when they want to renew their licenses.

c. Change the period of all license types to be 5 years maximum.

2. The second recommendation attaches ways of increasing traffic knowledge level in Jordan these days as seen TV and Fm radio stations can play a major role in increasing the traffic knowledge by making a contests and rewards to increase awareness of the drivers and trying to push them to learn by themselves.

3. The third recommendation what we hope from police patrols raising the observations of drivers violations of the traffic rules and raise the cost of the violations that may be caused in deadly accidents.

4. The last recommendation about the way to get the license. The first step you must do is to register to training school and then after finishing the training is to go to make a theoretical test. This way is inversely affected the students those trying to get the license, we prefer to make a theoretical test for the students and then they can register to the school to make their.

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Appendix A

Collected Data

Table (1-A) the data which was collected

records	age	sex	license_cl	year	education	status	vehicle_type	category	Salary	Accident_no	Accident_reason	Mistakes	marks	Location
1	28	m	3	2001	b	S	Pr	b	b	0	No accidents	3	88	ZARQA
2	27	m	3	2005	b	S	Pr	b	a	0	No accidents	0	100	ZARQA
3	57	m	3	1965	c	M	Pr	b	c	0	No accidents	5	80	ZARQA
4	33	m	5	2000	b	M	Pu	b	b	0	No accidents	4	84	ZARQA
5	60	m	3	1970	c	M	Pr	b	c	0	No accidents	4	84	ZARQA
6	62	m	3	1972	d	M	Pr	b	c	2	Exceeding Speed Limit	4	84	ZARQA
7	22	m	3	2004	b	S	Pr	b	d	0	No accidents	2	92	ZARQA
8	24	m	3	2005	c	S	Pr	b	a	0	No accidents	4	84	ZARQA
9	56	m	6	1973	b	M	Pu	d	a	2	Exceeding Speed Limit	6	76	ZARQA
10	27	m	3	1997	c	S	Pr	b	a	0	No accidents	3	88	ZARQA
11	26	m	3	1998	c	S	Pr	b	c	0	No accidents	2	92	ZARQA
12	28	m	3	2004	c	S	Pr	b	a	0	No accidents	1	96	ZARQA
13	26	m	3	2003	b	M	Pr	b	b	0	No accidents	7	72	ZARQA
14	25	m	3	1996	b	M	Pr	b	a	0	No accidents	4	84	ZARQA
15	34	f	3	1997	b	S	Pr	b	d	0	No accidents	4	84	ZARQA
16	57	m	6	1973	a	M	Pu	b	a	2	Exceeding Speed Limit	8	68	ZARQA
17	53	m	6	1973	b	M	Pu	d	c	0	No accidents	4	84	ZARQA
18	45	m	6	1974	b	M	Pu	d	a	2	Tail Gating	4	84	ZARQA
19	32	m	6	1997	b	S	Pu	d	a	2	Exceeding Speed Limit	4	84	ZARQA
20	54	m	5	1974	c	M	Pu	b	a	2	Incorrect Overtaking	3	88	ZARQA
21	55	m	3	1975	a	S	Pr	b	c	2	Exceeding Speed Limit	19	24	ZARQA
22	56	m	4	1975	b	M	Pu	b	a	2	Tail Gating	4	84	ZARQA
23	55	m	3	1975	b	M	Pr	b	d	0	No accidents	12	52	ZARQA
24	32	m	5	1995	b	S	Pu	c	a	0	No accidents	1	96	ZARQA
25	40	m	3	1997	b	M	Pr	b	b	0	No accidents	6	76	ZARQA
26	55	m	3	1975	a	S	Pr	b	c	2	Exceeding Speed Limit	19	24	ZARQA
27	56	m	4	1975	b	M	Pu	b	a	2	Tail Gating	4	84	ZARQA
28	28	m	3	1998	b	S	Pu	b	a	0	No accidents	7	72	ZARQA
29	33	m	4	1995	b	M	Pu	b	a	2	Tail Gating	5	80	ZARQA
30	54	m	5	1975	c	M	Pu	b	a	2	Exceeding Speed Limit	3	88	ZARQA
31	33	m	3	1995	c	M	Pr	b	c	0	No accidents	3	88	ZARQA
32	55	f	3	1975	b	M	Pr	b	d	0	No accidents	12	52	ZARQA
33	33	m	3	2001	c	M	Pr	b	c	0	No accidents	3	88	ZARQA
34	50	m	6	1976	b	M	Pu	d	a	0	No accidents	2	92	ZARQA
35	52	m	6	1976	a	M	Pu	b	a	0	No accidents	3	88	ZARQA
36	31	f	3	1999	c	M	Pr	b	c	0	No accidents	8	68	ZARQA
37	52	m	6	1976	a	M	Pu	b	a	0	No accidents	3	88	ZARQA
38	53	m	6	1977	b	M	Pu	d	c	3	Tail Gating	4	84	ZARQA
39	30	m	4	1998	b	M	Pu	b	a	0	No accidents	7	72	ZARQA
40	40	f	3	1996	b	M	Pr	b	c	2	Failing to take care	5	80	ZARQA
41	54	m	5	1977	c	M	Pu	b	a	0	No accidents	3	88	ZARQA
42	53	m	6	1977	b	M	Pu	d	c	3	Tail Gating	4	84	ZARQA
43	50	f	3	1977	b	M	Pr	b	a	1	Exceeding Speed Limit	8	68	ZARQA
44	65	m	3	1978	a	D	Pr	b	c	3	Exceeding Speed Limit	19	24	ZARQA
45	34	f	3	2006	c	S	Pr	b	b	0	No accidents	3	88	ZARQA
46	53	m	5	1978	c	M	Pr	b	c	1	Exceeding Speed Limit	5	80	ZARQA
47	40	f	3	1995	c	M	Pr	b	c	0	No accidents	7	72	ZARQA
48	34	f	3	2006	b	S	Pr	b	c	0	No accidents	9	64	ZARQA
49	40	m	5	1999	a	M	Pr	c	a	1	Loss control	4	84	ZARQA

records	age	sex	license_cl	year	education	status	vehicle_type	catogary	Salary	accident_no	Accident_reason	Mistakes	marks	location
50	52	m	3	1979	b	M	Pr	b	c	3	Exceeding Speed Limit	13	48	ZARQA
51	32	m	3	1998	b	M	Pr	b	c	2	Incorrect Overtaking	3	88	ZARQA
52	30	m	4	1998	c	M	Pr	f	b	2	Failing to take care	10	60	ZARQA
53	30	m	4	1997	b	M	Pu	b	b	0	No accidents	3	88	ZARQA
54	33	m	3	1995	c	S	Pr	b	a	0	No accidents	8	68	ZARQA
55	35	m	3	1996	a	M	Pr	b	b	0	No accidents	15	40	ZARQA
56	33	m	3	1995	c	M	Pr	b	c	0	No accidents	3	88	ZARQA
57	57	m	4	1979	b	M	Pu	b	b	3	Exceeding Speed Limit	13	48	ZARQA
58	52	m	3	1979	b	M	Pr	b	c	3	Exceeding Speed Limit	13	48	ZARQA
59	35	m	5	1980	d	M	Pr	c	b	2	Exceeding Speed Limit	3	88	ZARQA
60	44	m	4	1980	a	M	Pu	b	a	3	Failing to take care	8	68	ZARQA
61	48	m	6	1980	b	M	Pu	d	b	2	Incorrect Overtaking	5	80	ZARQA
62	43	m	3	1981	c	M	Pr	b	c	2	Exceeding Speed Limit	4	84	ZARQA
63	43	m	6	1981	b	S	Pu	c	a	0	No accidents	7	72	ZARQA
64	55	m	3	1981	c	M	Pr	b	b	0	No accidents	9	64	ZARQA
65	42	f	3	1982	b	S	Pr	b	c	1	Exceeding Speed Limit	10	60	ZARQA
66	43	m	3	1982	b	M	Pr	b	a	0	No accidents	8	68	ZARQA
67	41	m	3	1982	c	M	Pr	b	c	1	Exceeding Speed Limit	4	84	ZARQA
68	42	m	6	1982	b	M	Pu	d	b	2	Exceeding Speed Limit	4	84	ZARQA
69	41	m	4	1982	c	M	Pu	b	a	1	Tail Gating	5	80	ZARQA
70	42	m	4	1982	b	M	Pu	b	a	2	Incorrect Overtaking	6	76	ZARQA
71	42	f	3	1982	b	S	Pr	b	c	1	Exceeding Speed Limit	10	60	ZARQA
72	26	m	6	1997	b	M	Pr	f	c	0	No accidents	4	84	ZARQA
73	21	m	3	2002	b	S	Pr	f	a	3	No accidents	4	84	ZARQA
74	28	m	3	2004	b	M	Pr	c	c	2	Incorrect Overtaking	3	88	ZARQA
75	32	m	3	1998	b	M	Pr	b	c	2	Incorrect Overtaking	3	88	ZARQA
76	25	m	3	2001	c	S	Pr	b	b	0	No accidents	3	88	ZARQA
77	26	m	3	2001	b	S	Pr	b	b	0	No accidents	3	88	ZARQA
78	30	m	4	1997	b	M	Pu	b	b	0	No accidents	3	88	ZARQA
79	26	m	3	2001	c	S	Pr	b	d	0	No accidents	4	84	ZARQA
80	26	m	3	1998	b	S	Pr	b	b	0	No accidents	6	76	ZARQA
81	41	m	4	1983	b	M	Pu	b	b	3	Failing to take care	12	52	ZARQA
82	23	m	3	2001	b	M	Pr	b	a	0	No accidents	5	80	ZARQA
83	28	m	3	2000	b	S	Pr	b	a	0	No accidents	5	80	ZARQA
84	25	m	3	2000	a	S	Pr	b	a	0	No accidents	15	40	ZARQA
85	23	m	3	2000	b	S	Pr	b	a	0	No accidents	6	76	ZARQA
86	32	m	3	1998	b	M	Pr	b	b	0	No accidents	11	56	ZARQA
87	26	m	4	2001	a	S	Pu	b	b	3	Tail Gating	3	88	ZARQA
88	24	m	4	2001	a	S	Pu	b	a	0	No accidents	8	68	ZARQA
89	32	m	5	1999	b	M	Pu	b	a	3	Tail Gating	4	84	ZARQA
90	27	m	4	1998	c	S	Pu	b	a	1	Tail Gating	5	80	ZARQA
91	32	m	4	1998	b	M	Pu	b	a	3	Tail Gating	4	84	ZARQA
92	32	m	3	1997	b	M	GOV	b	a	2	Exceeding Speed Limit	12	52	ZARQA
93	30	m	3	1995	b	M	GOV	b	a	2	Incorrect Overtaking	12	52	ZARQA
94	27	f	3	1998	b	M	Pr	b	b	0	No accidents	10	60	ZARQA
95	25	f	3	1999	b	S	Pr	b	a	0	No accidents	12	52	ZARQA
96	23	m	3	2005	c	S	Pr	b	d	0	No accidents	5	80	ZARQA
97	26	f	3	1996	c	M	Pr	b	a	0	No accidents	12	52	ZARQA
98	41	m	6	1983	b	M	Pu	c	a	0	No accidents	6	76	ZARQA
99	41	m	6	1983	a	M	Pu	c	a	0	No accidents	5	80	ZARQA

records	age	sex	license_cl	year	education	status	vehicle_type	catogary	Salary	accident_no	Accident_reason	Mistakes	marks	location
100	34	m	6	1983	b	M	Pu	b	a	2	Exceeding Speed Limit	3	88	ZARQA
101	40	m	4	1983	c	M	Pu	b	a	2	Tail Gating	2	92	ZARQA
102	45	m	4	1984	c	M	Pu	b	b	2	Exceeding Speed Limit	5	80	ZARQA
103	45	m	5	1984	c	M	Pu	c	b	3	Incorrect Overtaking	7	72	ZARQA
104	44	m	3	1985	c	M	Pr	b	c	0	No accidents	2	92	ZARQA
105	39	m	3	1985	b	M	Re	b	c	0	No accidents	11	56	ZARQA
106	25	m	3	1996	c	S	Pr	b	b	2	Exceeding Speed Limit	4	84	ZARQA
107	26	m	3	1996	c	M	Pr	b	c	2	Failing to take care	3	88	ZARQA
108	28	m	3	1996	d	S	Pr	c	c	0	No accidents	6	76	ZARQA
109	27	m	5	1996	b	M	Pu	c	a	1	Using Incorrect Lane	6	76	ZARQA
110	29	m	3	1997	c	M	Pr	b	c	1	Exceeding Speed Limit	7	72	ZARQA
111	27	m	3	1997	c	S	Pr	b	b	3	Exceeding Speed Limit	5	80	ZARQA
112	27	m	3	1997	c	S	Pr	b	b	0	No accidents	3	88	ZARQA
113	29	m	4	1997	c	S	Pu	b	a	1	Exceeding Speed Limit	5	80	ZARQA
114	27	m	4	1997	b	S	Pr	b	b	0	No accidents	3	88	ZARQA
115	25	m	3	1998	c	S	Pr	c	c	3	Failing to take care	6	76	ZARQA
116	25	m	3	1998	b	S	Pr	c	b	3	Failing to take care	8	68	ZARQA
117	25	m	3	1998	d	S	Pr	b	c	3	Exceeding Speed Limit	9	64	ZARQA
118	25	m	3	1998	b	S	Pr	b	b	3	Exceeding Speed Limit	12	52	ZARQA
119	25	m	3	1998	b	S	Pr	b	a	2	Failing to take care	6	76	ZARQA
120	27	m	3	1998	c	S	Pr	b	c	0	No accidents	10	60	ZARQA
121	25	m	3	1998	c	S	Pr	b	d	0	No accidents	8	68	ZARQA
122	25	m	3	1998	c	S	Pr	b	c	0	No accidents	7	72	ZARQA
123	42	m	3	1985	b	M	Pr	c	c	2	Failing to take care	4	84	ZARQA
124	44	m	5	1985	c	M	Pr	c	c	0	No accidents	5	80	ZARQA
125	45	m	5	1985	c	M	Pr	c	c	0	No accidents	5	80	ZARQA
126	64	m	4	1958	b	M	Pu	b	b	2	Exceeding Speed Limit	5	80	ZARQA
127	39	m	3	1986	d	M	Pr	b	c	3	Exceeding Speed Limit	2	92	ZARQA
128	32	m	3	1988	d	M	Pr	b	c	2	Exceeding Speed Limit	3	88	ZARQA
129	39	m	3	1989	c	M	Pu	b	a	2	Exceeding Speed Limit	4	84	ZARQA
130	37	f	3	1989	c	M	Pr	b	d	0	No accidents	3	88	ZARQA
131	40	f	3	1989	c	M	Pr	b	d	2	Incorrect Overtaking	7	72	ZARQA
132	40	m	5	1989	a	M	Pu	c	c	0	No accidents	11	56	ZARQA
133	37	f	3	1989	c	M	Pr	b	d	0	No accidents	3	88	ZARQA
134	33	m	3	1990	d	M	Pr	b	a	0	No accidents	4	84	ZARQA
135	34	m	3	1990	c	M	Pr	b	b	1	Tail Gating	5	80	ZARQA
136	34	m	4	1990	b	M	Pr	b	b	2	Tail Gating	2	92	ZARQA
137	35	f	3	1990	c	M	Pr	b	c	0	No accidents	5	80	ZARQA
138	51	m	3	1997	a	M	Pr	b	c	0	No accidents	11	56	ZARQA
139	26	m	3	2001	b	S	Pr	b	b	0	No accidents	3	88	ZARQA
140	30	m	4	1997	b	M	Pu	b	b	0	No accidents	3	88	ZARQA
141	45	m	3	1990	c	M	Pr	b	c	0	No accidents	5	80	ZARQA
142	26	m	3	2001	c	S	Pr	b	d	0	No accidents	4	84	ZARQA
143	26	m	3	1998	b	S	Pr	b	b	0	No accidents	6	76	ZARQA
144	33	m	3	1995	c	S	Pr	b	a	0	No accidents	8	68	ZARQA
145	32	m	4	1991	b	S	Pr	b	a	0	No accidents	7	72	ZARQA
146	23	m	3	2001	b	M	Pr	b	a	0	No accidents	5	80	ZARQA
147	28	m	3	2000	b	S	Pr	b	a	0	No accidents	5	80	ZARQA
148	28	m	3	1991	c	M	Pr	b	b	0	No accidents	3	88	ZARQA
149	35	m	3	1996	a	M	Pr	b	b	0	No accidents	15	40	ZARQA

records	age	sex	license_cl	year	education	status	vehicle_type	catogary	Salary	accident_no	Accident_reason	Mistakes	marks	location
150	25	m	3	2000	a	S	Pr	b	a	0	No accidents	15	40	ZARQA
151	23	m	3	2000	b	S	Pr	b	a	0	No accidents	6	76	ZARQA
152	39	m	4	1991	b	M	Pu	b	b	2	Tail Gating	3	88	ZARQA
153	32	m	3	1998	b	M	Pr	b	b	0	No accidents	11	56	ZARQA
154	26	m	4	2001	a	S	Pu	b	b	3	Tail Gating	3	88	ZARQA
155	41	m	4	1991	c	M	Pu	b	c	1	Tail Gating	3	88	ZARQA
156	32	m	4	1992	b	S	Pr	b	a	0	No accidents	7	72	ZARQA
157	64	m	4	1962	b	M	Pu	b	b	2	Incorrect Overtaking	5	80	ZARQA
158	24	m	4	2001	a	S	Pu	b	a	0	No accidents	8	68	ZARQA
159	32	m	5	1999	b	M	Pu	b	a	3	Tail Gating	4	84	ZARQA
160	49	m	4	1996	c	M	Pu	b	a	3	Exceeding Speed Limit	6	76	ZARQA
161	36	m	3	1992	c	M	Pr	f	c	2	Loss control	2	92	ZARQA
162	31	m	3	1992	d	S	Pr	b	c	2	Exceeding Speed Limit	4	84	ZARQA
163	27	m	4	1998	c	S	Pu	b	a	1	Tail Gating	5	80	ZARQA
164	31	m	3	1992	d	S	Pr	b	c	2	Exceeding Speed Limit	4	84	ZARQA
165	31	m	3	1992	d	S	Pr	b	c	2	Exceeding Speed Limit	4	84	ZARQA
166	31	m	3	1992	d	S	Pr	b	c	2	Exceeding Speed Limit	4	84	ZARQA
167	32	m	4	1998	b	M	Pu	b	a	3	Tail Gating	4	84	ZARQA
168	33	m	4	1997	b	M	Pu	b	a	2	Tail Gating	6	76	ZARQA
169	35	m	4	1992	b	M	Pu	b	c	2	Exceeding Speed Limit	4	84	ZARQA
170	31	m	3	1993	b	M	Pr	c	a	1	Exceeding Speed Limit	18	28	ZARQA
171	33	m	4	1993	c	M	Pr	b	c	0	No accidents	6	76	ZARQA
172	31	m	3	1993	b	M	Pr	c	a	1	Exceeding Speed Limit	18	28	ZARQA
173	28	m	3	1993	b	M	Pr	b	a	2	Exceeding Speed Limit	9	64	ZARQA
174	36	m	4	1993	b	M	Pu	b	c	2	Exceeding Speed Limit	5	80	ZARQA
175	30	m	6	1994	b	M	Pu	d	a	0	No accidents	2	92	ZARQA
176	33	m	6	1994	b	M	Pu	d	b	0	No accidents	4	84	ZARQA
177	36	f	3	1994	d	S	Pr	b	c	0	No accidents	4	84	ZARQA
178	32	m	5	1999	b	M	Pu	b	a	3	Tail Gating	4	84	ZARQA
179	30	m	6	1994	b	M	Pu	d	a	0	No accidents	2	92	ZARQA
180	25	m	5	1998	b	S	Pr	c	b	0	No accidents	4	84	ZARQA
181	40	m	5	1999	a	M	Pr	c	a	1	Loss control	4	84	ZARQA
182	28	m	5	1998	c	S	Pr	b	c	1	Exceeding Speed Limit	3	88	ZARQA
183	25	m	5	1998	b	S	Pr	c	b	0	No accidents	4	84	ZARQA
184	29	m	3	1994	a	M	Pr	b	a	0	No accidents	17	32	ZARQA
185	27	m	3	1994	b	S	Pr	b	c	3	Failing to take care	5	80	ZARQA
186	28	m	5	2000	b	M	Pr	c	c	2	Incorrect Overtaking	3	88	ZARQA
187	32	m	5	1998	b	M	Pr	c	c	2	Incorrect Overtaking	3	88	ZARQA
188	28	m	3	1994	c	M	Pr	b	b	3	Others	3	88	ZARQA
189	33	m	5	1995	c	S	Pr	c	a	0	No accidents	8	68	ZARQA
190	31	m	3	1994	b	M	Pr	b	c	2	Exceeding Speed Limit	3	88	ZARQA
191	26	f	3	1996	c	M	Pr	b	a	0	No accidents	12	52	ZARQA
192	23	f	3	2005	c	S	Pr	b	c	0	No accidents	0	100	ZARQA
193	24	f	3	2000	c	S	Pr	b	c	2	Tail Gating	4	84	ZARQA
194	29	m	5	1994	b	M	Pu	c	a	0	No accidents	5	80	ZARQA
195	29	f	3	1996	c	M	Pr	b	c	0	No accidents	4	84	ZARQA
196	31	f	3	1999	c	M	Pr	b	c	0	No accidents	8	68	ZARQA
197	29	m	3	1994	a	M	Pr	b	a	0	No accidents	17	32	ZARQA
198	40	f	3	1996	b	M	Pr	b	c	2	Failing to take care	5	80	ZARQA
199	35	m	4	1994	b	M	Pu	b	b	2	Incorrect Overtaking	4	84	ZARQA

records	age	sex	license_cl	year	education	status	vehicle_type	catogary	Salary	accident_no	Accident_reason	Mistakes	marks	Location
200	25	f	3	2000	c	M	Pr	b	c	0	No accidents	3	88	ZARQA
201	50	m	3	1978	d	M	Pr	b	c	3	Failing to take care	5	80	IRBID
202	65	m	3	1978	a	D	Pr	b	c	3	Exceeding Speed Limit	19	24	IRBID
203	53	m	5	1978	c	M	Pr	b	c	1	Exceeding Speed Limit	5	80	IRBID
204	35	m	5	1980	d	M	Pr	c	b	2	Exceeding Speed Limit	3	88	IRBID
205	46	m	6	1981	b	M	Pu	c	a	0	No accidents	10	60	IRBID
206	43	m	6	1981	b	S	Pu	c	a	0	No accidents	7	72	IRBID
207	41	m	3	1982	c	M	Pr	b	c	1	Exceeding Speed Limit	4	84	IRBID
208	42	m	6	1982	b	M	Pu	d	b	2	Exceeding Speed Limit	4	84	IRBID
209	41	m	6	1983	b	M	Pu	c	a	0	No accidents	6	76	IRBID
210	41	m	6	1983	a	M	Pu	c	a	0	No accidents	5	80	IRBID
211	42	m	3	1985	b	M	Pr	c	c	2	Failing to take care	4	84	IRBID
212	47	m	3	1987	c	D	GOV	a	c	0	No accidents	5	80	IRBID
213	45	m	3	1987	d	M	Pr	b	c	0	No accidents	4	84	IRBID
214	32	m	3	1988	d	M	Pr	b	c	2	Exceeding Speed Limit	3	88	IRBID
215	40	f	3	1989	c	M	Pr	b	d	2	Incorrect Overtaking	7	72	IRBID
216	46	f	3	1989	c	M	Pr	b	d	0	No accidents	2	92	IRBID
217	40	m	5	1989	b	M	Pu	c	c	0	No accidents	11	56	IRBID
218	31	m	3	1992	d	S	Pr	b	c	2	Exceeding Speed Limit	4	84	IRBID
219	31	m	3	1992	d	S	Pr	b	c	2	Exceeding Speed Limit	4	84	IRBID
220	46	m	4	1992	b	M	Pu	b	b	0	No accidents	2	92	IRBID
221	31	m	3	1993	b	M	Pr	c	a	1	Exceeding Speed Limit	18	28	IRBID
222	28	m	3	1993	b	M	Pr	b	a	2	Exceeding Speed Limit	9	64	IRBID
223	33	m	4	1993	c	M	Pr	b	c	0	No accidents	6	76	IRBID
224	27	m	3	1994	b	S	Pr	b	c	3	Failing to take care	5	80	IRBID
225	28	m	3	1994	c	M	Pr	b	b	3	Others	3	88	IRBID
226	31	m	3	1994	b	M	Pr	b	c	2	Exceeding Speed Limit	3	88	IRBID
227	33	m	4	1994	c	M	Pr	b	b	3	Exceeding Speed Limit	6	76	IRBID
228	29	m	5	1994	b	M	Pu	c	a	0	No accidents	5	80	IRBID
229	25	m	3	1996	c	S	Pr	b	b	2	Exceeding Speed Limit	4	84	IRBID
230	26	m	3	1996	c	M	Pr	b	c	2	Failing to take care	3	88	IRBID
231	28	m	3	1996	d	S	Pr	c	c	0	No accidents	6	76	IRBID
232	32	m	4	1996	c	S	Pr	b	a	2	Exceeding Speed Limit	8	68	IRBID
233	32	m	5	1996	b	M	Pu	c	a	0	No accidents	5	80	IRBID
234	27	m	5	1996	b	M	Pu	c	a	1	Using Incorrect Lane	6	76	IRBID
235	29	m	3	1997	c	M	Pr	b	c	1	Exceeding Speed Limit	7	72	IRBID
236	27	m	3	1997	c	S	Pr	b	b	3	Exceeding Speed Limit	5	80	IRBID
237	51	m	3	1997	a	M	Pr	b	c	0	No accidents	11	56	IRBID
238	27	m	3	1997	c	S	Pr	b	b	0	No accidents	3	88	IRBID
239	29	m	4	1997	c	S	Pu	b	a	1	Exceeding Speed Limit	5	80	IRBID
240	27	m	4	1997	b	S	Pr	b	b	0	No accidents	3	88	IRBID
241	32	m	5	1997	b	M	Pu	c	a	1	Failing to take care	6	76	IRBID
242	25	m	3	1998	c	S	Pr	c	c	3	Failing to take care	6	76	IRBID
243	25	m	3	1998	b	S	Pr	c	b	3	Failing to take care	8	68	IRBID
244	25	m	3	1998	d	S	Pr	b	c	3	Exceeding Speed Limit	9	64	IRBID
245	25	m	3	1998	b	S	Pr	b	b	3	Exceeding Speed Limit	12	52	IRBID
246	25	m	3	1998	b	S	Pr	b	a	2	Failing to take care	6	76	IRBID
247	27	m	3	1998	c	S	Pr	b	c	0	No accidents	10	60	IRBID
248	25	m	3	1998	c	S	Pr	b	d	0	No accidents	8	68	IRBID
249	25	m	3	1998	c	S	Pr	b	c	0	No accidents	7	72	IRBID

records	age	sex	license_cl	year	education	status	vehicle_type	catogary	Salary	accident_no	Accident_reason	Mistakes	marks	location
250	25	m	3	1998	c	S	Pr	b	d	0	No accidents	1	96	IRBID
251	26	m	4	1998	b	S	Pu	b	a	0	No accidents	7	72	IRBID
252	26	m	4	1998	b	S	Pu	b	a	0	No accidents	5	80	IRBID
253	28	m	4	1998	b	M	Pu	b	b	0	No accidents	19	24	IRBID
254	24	m	3	1998	c	S	Pr	c	b	3	Exceeding Speed Limit	6	76	IRBID
255	27	m	3	1998	b	D	Pr	b	a	2	Exceeding Speed Limit	9	64	IRBID
256	32	m	3	1998	c	S	Pr	b	c	0	No accidents	3	88	IRBID
257	27	f	3	1998	b	D	Pr	b	a	2	Exceeding Speed Limit	9	64	IRBID
258	25	m	3	1999	d	S	Pr	b	d	1	Exceeding Speed Limit	3	88	IRBID
259	24	m	3	1999	d	S	Pr	b	b	1	Exceeding Speed Limit	1	96	IRBID
260	25	m	3	1999	c	S	Pr	b	c	1	Incorrect Parking	4	84	IRBID
261	25	m	3	1999	d	S	Pr	c	c	2	Failing to take care	4	84	IRBID
262	23	m	3	1999	c	S	Pr	b	c	2	Exceeding Speed Limit	7	72	IRBID
263	24	m	3	1999	b	M	Pr	b	b	2	Failing to take care	9	64	IRBID
264	24	m	3	1999	b	S	Pr	b	d	2	Exceeding Speed Limit	7	72	IRBID
265	25	m	3	1999	b	S	Pr	b	c	2	Exceeding Speed Limit	13	48	IRBID
266	25	m	3	1999	c	S	Pr	b	a	0	No accidents	2	92	IRBID
267	24	m	3	1999	c	S	Pr	b	b	0	No accidents	5	80	IRBID
268	26	m	3	1999	c	S	Pr	c	c	0	No accidents	2	92	IRBID
269	24	m	3	1999	c	S	Pr	b	c	0	No accidents	3	88	IRBID
270	27	m	3	1999	d	S	Pr	b	c	0	No accidents	3	88	IRBID
271	25	m	3	1999	d	S	Pr	b	a	0	No accidents	2	92	IRBID
272	25	m	3	1999	c	S	Pr	b	a	0	No accidents	4	84	IRBID
273	24	m	3	1999	c	S	Pr	b	a	0	No accidents	3	88	IRBID
274	32	m	5	1999	b	S	Pu	c	a	0	No accidents	6	76	IRBID
275	24	m	3	1999	c	S	Pr	c	c	0	No accidents	6	76	IRBID
276	24	m	3	1999	c	S	Pr	c	c	0	No accidents	6	76	IRBID
277	24	m	3	1999	c	S	Pr	b	a	0	No accidents	9	64	IRBID
278	24	m	3	1999	c	S	Pr	b	b	0	No accidents	1	96	IRBID
279	24	m	3	1999	c	S	Pr	b	b	0	No accidents	1	96	IRBID
280	24	m	4	1999	b	S	Pr	b	d	0	No accidents	15	40	IRBID
281	23	m	3	2000	b	S	Pr	b	d	0	No accidents	6	76	IRBID
282	28	m	3	2000	a	M	Pu	b	a	0	No accidents	20	20	IRBID
283	23	m	3	2000	c	S	Pr	b	b	0	No accidents	5	80	IRBID
284	22	m	3	2000	b	S	Pr	b	a	0	No accidents	8	68	IRBID
285	23	m	3	2000	c	S	Pr	b	c	0	No accidents	5	80	IRBID
286	25	m	3	2000	d	S	Pr	b	a	0	No accidents	4	84	IRBID
287	23	m	3	2000	c	S	Pr	b	b	0	No accidents	7	72	IRBID
288	25	m	3	2000	d	S	Pr	b	d	0	No accidents	10	60	IRBID
289	23	m	3	2000	b	S	Pr	b	d	0	No accidents	6	76	IRBID
290	22	m	4	2000	c	S	Pu	b	b	2	Exceeding Speed Limit	7	72	IRBID
291	27	m	5	2000	b	S	Pu	b	b	2	Exceeding Speed Limit	5	80	IRBID
292	28	m	5	2000	b	M	GOV	d	a	0	No accidents	17	32	IRBID
293	27	m	5	2000	b	W	GOV	d	a	0	No accidents	11	56	IRBID
294	22	m	3	2001	c	S	Pr	b	c	1	Exceeding Speed Limit	1	96	IRBID
295	25	m	3	2001	c	S	Pr	b	c	3	Failing to take care	5	80	IRBID
296	22	m	3	2001	c	S	Pr	b	a	0	No accidents	6	76	IRBID
297	23	m	3	2001	c	S	Pr	b	a	2	Exceeding Speed Limit	10	60	IRBID
298	21	m	3	2001	c	S	Pr	b	b	2	Exceeding Speed Limit	4	84	IRBID
299	23	m	3	2001	c	S	Pr	b	b	2	Failing to take care	4	84	IRBID

records	age	sex	license_cl	year	education	status	vehicle_type	catogary	Salary	accident_no	Accident_reason	Mistakes	marks	location
300	27	m	3	2001	b	S	Pr	b	a	0	No accidents	5	80	IRBID
301	25	m	3	2001	a	S	Pr	c	d	0	No accidents	5	80	IRBID
302	26	m	3	2001	c	S	Pr	b	b	0	No accidents	4	84	IRBID
303	22	m	3	2001	b	S	Pr	b	a	0	No accidents	2	92	IRBID
304	23	m	3	2001	c	S	Pr	b	a	0	No accidents	6	76	IRBID
305	25	m	3	2001	c	S	Pr	b	b	0	No accidents	2	92	IRBID
306	25	m	3	2001	d	S	Pr	b	c	0	No accidents	4	84	IRBID
307	22	m	3	2001	b	S	Pr	b	a	0	No accidents	7	72	IRBID
308	24	m	3	2001	c	S	Pr	b	b	0	No accidents	6	76	IRBID
309	23	m	3	2001	c	S	Pr	b	b	0	No accidents	4	84	IRBID
310	22	m	3	2001	c	S	Pr	b	c	0	No accidents	4	84	IRBID
311	24	m	3	2001	c	S	Pr	b	a	0	No accidents	3	88	IRBID
312	25	m	3	2001	c	S	Pr	b	c	0	No accidents	8	68	IRBID
313	25	f	3	2001	a	S	Pr	c	d	0	No accidents	5	80	IRBID
314	21	m	3	2002	c	S	Pr	b	c	2	Exceeding Speed Limit	4	84	IRBID
315	25	m	3	2002	c	S	Re	b	c	2	Exceeding Speed Limit	9	64	IRBID
316	20	m	3	2002	c	S	Pr	c	c	0	No accidents	12	52	IRBID
317	22	m	3	2002	c	S	Pr	b	a	0	No accidents	7	72	IRBID
318	23	m	3	2002	c	S	Pr	c	d	0	No accidents	9	64	IRBID
319	21	m	3	2002	c	S	Pr	b	a	0	No accidents	2	92	IRBID
320	21	m	3	2002	c	S	Pr	c	c	0	No accidents	7	72	IRBID
321	22	m	3	2002	c	S	Pr	b	a	0	No accidents	3	88	IRBID
322	24	m	3	2002	c	S	Pr	b	d	0	No accidents	7	72	IRBID
323	26	m	3	2002	c	S	Pr	b	b	0	No accidents	5	80	IRBID
324	29	m	3	2002	b	S	Pr	b	b	0	No accidents	7	72	IRBID
325	21	m	3	2002	c	S	Pr	b	a	0	No accidents	3	88	IRBID
326	23	m	3	2002	c	S	Pr	b	b	0	No accidents	3	88	IRBID
327	22	m	3	2002	c	M	Pr	b	a	0	No accidents	4	84	IRBID
328	22	m	3	2002	c	S	Pr	b	a	0	No accidents	4	84	IRBID
329	21	m	3	2002	c	S	Pr	b	a	0	No accidents	4	84	IRBID
330	22	m	3	2002	c	S	Pr	b	a	0	No accidents	7	72	IRBID
331	20	f	3	2002	c	S	Pr	c	c	0	No accidents	11	56	IRBID
332	21	f	3	2002	c	S	Pr	c	c	0	No accidents	7	72	IRBID
333	22	f	3	2002	c	S	Pr	b	a	0	No accidents	3	88	IRBID
334	24	f	3	2002	c	S	Pr	b	d	0	No accidents	7	72	IRBID
335	21	f	3	2002	c	S	Pr	c	c	0	No accidents	7	72	IRBID
336	22	f	3	2002	c	S	Pr	b	a	0	No accidents	3	88	IRBID
337	24	f	3	2002	c	S	Pr	b	d	0	No accidents	7	72	IRBID
338	23	m	4	2002	b	S	Pu	b	b	0	No accidents	3	88	IRBID
339	22	m	4	2002	c	S	Pr	b	c	0	No accidents	13	48	IRBID
340	21	m	3	2003	c	S	Pr	c	a	1	Incorrect Parking	5	80	IRBID
341	20	m	3	2003	c	S	Pr	b	c	3	Exceeding Speed Limit	9	64	IRBID
342	34	m	3	2003	c	S	Pr	b	b	3	Failing to take care	4	84	IRBID
343	20	m	3	2003	c	S	Pr	b	a	0	No accidents	13	48	IRBID
344	21	m	3	2003	c	S	Pr	c	a	2	Failing to take care	2	92	IRBID
345	21	m	3	2003	c	S	Pr	b	a	2	Using Incorrect Lane	4	84	IRBID
346	24	m	3	2003	c	S	Pr	c	d	0	No accidents	5	80	IRBID
347	22	m	3	2003	c	S	Pr	c	d	0	No accidents	2	92	IRBID
348	20	m	3	2003	c	S	Pr	b	a	0	No accidents	5	80	IRBID
349	22	m	3	2003	c	S	Pr	b	a	0	No accidents	5	80	IRBID

records	age	sex	license_cl	year	education	status	vehicle_type	catogary	Salary	accident_no	Accident_reason	Mistakes	marks	location
350	25	m	3	2003	d	S	Pr	b	c	0	No accidents	9	64	IRBID
351	20	m	3	2003	c	S	Pr	b	a	0	No accidents	6	76	IRBID
352	21	m	3	2003	c	S	Pr	c	a	0	No accidents	7	72	IRBID
353	20	m	3	2003	c	S	Pr	b	a	0	No accidents	2	92	IRBID
354	21	m	3	2003	b	S	Pr	b	a	0	No accidents	12	52	IRBID
355	27	m	3	2003	c	S	Pr	b	b	0	No accidents	7	72	IRBID
356	23	m	3	2003	c	S	Pr	b	a	0	No accidents	3	88	IRBID
357	23	m	3	2003	c	S	Pr	b	a	0	No accidents	8	68	IRBID
358	22	m	3	2003	c	S	Pr	b	a	0	No accidents	7	72	IRBID
359	25	m	3	2003	c	S	Pr	b	c	0	No accidents	7	72	IRBID
360	24	m	3	2003	c	S	Pr	c	d	0	No accidents	5	80	IRBID
361	20	f	3	2003	b	S	Pr	b	a	0	No accidents	13	48	IRBID
362	22	f	3	2003	c	S	Pr	b	a	0	No accidents	5	80	IRBID
363	22	f	3	2003	c	S	Pr	b	a	0	No accidents	5	80	IRBID
364	27	m	4	2003	c	S	Pr	b	b	0	No accidents	7	72	IRBID
365	27	m	3	2004	c	M	Pr	b	a	1	Exceeding Speed Limit	5	80	IRBID
366	27	m	3	2004	c	M	Pr	b	a	2	Exceeding Speed Limit	6	76	IRBID
367	25	m	3	2004	c	S	Pr	b	b	2	Failing to take care	4	84	IRBID
368	19	m	3	2004	b	S	Pr	b	c	2	Exceeding Speed Limit	6	76	IRBID
369	21	m	3	2004	b	S	Pr	b	b	2	Exceeding Speed Limit	5	80	IRBID
370	19	m	3	2004	b	S	Pr	b	c	2	Exceeding Speed Limit	10	60	IRBID
371	21	m	3	2004	c	S	Pr	b	a	2	Using Incorrect Lane	5	80	IRBID
372	25	m	3	2004	b	S	Pr	b	b	0	No accidents	4	84	IRBID
373	22	m	3	2004	c	S	Pr	b	d	0	No accidents	4	84	IRBID
374	20	m	3	2004	c	S	Pr	b	c	0	No accidents	3	88	IRBID
375	23	m	3	2004	b	S	Pr	b	d	0	No accidents	8	68	IRBID
376	25	m	3	2004	d	S	Pr	b	d	0	No accidents	3	88	IRBID
377	19	m	3	2004	b	S	GOV	b	b	1	Exceeding Speed Limit	4	84	IRBID
378	23	m	3	2004	c	S	Pr	b	c	0	No accidents	4	84	IRBID
379	20	f	3	2004	a	S	Pr	b	a	1	Exceeding Speed Limit	3	88	IRBID
380	19	m	4	2004	b	S	Pu	b	a	0	No accidents	15	40	IRBID
381	21	m	4	2004	c	S	Pu	b	a	0	No accidents	3	88	IRBID
382	19	m	3	2005	c	S	Pr	b	a	1	Failing to take care	3	88	IRBID
383	20	m	3	2005	c	S	Pr	b	b	1	Exceeding Speed Limit	3	88	IRBID
384	21	m	3	2005	c	S	Pr	b	c	1	Exceeding Speed Limit	3	88	IRBID
385	22	m	3	2005	c	S	Pr	b	b	2	Exceeding Speed Limit	6	76	IRBID
386	24	m	3	2005	c	S	Pr	b	c	2	Exceeding Speed Limit	2	92	IRBID
387	26	m	3	2005	c	S	Pr	b	b	0	No accidents	6	76	IRBID
388	27	m	3	2005	a	S	Pr	b	d	0	No accidents	7	72	IRBID
389	23	m	3	2005	c	S	Pr	b	a	0	No accidents	5	80	IRBID
390	21	m	3	2005	c	S	Pr	c	b	0	No accidents	6	76	IRBID
391	20	m	3	2005	c	S	Pr	b	a	0	No accidents	6	76	IRBID
392	21	m	3	2005	c	S	Pr	b	b	0	No accidents	8	68	IRBID
393	20	m	3	2005	c	S	Pr	b	a	0	No accidents	6	76	IRBID
394	26	m	3	2005	b	S	Pr	b	b	0	No accidents	8	68	IRBID
395	23	m	3	2005	c	S	Pr	b	a	0	No accidents	6	76	IRBID
396	21	m	3	2005	c	S	Pr	b	a	0	No accidents	6	76	IRBID
397	25	m	3	2005	c	S	Pr	b	b	0	No accidents	6	76	IRBID
398	23	f	3	2005	c	S	Pr	b	a	0	No accidents	5	80	IRBID
399	23	f	3	2005	c	S	Pr	b	a	0	No accidents	5	80	IRBID

records	age	sex	license_cl	year	education	status	vehicle_type	catogary	Salary	accident_no	Accident_reason	Mistakes	marks	location
400	21	f	3	2005	c	S	Pr	c	b	0	No accidents	6	76	IRBID
401	26	m	6	1997	b	M	Pr	f	c	0	No accidents	4	84	AMMAN
402	44	m	3	1985	c	M	Pr	b	c	0	No accidents	5	80	AMMAN
403	21	m	3	2002	b	S	Pr	f	a	0	No accidents	4	84	AMMAN
404	28	m	3	2004	b	M	Pr	c	c	2	Incorrect Overtaking	3	88	AMMAN
405	32	m	3	1998	b	M	Pr	b	c	2	Incorrect Overtaking	3	88	AMMAN
406	25	m	3	2001	c	S	Pr	b	b	0	No accidents	3	88	AMMAN
407	26	m	3	2001	b	S	Pr	b	b	0	No accidents	3	88	AMMAN
408	30	m	4	1997	b	M	Pu	b	b	0	No accidents	3	88	AMMAN
409	45	m	3	1990	c	M	Pr	b	c	0	No accidents	5	80	AMMAN
410	26	m	3	2001	c	S	Pr	b	d	0	No accidents	4	84	AMMAN
411	26	m	3	1998	b	S	Pr	b	b	0	No accidents	6	76	AMMAN
412	33	m	3	1995	c	S	Pr	b	a	0	No accidents	8	68	AMMAN
413	29	m	3	1994	a	M	Pr	b	a	0	No accidents	17	32	AMMAN
414	23	m	3	2001	b	M	Pr	b	a	0	No accidents	5	80	AMMAN
415	28	m	3	2000	b	S	Pr	b	a	0	No accidents	5	80	AMMAN
416	55	m	3	1975	a	S	Pr	b	c	2	Exceeding Speed Limit	19	24	AMMAN
417	35	m	3	1996	a	M	Pr	b	b	0	No accidents	15	40	AMMAN
418	25	m	3	2000	a	S	Pr	b	a	0	No accidents	15	40	AMMAN
419	23	m	3	2000	b	S	Pr	b	a	0	No accidents	6	76	AMMAN
420	52	m	3	1979	b	M	Pr	b	c	3	Exceeding Speed Limit	13	48	AMMAN
421	32	m	3	1998	b	M	Pr	b	b	0	No accidents	11	56	AMMAN
422	26	m	4	2001	a	S	Pu	b	b	3	Tail Gating	3	88	AMMAN
423	56	m	4	1960	b	M	Pu	b	a	2	Tail Gating	4	84	AMMAN
424	39	m	4	1991	b	M	Pu	b	b	2	Tail Gating	3	88	AMMAN
425	64	m	4	1958	b	M	Pu	b	b	2	Exceeding Speed Limit	5	80	AMMAN
426	24	m	4	2001	a	S	Pu	b	a	0	No accidents	8	68	AMMAN
427	32	m	5	1999	b	M	Pu	b	a	3	Tail Gating	4	84	AMMAN
428	49	m	4	1996	c	M	Pu	b	a	3	Exceeding Speed Limit	6	76	AMMAN
429	54	m	5	1954	c	M	Pu	b	a	2	Incorrect Overtaking	3	88	AMMAN
430	41	m	4	1982	c	M	Pu	b	a	1	Tail Gating	5	80	AMMAN
431	27	m	4	1998	c	S	Pu	b	a	1	Tail Gating	5	80	AMMAN
432	35	m	4	1994	b	M	Pu	b	b	2	Incorrect Overtaking	4	84	AMMAN
433	44	m	4	1980	a	M	Pu	b	a	3	Failing to take care	8	68	AMMAN
434	35	m	4	1992	b	M	Pu	b	c	2	Exceeding Speed Limit	4	84	AMMAN
435	32	m	4	1998	b	M	Pu	b	a	3	Tail Gating	4	84	AMMAN
436	33	m	4	1997	b	M	Pu	b	a	2	Tail Gating	6	76	AMMAN
437	45	m	4	1984	c	M	Pu	b	b	2	Exceeding Speed Limit	5	80	AMMAN
438	42	m	4	1982	b	M	Pu	b	a	2	Incorrect Overtaking	6	76	AMMAN
439	36	m	4	1993	b	M	Pu	b	c	2	Exceeding Speed Limit	5	80	AMMAN
440	41	m	4	1991	c	M	Pu	b	c	1	Tail Gating	3	88	AMMAN
441	34	m	6	1983	b	M	Pu	b	a	2	Exceeding Speed Limit	3	88	AMMAN
442	52	m	6	1976	a	M	Pu	b	a	0	No accidents	3	88	AMMAN
443	40	m	4	1983	c	M	Pu	b	a	2	Tail Gating	2	92	AMMAN
444	53	m	6	1977	b	M	Pu	d	c	3	Tail Gating	4	84	AMMAN
445	48	m	6	1980	b	M	Pu	d	b	2	Incorrect Overtaking	5	80	AMMAN
446	45	m	4	1988	b	M	Pu	b	b	2	Exceeding Speed Limit	11	56	AMMAN
447	32	m	3	1997	b	M	GOV	b	a	2	Exceeding Speed Limit	12	52	AMMAN
448	47	m	4	1983	a	M	Pu	b	b	3	Exceeding Speed Limit	12	52	AMMAN
449	30	m	3	1995	b	M	GOV	b	a	2	Incorrect Overtaking	12	52	AMMAN

records	age	sex	license_cl	year	education	status	vehicle_type	catogary	Salary	accident_no	Accident_reason	Mistakes	marks	location
450	27	f	3	1998	b	M	Pr	b	b	0	No accidents	10	60	AMMAN
451	25	f	3	1999	b	S	Pr	b	a	0	No accidents	12	52	AMMAN
452	44	m	3	1986	d	M	Pr	b	a	3	Incorrect Overtaking	12	52	AMMAN
453	38	m	3	1998	b	M	Pr	b	b	2	Exceeding Speed Limit	5	80	AMMAN
454	57	m	4	1979	b	M	Pu	b	b	3	Exceeding Speed Limit	13	48	AMMAN
455	23	m	3	2005	c	S	Pr	b	d	0	No accidents	5	80	AMMAN
456	26	f	3	1996	c	M	Pr	b	a	0	No accidents	12	52	AMMAN
457	30	m	4	1998	b	M	Pu	b	b	1	Exceeding Speed Limit	12	52	AMMAN
458	55	m	3	1981	c	M	Pr	b	b	0	No accidents	9	64	AMMAN
459	39	m	3	2002	b	M	Pr	b	a	0	No accidents	7	72	AMMAN
460	35	m	3	2000	b	M	Pr	b	b	0	No accidents	8	68	AMMAN
461	27	m	3	2000	b	S	GOV	b	a	2	Exceeding Speed Limit	13	48	AMMAN
462	31	m	3	1994	c	S	Pr	b	b	2	Incorrect Overtaking	3	88	AMMAN
463	33	m	4	1995	b	M	Pu	b	a	2	Tail Gating	5	80	AMMAN
464	28	m	4	1999	b	M	Pu	b	a	2	Exceeding Speed Limit	12	52	AMMAN
465	29	m	3	1995	c	S	Pr	b	c	3	Incorrect Overtaking	0	100	AMMAN
466	41	m	4	1983	b	M	Pu	b	b	3	Failing to take care	12	52	AMMAN
467	27	m	3	1998	c	S	Pr	b	c	0	No accidents	0	100	AMMAN
468	60	m	3	1970	c	M	Pr	b	c	0	No accidents	4	84	AMMAN
469	27	m	3	1997	c	M	Pr	b	c	0	No accidents	1	96	AMMAN
470	23	f	3	2005	c	S	Pr	b	c	0	No accidents	0	100	AMMAN
471	33	m	3	1995	c	M	Pr	b	c	0	No accidents	3	88	AMMAN
472	25	m	3	1999	c	S	Pr	b	c	0	No accidents	0	100	AMMAN
473	24	f	3	2000	c	S	Pr	b	c	2	Tail Gating	4	84	AMMAN
474	27	m	3	1999	d	S	Pr	b	c	0	No accidents	4	84	AMMAN
475	36	f	3	1994	d	S	Pr	b	c	0	No accidents	4	84	AMMAN
476	45	m	3	1985	c	M	Pr	b	c	2	Tail Gating	1	96	AMMAN
477	46	m	3	1981	c	W	Pr	b	c	3	Incorrect Overtaking	3	88	AMMAN
478	26	m	3	1999	c	M	Pr	b	c	2	Failing to take care	3	88	AMMAN
479	33	m	3	2001	c	M	Pr	b	c	0	No accidents	3	88	AMMAN
480	29	f	3	1996	c	M	Pr	b	c	0	No accidents	4	84	AMMAN
481	29	m	3	1996	c	S	Pr	b	c	2	Incorrect Overtaking	2	92	AMMAN
482	26	m	3	2000	c	S	Pr	b	c	0	No accidents	2	92	AMMAN
483	25	m	3	2001	c	S	Pr	b	c	0	No accidents	2	92	AMMAN
484	25	m	5	1998	b	S	Pr	c	b	0	No accidents	4	84	AMMAN
485	28	m	4	1997	b	S	Pr	b	b	2	Exceeding Speed Limit	2	92	AMMAN
486	34	m	4	1990	b	M	Pr	b	b	2	Tail Gating	2	92	AMMAN
487	44	m	3	1985	c	M	Pr	b	c	0	No accidents	2	92	AMMAN
488	31	f	3	1999	c	M	Pr	b	c	0	No accidents	8	68	AMMAN
489	36	m	3	1992	c	M	Pr	f	c	2	Loss control	2	92	AMMAN
490	62	m	3	1972	d	M	Pr	b	c	2	Exceeding Speed Limit	4	84	AMMAN
491	42	f	3	1982	b	S	Pr	b	c	1	Exceeding Speed Limit	10	60	AMMAN
492	30	m	4	1998	b	M	Pu	b	a	0	No accidents	7	72	AMMAN
493	24	m	3	2004	c	S	Pr	b	b	3	Exceeding Speed Limit	0	100	AMMAN
494	40	f	3	1996	b	M	Pr	b	c	2	Failing to take care	5	80	AMMAN
495	46	m	3	1982	c	M	Pr	b	c	3	Exceeding Speed Limit	6	76	AMMAN
496	26	m	3	1998	c	S	Pr	b	c	3	Exceeding Speed Limit	3	88	AMMAN
497	43	m	3	1981	c	M	Pr	b	c	2	Exceeding Speed Limit	4	84	AMMAN
498	37	f	3	1989	c	M	Pr	b	d	0	No accidents	3	88	AMMAN
499	25	f	3	2000	c	M	Pr	b	c	0	No accidents	3	88	AMMAN

records	age	sex	license_cl	year	education	status	vehicle_type	catogary	Salary	accident_no	Accident_reason	Mistakes	marks	location
500	39	m	3	1985	b	M	Re	b	c	0	No accidents	11	56	AMMAN
501	50	f	3	1977	b	M	Pr	b	a	1	Exceeding Speed Limit	8	68	AMMAN
502	43	m	3	1982	b	M	Pr	b	a	0	No accidents	8	68	AMMAN
503	29	f	3	1994	c	S	Pr	b	c	0	No accidents	3	88	AMMAN
504	28	f	3	1995	c	S	Pr	b	c	0	No accidents	2	92	AMMAN
505	55	f	3	1975	b	M	Pr	b	d	0	No accidents	12	52	AMMAN
506	34	f	3	2006	c	S	Pr	b	b	0	No accidents	3	88	AMMAN
507	35	f	3	1990	c	M	Pr	b	c	0	No accidents	5	80	AMMAN
508	40	f	3	1995	c	M	Pr	b	c	0	No accidents	7	72	AMMAN
509	50	f	3	1985	b	M	Pr	b	d	2	Exceeding Speed Limit	9	64	AMMAN
510	34	f	3	2006	b	S	Pr	b	c	0	No accidents	9	64	AMMAN
511	27	m	3	2003	b	S	Pr	b	b	3	Failing to take care	12	52	AMMAN
512	40	m	5	1999	a	M	Pr	c	a	1	Loss control	4	84	AMMAN
513	57	m	3	1965	c	M	Pr	b	c	0	No accidents	5	80	AMMAN
514	26	f	3	2002	b	S	Pr	b	c	2	Loss control	9	64	AMMAN
515	39	m	3	1986	d	M	Pr	b	c	3	Exceeding Speed Limit	2	92	AMMAN
516	32	m	3	1998	b	M	Pr	b	c	2	Incorrect Overtaking	3	88	AMMAN
517	25	m	3	2001	c	S	Pr	b	b	0	No accidents	3	88	AMMAN
518	30	m	4	1998	c	M	Pr	f	b	2	Failing to take care	10	60	AMMAN
519	24	f	3	2000	c	S	Pr	b	b	0	No accidents	7	72	AMMAN
520	28	m	5	1998	c	S	Pr	b	c	1	Exceeding Speed Limit	3	88	AMMAN
521	26	m	3	2001	b	S	Pr	b	b	0	No accidents	3	88	AMMAN
522	45	m	3	1990	c	M	Pr	b	c	0	No accidents	5	80	AMMAN
523	26	m	3	2001	c	S	Pr	b	d	0	No accidents	4	84	AMMAN
524	26	m	3	1998	b	S	Pr	b	b	0	No accidents	6	76	AMMAN
525	30	m	4	1997	b	M	Pu	b	b	0	No accidents	3	88	AMMAN
526	33	m	3	1995	c	S	Pr	b	a	0	No accidents	8	68	AMMAN
527	29	m	3	1994	b	M	Pr	b	a	0	No accidents	17	32	AMMAN
528	23	m	3	2001	b	M	Pr	b	a	0	No accidents	5	80	AMMAN
529	28	m	3	2000	b	S	Pr	b	a	0	No accidents	5	80	AMMAN
530	55	m	3	1975	a	S	Pr	b	c	2	Exceeding Speed Limit	19	24	AMMAN
531	35	m	3	1996	a	M	Pr	b	b	0	No accidents	15	40	AMMAN
532	25	m	3	2000	a	S	Pr	b	a	0	No accidents	15	40	AMMAN
533	23	m	3	2000	b	S	Pr	b	a	0	No accidents	6	76	AMMAN
534	27	m	3	1997	c	M	Pr	b	c	0	No accidents	1	96	AMMAN
535	33	m	3	1995	c	M	Pr	b	c	0	No accidents	3	88	AMMAN
536	25	m	3	1999	c	S	Pr	b	c	0	No accidents	0	100	AMMAN
537	27	m	3	1999	d	S	Pr	b	c	0	No accidents	4	84	AMMAN
538	30	m	6	1994	b	M	Pu	d	a	0	No accidents	2	92	AMMAN
539	57	m	6	1973	a	M	Pu	b	a	2	Exceeding Speed Limit	8	68	AMMAN
540	33	m	6	1994	b	M	Pu	d	b	0	No accidents	4	84	AMMAN
541	45	m	6	1974	b	M	Pu	d	a	2	Tail Gating	4	84	AMMAN
542	53	m	6	1973	b	M	Pu	d	c	0	No accidents	4	84	AMMAN
543	45	m	3	1985	c	M	Pr	b	c	2	Tail Gating	1	96	AMMAN
544	24	f	3	2000	c	S	Pr	b	c	2	Tail Gating	4	84	AMMAN
545	46	m	3	1981	c	W	Pr	b	c	3	Incorrect Overtaking	3	88	AMMAN
546	36	f	3	1994	d	S	Pr	b	c	0	No accidents	4	84	AMMAN
547	26	m	3	1999	c	M	Pr	b	c	2	Failing to take care	3	88	AMMAN
548	33	m	3	2001	c	M	Pr	b	c	0	No accidents	3	88	AMMAN
549	29	m	3	1996	c	S	Pr	b	c	2	Incorrect Overtaking	2	92	AMMAN

records	age	sex	license_cl	year	education	status	vehicle_type	catogary	Salary	accident_no	Accident_reason	Mistakes	marks	location
550	26	m	3	2000	c	S	Pr	b	c	0	No accidents	2	92	AMMAN
551	29	f	3	1996	c	M	Pr	b	c	0	No accidents	4	84	AMMAN
552	25	m	3	2001	c	S	Pr	b	c	0	No accidents	2	92	AMMAN
553	44	m	3	1985	c	M	Pr	b	c	0	No accidents	2	92	AMMAN
554	30	m	3	1995	a	S	Pr	b	a	0	No accidents	11	56	AMMAN
555	25	m	5	1998	b	S	Pr	c	b	0	No accidents	4	84	AMMAN
556	28	m	4	1997	b	S	Pr	b	b	2	Exceeding Speed Limit	2	92	AMMAN
557	34	m	4	1990	b	M	Pr	b	b	2	Tail Gating	2	92	AMMAN
558	19	m	3	2005	b	S	Pr	b	a	0	No accidents	9	64	AMMAN
559	31	f	3	1999	c	M	Pr	b	c	0	No accidents	8	68	AMMAN
560	48	m	3	1990	c	M	Pr	b	c	0	No accidents	8	68	AMMAN
561	30	m	3	1995	a	S	Pr	b	a	0	No accidents	11	56	AMMAN
562	42	f	3	1982	b	S	Pr	b	c	1	Exceeding Speed Limit	10	60	AMMAN
563	30	m	4	1998	b	M	Pu	b	a	0	No accidents	7	72	AMMAN
564	48	m	3	1990	c	M	Pr	b	c	0	No accidents	8	68	AMMAN
565	40	f	3	1996	b	M	Pr	b	c	2	Failing to take care	5	80	AMMAN
566	29	f	3	1994	c	S	Pr	b	c	0	No accidents	3	88	AMMAN
567	28	f	3	1995	c	S	Pr	b	c	0	No accidents	2	92	AMMAN
568	55	f	3	1975	b	M	Pr	b	d	0	No accidents	12	52	AMMAN
569	34	f	3	2006	c	S	Pr	b	b	0	No accidents	3	88	AMMAN
570	35	f	3	1990	c	M	Pr	b	c	0	No accidents	5	80	AMMAN
571	40	f	3	1995	c	M	Pr	b	c	0	No accidents	7	72	AMMAN
572	34	f	3	2006	c	S	Pr	b	b	0	No accidents	3	88	AMMAN
573	35	f	3	1990	c	M	Pr	b	c	0	No accidents	5	80	AMMAN
574	40	f	3	1995	c	M	Pr	b	c	0	No accidents	7	72	AMMAN
575	45	m	5	1984	c	M	Pu	c	b	3	Incorrect Overtaking	7	72	AMMAN
576	44	m	5	1985	c	M	Pr	c	c	0	No accidents	5	80	AMMAN
577	28	m	5	2000	b	M	Pr	c	c	2	Incorrect Overtaking	3	88	AMMAN
578	32	m	5	1998	b	M	Pr	c	c	2	Incorrect Overtaking	3	88	AMMAN
579	45	m	5	1985	c	M	Pr	c	c	0	No accidents	5	80	AMMAN
580	33	m	5	1995	c	S	Pr	c	a	0	No accidents	8	68	AMMAN
581	29	m	5	1994	a	M	Pr	c	a	0	No accidents	17	32	AMMAN
582	28	m	5	1998	b	S	Pr	c	a	0	No accidents	5	80	AMMAN
583	55	m	5	1975	a	S	Pr	c	c	2	Exceeding Speed Limit	19	24	AMMAN
584	30	m	5	1995	a	S	1	c	a	0	No accidents	11	56	AMMAN
585	35	m	5	1996	a	M	Pr	c	b	0	No accidents	15	40	AMMAN
586	52	m	5	1979	b	M	Pr	c	c	3	Exceeding Speed Limit	13	48	AMMAN
587	32	m	5	1998	b	M	Pr	c	b	0	No accidents	11	56	AMMAN
588	32	m	5	1997	b	M	GOV	b	a	2	Exceeding Speed Limit	12	52	AMMAN
589	30	m	5	1995	b	M	GOV	b	a	2	Incorrect Overtaking	12	52	AMMAN
590	44	m	5	1986	d	M	Pr	b	a	3	Incorrect Overtaking	12	52	AMMAN
591	38	m	5	1998	b	M	Pr	c	b	2	Exceeding Speed Limit	5	80	AMMAN
592	55	m	5	1981	c	M	Pr	b	b	0	No accidents	9	64	AMMAN
593	39	m	5	2002	b	M	Pr	b	a	0	No accidents	7	72	AMMAN
594	35	m	5	2000	b	M	Pr	b	b	0	No accidents	8	68	AMMAN
595	50	m	5	1980	b	S	GOV	c	a	2	Exceeding Speed Limit	13	48	AMMAN
596	31	m	5	1994	c	S	Pr	b	b	2	Incorrect Overtaking	3	88	AMMAN
597	29	m	5	1995	c	S	Pr	b	c	3	Incorrect Overtaking	0	100	AMMAN
598	27	m	5	1998	c	S	Pr	b	c	0	No accidents	0	100	AMMAN
599	60	m	5	1970	c	M	Pr	b	c	0	No accidents	4	84	AMMAN
600	27	m	5	1997	c	M	Pr	b	c	2	Incorrect Overtaking	1	96	AMMAN

Appendix B

SPSS TABLES

Table (1-B) Post Hoc analysis table of the accident reason factor

Multiple Comparisons

Dependent Variable: Traffic_knowledge

Tukey HSD

(I) Accident reason	(J) Accident reason	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
Exceding Speed limit	Failing to take care	-5.371	2.866	.569	-14.09	3.35
	incorrect overtaking	-10.168*	2.749	.006	-18.53	-1.81
	Loss control	-12.476	6.268	.489	-31.54	6.59
	No Accident	-5.004*	1.561	.031	-9.75	-.26
	Others	-17.143	10.690	.748	-49.66	15.37
	TAIL GATING	-14.190*	2.673	.000	-22.32	-6.06
	USING INCORRECT LANE	-8.143	7.618	.963	-31.31	15.03
Failing to take care	Exceding Speed limit	5.371	2.866	.569	-3.35	14.09
	incorrect overtaking	-4.797	3.492	.869	-15.42	5.83
	Loss control	-7.105	6.628	.962	-27.26	13.06
	No Accident	.367	2.661	1.000	-7.73	8.46
	Others	-11.771	10.905	.961	-44.94	21.40
	TAIL GATING	-8.819	3.433	.169	-19.26	1.62
	USING INCORRECT LANE	-2.771	7.917	1.000	-26.85	21.31
incorrect overtaking	Exceding Speed limit	10.168*	2.749	.006	1.81	18.53
	Failing to take care	4.797	3.492	.869	-5.83	15.42
	Loss control	-2.308	6.578	1.000	-22.32	17.70
	No Accident	5.164	2.534	.457	-2.54	12.87
	Others	-6.974	10.875	.998	-40.05	26.10
	TAIL GATING	-4.022	3.335	.930	-14.17	6.12
	USING INCORRECT LANE	2.026	7.875	1.000	-21.93	25.98
Loss control	Exceding Speed limit	12.476	6.268	.489	-6.59	31.54
	Failing to take care	7.105	6.628	.962	-13.06	27.26
	incorrect overtaking	2.308	6.578	1.000	-17.70	22.32
	No Accident	7.472	6.176	.929	-11.32	26.26
	Others	-4.667	12.247	1.000	-41.92	32.59
	TAIL GATING	-1.714	6.546	1.000	-21.63	18.20
	USING INCORRECT LANE	4.333	9.682	1.000	-25.12	33.78
No Accident	Exceding Speed limit	5.004*	1.561	.031	.26	9.75
	Failing to take care	-.367	2.661	1.000	-8.46	7.73
	incorrect overtaking	-5.164	2.534	.457	-12.87	2.54
	Loss control	-7.472	6.176	.929	-26.26	11.32
	Others	-12.139	10.637	.947	-44.49	20.22
	TAIL GATING	-9.186*	2.451	.005	-16.64	-1.73
	USING INCORRECT LANE	-3.139	7.543	1.000	-26.08	19.81
Others	Exceding Speed limit	17.143	10.690	.748	-15.37	49.66
	Failing to take care	11.771	10.905	.961	-21.40	44.94
	incorrect overtaking	6.974	10.875	.998	-26.10	40.05
	Loss control	4.667	12.247	1.000	-32.59	41.92
	No Accident	12.139	10.637	.947	-20.22	44.49
	TAIL GATING	2.952	10.856	1.000	-30.07	35.97
	USING INCORRECT LANE	9.000	12.990	.997	-30.51	48.51
TAIL GATING	Exceding Speed limit	14.190*	2.673	.000	6.06	22.32
	Failing to take care	8.819	3.433	.169	-1.62	19.26
	incorrect overtaking	4.022	3.335	.930	-6.12	14.17
	Loss control	1.714	6.546	1.000	-18.20	21.63
	No Accident	9.186*	2.451	.005	1.73	16.64
	Others	-2.952	10.856	1.000	-35.97	30.07
	USING INCORRECT LANE	6.048	7.849	.995	-17.83	29.92
USING INCORRECT LANE	Exceding Speed limit	8.143	7.618	.963	-15.03	31.31
	Failing to take care	2.771	7.917	1.000	-21.31	26.85
	incorrect overtaking	-2.026	7.875	1.000	-25.98	21.93
	Loss control	-4.333	9.682	1.000	-33.78	25.12
	No Accident	3.139	7.543	1.000	-19.81	26.08
	Others	-9.000	12.990	.997	-48.51	30.51
	TAIL GATING	-6.048	7.849	.995	-29.92	17.83

*. The mean difference is significant at the .05 level.

Tables (2-B) ANOVOA Tables for question number 1

Descriptives

Traffic_knowledge

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
a	19	70.95	17.731	4.068	62.40	79.49	20	88
b	538	76.88	14.925	.643	75.61	78.14	24	100
c	43	66.51	16.585	2.529	61.41	71.62	28	88
Total	600	75.95	15.375	.628	74.71	77.18	20	100

ANOVA

Traffic_knowledge

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	4768.698	2	2384.349	10.403	.000
Within Groups	136829.6	597	229.195		
Total	141598.3	599			

Multiple Comparisons

Dependent Variable: Traffic_knowledge

Tukey HSD

(I) q1	(J) q1	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
a	b	-5.930	3.534	.214	-14.23	2.37
	c	4.436	4.170	.537	-5.36	14.23
b	a	5.930	3.534	.214	-2.37	14.23
	c	10.366*	2.399	.000	4.73	16.00
c	a	-4.436	4.170	.537	-14.23	5.36
	b	-10.366*	2.399	.000	-16.00	-4.73

*. The mean difference is significant at the .05 level.

Tables (3-B) ANOVOA Tables for question number 2

Descriptives

Traffic_knowledge

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
a	268	72.40	14.598	.892	70.65	74.16	20	96
c	292	79.92	15.207	.890	78.17	81.67	24	100
b	40	70.70	14.617	2.311	66.03	75.37	24	88
Total	600	75.95	15.375	.628	74.71	77.18	20	100

ANOVA

Traffic_knowledge

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	9071.388	2	4535.694	20.432	.000
Within Groups	132526.9	597	221.988		
Total	141598.3	599			

Multiple Comparisons

Dependent Variable: Traffic_knowledge

Tukey HSD

(I) q2	(J) q2	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
a	c	-7.515*	1.260	.000	-10.48	-4.55
	b	1.703	2.525	.779	-4.23	7.64
c	a	7.515*	1.260	.000	4.55	10.48
	b	9.218*	2.512	.001	3.32	15.12
b	a	-1.703	2.525	.779	-7.64	4.23
	c	-9.218*	2.512	.001	-15.12	-3.32

*. The mean difference is significant at the .05 level.

Tables (4-B) ANOVOA Tables for question number 3

Descriptives

Traffic_knowledge

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
a	38	45.16	19.011	3.084	38.91	51.41	20	80
b	8	47.50	21.534	7.613	29.50	65.50	24	80
c	554	78.47	11.949	.508	77.47	79.47	40	100
Total	600	75.95	15.375	.628	74.71	77.18	20	100

ANOVA

Traffic_knowledge

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	46021.262	2	23010.631	143.731	.000
Within Groups	95577.031	597	160.096		
Total	141598.3	599			

Multiple Comparisons

Dependent Variable: Traffic_knowledge

Tukey HSD

(I) q3	(J) q3	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
a	b	-2.342	4.922	.883	-13.91	9.22
	c	-33.311*	2.122	.000	-38.30	-28.33
b	a	2.342	4.922	.883	-9.22	13.91
	c	-30.969*	4.506	.000	-41.56	-20.38
c	a	33.311*	2.122	.000	28.33	38.30
	b	30.969*	4.506	.000	20.38	41.56

*. The mean difference is significant at the .05 level.

Tables (5-B) ANOVOA Tables for question number 4

Descriptives

Traffic_knowledge

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
a	234	76.43	14.783	.966	74.52	78.33	20	96
b	121	77.75	11.988	1.090	75.59	79.91	24	96
c	245	74.60	17.242	1.102	72.43	76.77	24	100
Total	600	75.95	15.375	.628	74.71	77.18	20	100

ANOVA

Traffic_knowledge

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	46021.262	2	23010.631	143.731	.000
Within Groups	95577.031	597	160.096		
Total	141598.3	599			

Multiple Comparisons

Dependent Variable: Traffic_knowledge

Tukey HSD

(I) q3	(J) q3	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
a	b	-2.342	4.922	.883	-13.91	9.22
	c	-33.311*	2.122	.000	-38.30	-28.33
b	a	2.342	4.922	.883	-9.22	13.91
	c	-30.969*	4.506	.000	-41.56	-20.38
c	a	33.311*	2.122	.000	28.33	38.30
	b	30.969*	4.506	.000	20.38	41.56

*. The mean difference is significant at the .05 level.

Tables (6-B) ANOVOA Tables for question number 5

Descriptives

Traffic_knowledge

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
a	492	78.30	13.712	.618	77.09	79.52	24	100
b	83	67.61	16.804	1.845	63.95	71.28	24	88
c	25	57.28	19.278	3.856	49.32	65.24	20	84
Total	600	75.95	15.375	.628	74.71	77.18	20	100

ANOVA

Traffic_knowledge

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	17200.111	2	8600.056	41.273	.000
Within Groups	124398.2	597	208.372		
Total	141598.3	599			

Multiple Comparisons

Dependent Variable: Traffic_knowledge

Tukey HSD

(I) q5	(J) q5	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
a	b	10.686*	1.713	.000	6.66	14.71
	c	21.021*	2.959	.000	14.07	27.97
b	a	-10.686*	1.713	.000	-14.71	-6.66
	c	10.334*	3.293	.005	2.60	18.07
c	a	-21.021*	2.959	.000	-27.97	-14.07
	b	-10.334*	3.293	.005	-18.07	-2.60

*. The mean difference is significant at the .05 level.

Tables (7-B) ANOVOA Tables for question number 6

Descriptives

Traffic_knowledge

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
a	466	78.64	12.598	.584	77.49	79.78	40	100
b	40	59.30	21.944	3.470	52.28	66.32	20	84
c	94	69.70	18.227	1.880	65.97	73.44	24	92
Total	600	75.95	15.375	.628	74.71	77.18	20	100

ANOVA

Traffic_knowledge

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	18118.251	2	9059.125	43.799	.000
Within Groups	123480.0	597	206.834		
Total	141598.3	599			

Multiple Comparisons

Dependent Variable: Traffic_knowledge

Tukey HSD

(I) q6	(J) q6	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
a	b	19.335*	2.370	.000	13.77	24.90
	c	8.933*	1.626	.000	5.11	12.75
b	a	-19.335*	2.370	.000	-24.90	-13.77
	c	-10.402*	2.715	.000	-16.78	-4.02
c	a	-8.933*	1.626	.000	-12.75	-5.11
	b	10.402*	2.715	.000	4.02	16.78

*. The mean difference is significant at the .05 level.

Tables (8-B) ANOVOA Tables for question number 7

Descriptives

Traffic_knowledge

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
a	547	78.02	12.825	.548	76.94	79.10	20	100
b	33	62.42	18.760	3.266	55.77	69.08	32	88
c	20	41.60	21.222	4.745	31.67	51.53	24	80
Total	600	75.95	15.375	.628	74.71	77.18	20	100

ANOVA

Traffic_knowledge

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	31975.616	2	15987.808	87.069	.000
Within Groups	109622.7	597	183.623		
Total	141598.3	599			

Multiple Comparisons

Dependent Variable: Traffic_knowledge

Tukey HSD

(I) q7	(J) q7	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
a	b	15.594*	2.429	.000	9.89	21.30
	c	36.418*	3.085	.000	29.17	43.67
b	a	-15.594*	2.429	.000	-21.30	-9.89
	c	20.824*	3.840	.000	11.80	29.85
c	a	-36.418*	3.085	.000	-43.67	-29.17
	b	-20.824*	3.840	.000	-29.85	-11.80

*. The mean difference is significant at the .05 level.

Tables (9-B) ANOVOA Tables for question number 8

Descriptives

Traffic_knowledge

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
a	86	57.81	18.688	2.015	53.81	61.82	24	88
b	499	79.41	12.028	.538	78.35	80.46	20	100
c	15	64.80	16.367	4.226	55.74	73.86	32	92
Total	600	75.95	15.375	.628	74.71	77.18	20	100

ANOVA

Traffic_knowledge

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	36114.453	2	18057.227	102.197	.000
Within Groups	105483.8	597	176.690		
Total	141598.3	599			

Multiple Comparisons

Dependent Variable: Traffic_knowledge

Tukey HSD

(I) q8	(J) q8	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
a	b	-21.593*	1.552	.000	-25.24	-17.95
	c	-6.986	3.719	.146	-15.73	1.75
b	a	21.593*	1.552	.000	17.95	25.24
	c	14.607*	3.483	.000	6.42	22.79
c	a	6.986	3.719	.146	-1.75	15.73
	b	-14.607*	3.483	.000	-22.79	-6.42

*. The mean difference is significant at the .05 level.

Tables (10-B) ANOVOA Tables for question number 9

Descriptives

Traffic_knowledge

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
a	53	64.45	22.308	3.064	58.30	70.60	24	92
b	36	65.78	14.980	2.497	60.71	70.85	20	84
c	511	77.86	13.668	.605	76.67	79.04	28	100
Total	600	75.95	15.375	.628	74.71	77.18	20	100

ANOVA

Traffic_knowledge

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	12585.655	2	6292.828	29.120	.000
Within Groups	129012.6	597	216.102		
Total	141598.3	599			

Multiple Comparisons

Dependent Variable: Traffic_knowledge

Tukey HSD

(I) q9	(J) q9	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
a	b	-1.325	3.175	.908	-8.78	6.13
	c	-13.402*	2.121	.000	-18.39	-8.42
b	a	1.325	3.175	.908	-6.13	8.78
	c	-12.077*	2.535	.000	-18.03	-6.12
c	a	13.402*	2.121	.000	8.42	18.39
	b	12.077*	2.535	.000	6.12	18.03

*. The mean difference is significant at the .05 level.

Tables (11-B) ANOVOA Tables for question number 10

Descriptives

Traffic_knowledge

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
a	531	78.67	13.118	.569	77.55	79.78	24	100
b	30	63.60	18.860	3.443	56.56	70.64	20	84
c	39	48.41	7.272	1.164	46.05	50.77	24	56
Total	600	75.95	15.375	.628	74.71	77.18	20	100

ANOVA

Traffic_knowledge

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	38073.657	2	19036.829	109.781	.000
Within Groups	103524.6	597	173.408		
Total	141598.3	599			

Multiple Comparisons

Dependent Variable: Traffic_knowledge

Tukey HSD

(I) q10	(J) q10	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
a	b	15.067*	2.471	.000	9.26	20.87
	c	30.256*	2.185	.000	25.12	35.39
b	a	-15.067*	2.471	.000	-20.87	-9.26
	c	15.190*	3.198	.000	7.68	22.70
c	a	-30.256*	2.185	.000	-35.39	-25.12
	b	-15.190*	3.198	.000	-22.70	-7.68

*. The mean difference is significant at the .05 level.

Tables (12-B) ANOVOA Tables for question number 11

Descriptives

Traffic_knowledge

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
a	570	77.96	12.732	.533	76.92	79.01	24	100
b	13	40.31	13.996	3.882	31.85	48.77	20	56
c	17	35.53	5.076	1.231	32.92	38.14	28	40
Total	600	75.95	15.375	.628	74.71	77.18	20	100

ANOVA

Traffic_knowledge

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	46603.991	2	23301.995	146.443	.000
Within Groups	94994.303	597	159.119		
Total	141598.3	599			

Multiple Comparisons

Dependent Variable: Traffic_knowledge

Tukey HSD

(I) q11	(J) q11	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
a	b	37.657*	3.538	.000	29.34	45.97
	c	42.436*	3.105	.000	35.14	49.73
b	a	-37.657*	3.538	.000	-45.97	-29.34
	c	4.778	4.648	.559	-6.14	15.70
c	a	-42.436*	3.105	.000	-49.73	-35.14
	b	-4.778	4.648	.559	-15.70	6.14

*. The mean difference is significant at the .05 level.

Tables (13-B) ANOVOA Tables for question number 12

Descriptives

Traffic_knowledge

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
a	536	78.43	12.809	.553	77.35	79.52	20	100
b	16	70.50	8.116	2.029	66.18	74.82	56	80
c	47	49.19	18.214	2.657	43.84	54.54	24	80
Total	599	75.93	15.380	.628	74.69	77.16	20	100

ANOVA

Traffic_knowledge

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	37431.909	2	18715.955	107.235	.000
Within Groups	104020.9	596	174.532		
Total	141452.8	598			

Multiple Comparisons

Dependent Variable: Traffic_knowledge

Tukey HSD

(I) q12	(J) q12	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
a	b	7.933*	3.352	.048	.06	15.81
	c	29.241*	2.010	.000	24.52	33.96
b	a	-7.933*	3.352	.048	-15.81	-.06
	c	21.309*	3.824	.000	12.32	30.29
c	a	-29.241*	2.010	.000	-33.96	-24.52
	b	-21.309*	3.824	.000	-30.29	-12.32

*. The mean difference is significant at the .05 level.

Tables (14-B) ANOVOA Tables for question number 13

Descriptives

Traffic_knowledge

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
a	497	79.09	12.699	.570	77.97	80.21	20	100
b	73	64.99	13.643	1.597	61.80	68.17	32	88
c	30	50.53	22.857	4.173	42.00	59.07	24	88
Total	600	75.95	15.375	.628	74.71	77.18	20	100

ANOVA

Traffic_knowledge

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	33056.915	2	16528.457	90.910	.000
Within Groups	108541.4	597	181.811		
Total	141598.3	599			

Multiple Comparisons

Dependent Variable: Traffic_knowledge

Tukey HSD

(I) q13	(J) q13	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
a	b	14.104*	1.690	.000	10.13	18.08
	c	28.557*	2.535	.000	22.60	34.51
b	a	-14.104*	1.690	.000	-18.08	-10.13
	c	14.453*	2.924	.000	7.58	21.32
c	a	-28.557*	2.535	.000	-34.51	-22.60
	b	-14.453*	2.924	.000	-21.32	-7.58

*. The mean difference is significant at the .05 level.

Tables (15-B) ANOVOA Tables for question number 14

Descriptives

Traffic_knowledge

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
a	443	79.22	12.771	.607	78.03	80.42	28	100
b	127	67.91	18.846	1.672	64.60	71.21	20	92
c	30	61.60	13.920	2.541	56.40	66.80	40	84
Total	600	75.95	15.375	.628	74.71	77.18	20	100

ANOVA

Traffic_knowledge

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	19143.351	2	9571.676	46.664	.000
Within Groups	122454.9	597	205.117		
Total	141598.3	599			

Multiple Comparisons

Dependent Variable: Traffic_knowledge

Tukey HSD

(I) q14	(J) q14	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
a	b	11.318*	1.442	.000	7.93	14.71
	c	17.623*	2.702	.000	11.28	23.97
b	a	-11.318*	1.442	.000	-14.71	-7.93
	c	6.306	2.907	.077	-.53	13.14
c	a	-17.623*	2.702	.000	-23.97	-11.28
	b	-6.306	2.907	.077	-13.14	.53

*. The mean difference is significant at the .05 level.

Tables (16-B) ANOVOA Tables for question number 15

Descriptives

Traffic_knowledge

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
a	51	55.22	15.074	2.111	50.98	59.46	20	88
b	30	39.60	14.493	2.646	34.19	45.01	24	68
c	519	80.08	10.183	.447	79.21	80.96	32	100
Total	600	75.95	15.375	.628	74.71	77.18	20	100

ANOVA

Traffic_knowledge

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	70438.196	2	35219.098	295.472	.000
Within Groups	71160.097	597	119.196		
Total	141598.3	599			

Multiple Comparisons

Dependent Variable: Traffic_knowledge

Tukey HSD

(I) q15	(J) q15	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
a	b	15.616*	2.512	.000	9.71	21.52
	c	-24.869*	1.602	.000	-28.63	-21.10
b	a	-15.616*	2.512	.000	-21.52	-9.71
	c	-40.485*	2.050	.000	-45.30	-35.67
c	a	24.869*	1.602	.000	21.10	28.63
	b	40.485*	2.050	.000	35.67	45.30

*. The mean difference is significant at the .05 level.

Tables (17-B) ANOVOA Tables for question number 16

Descriptives

Traffic_knowledge

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
a	430	80.44	11.995	.578	79.30	81.57	20	100
b	50	64.56	20.444	2.891	58.75	70.37	24	88
c	120	64.60	15.554	1.420	61.79	67.41	32	96
Total	600	75.95	15.375	.628	74.71	77.18	20	100

ANOVA

Traffic_knowledge

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	30603.369	2	15301.684	82.302	.000
Within Groups	110994.9	597	185.921		
Total	141598.3	599			

Multiple Comparisons

Dependent Variable: Traffic_knowledge

Tukey HSD

(I) q16	(J) q16	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
a	b	15.877*	2.037	.000	11.09	20.66
	c	15.837*	1.408	.000	12.53	19.14
b	a	-15.877*	2.037	.000	-20.66	-11.09
	c	-.040	2.295	1.000	-5.43	5.35
c	a	-15.837*	1.408	.000	-19.14	-12.53
	b	.040	2.295	1.000	-5.35	5.43

*. The mean difference is significant at the .05 level.

Tables (18-B) ANOVOA Tables for question number 17

Descriptives

Traffic_knowledge

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
a	200	67.54	19.030	1.346	64.89	70.19	24	92
b	389	80.67	10.323	.523	79.64	81.70	20	100
c	11	61.82	17.832	5.376	49.84	73.80	40	92
Total	600	75.95	15.375	.628	74.71	77.18	20	100

ANOVA

Traffic_knowledge

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	25002.756	2	12501.378	64.010	.000
Within Groups	116595.5	597	195.302		
Total	141598.3	599			

Multiple Comparisons

Dependent Variable: Traffic_knowledge

Tukey HSD

(I) q17	(J) q17	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
a	b	-13.128*	1.216	.000	-15.99	-10.27
	c	5.722	4.328	.383	-4.45	15.89
b	a	13.128*	1.216	.000	10.27	15.99
	c	18.850*	4.273	.000	8.81	28.89
c	a	-5.722	4.328	.383	-15.89	4.45
	b	-18.850*	4.273	.000	-28.89	-8.81

*. The mean difference is significant at the .05 level.

Tables (19-B) ANOVOA Tables for question number 18

Descriptives

Traffic_knowledge

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
a	157	66.27	16.673	1.331	63.64	68.90	24	92
b	405	81.95	8.889	.442	81.08	82.81	48	100
c	37	51.14	19.847	3.263	44.52	57.75	20	88
Total	599	75.93	15.384	.629	74.70	77.17	20	100

ANOVA

Traffic_knowledge

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	52061.435	2	26030.718	173.399	.000
Within Groups	89471.894	596	150.121		
Total	141533.3	598			

Multiple Comparisons

Dependent Variable: Traffic_knowledge

Tukey HSD

(I) q18	(J) q18	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
a	b	-15.678*	1.152	.000	-18.38	-12.97
	c	15.132*	2.239	.000	9.87	20.39
b	a	15.678*	1.152	.000	12.97	18.38
	c	30.811*	2.104	.000	25.87	35.75
c	a	-15.132*	2.239	.000	-20.39	-9.87
	b	-30.811*	2.104	.000	-35.75	-25.87

*. The mean difference is significant at the .05 level.

Tables (20-B) ANOVOA Tables for question number 19

Descriptives

Traffic_knowledge

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
a	540	79.04	11.940	.514	78.03	80.05	24	100
b	40	52.00	12.906	2.041	47.87	56.13	20	84
c	20	40.40	16.047	3.588	32.89	47.91	24	80
Total	600	75.95	15.375	.628	74.71	77.18	20	100

ANOVA

Traffic_knowledge

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	53366.234	2	26683.117	180.545	.000
Within Groups	88232.059	597	147.792		
Total	141598.3	599			

Multiple Comparisons

Dependent Variable: Traffic_knowledge

Tukey HSD

(I) q19	(J) q19	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
a	b	27.037*	1.992	.000	22.36	31.72
	c	38.637*	2.768	.000	32.13	45.14
b	a	-27.037*	1.992	.000	-31.72	-22.36
	c	11.600*	3.329	.002	3.78	19.42
c	a	-38.637*	2.768	.000	-45.14	-32.13
	b	-11.600*	3.329	.002	-19.42	-3.78

*. The mean difference is significant at the .05 level.

Tables (21-B) ANOVOA Tables for question number 20

Descriptives

Traffic_knowledge

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
a	235	72.58	16.437	1.072	70.47	74.69	20	96
b	345	79.55	12.446	.670	78.23	80.87	32	100
c	20	53.40	20.242	4.526	43.93	62.87	24	84
Total	600	75.95	15.375	.628	74.71	77.18	20	100

ANOVA

Traffic_knowledge

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	17306.739	2	8653.369	41.564	.000
Within Groups	124291.6	597	208.194		
Total	141598.3	599			

Multiple Comparisons

Dependent Variable: Traffic_knowledge

Tukey HSD

(I) q20	(J) q20	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
a	b	-6.969*	1.220	.000	-9.84	-4.10
	c	19.179*	3.361	.000	11.28	27.08
b	a	6.969*	1.220	.000	4.10	9.84
	c	26.148*	3.319	.000	18.35	33.95
c	a	-19.179*	3.361	.000	-27.08	-11.28
	b	-26.148*	3.319	.000	-33.95	-18.35

*. The mean difference is significant at the .05 level.

Tables (22-B) ANOVOA Tables for question number 21

Descriptives

Traffic_knowledge

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
a	124	71.35	12.948	1.163	69.05	73.66	24	92
b	165	65.31	18.144	1.413	62.52	68.10	20	92
c	311	83.42	9.559	.542	82.35	84.49	24	100
Total	600	75.95	15.375	.628	74.71	77.18	20	100

ANOVA

Traffic_knowledge

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	38660.850	2	19330.425	112.109	.000
Within Groups	102937.4	597	172.425		
Total	141598.3	599			

Multiple Comparisons

Dependent Variable: Traffic_knowledge

Tukey HSD

(I) q21	(J) q21	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
a	b	6.046*	1.561	.000	2.38	9.71
	c	-12.066*	1.395	.000	-15.34	-8.79
b	a	-6.046*	1.561	.000	-9.71	-2.38
	c	-18.112*	1.265	.000	-21.08	-15.14
c	a	12.066*	1.395	.000	8.79	15.34
	b	18.112*	1.265	.000	15.14	21.08

*. The mean difference is significant at the .05 level.

Tables (23-B) ANOVOA Tables for question number 22

Descriptives

Traffic_knowledge

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
a	153	75.08	11.978	.968	73.17	77.00	20	96
b	313	79.55	15.003	.848	77.88	81.22	24	100
c	134	68.51	16.895	1.460	65.62	71.39	24	92
Total	600	75.95	15.375	.628	74.71	77.18	20	100

ANOVA

Traffic_knowledge

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	11599.525	2	5799.763	26.635	.000
Within Groups	129998.8	597	217.753		
Total	141598.3	599			

Multiple Comparisons

Dependent Variable: Traffic_knowledge

Tukey HSD

(I) q22	(J) q22	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
a	b	-4.468*	1.456	.006	-7.89	-1.05
	c	6.578*	1.746	.001	2.48	10.68
b	a	4.468*	1.456	.006	1.05	7.89
	c	11.045*	1.523	.000	7.47	14.62
c	a	-6.578*	1.746	.001	-10.68	-2.48
	b	-11.045*	1.523	.000	-14.62	-7.47

*. The mean difference is significant at the .05 level.

Tables (24-B) ANOVOA Tables for question number 23

Descriptives

Traffic_knowledge

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
a	121	64.60	16.417	1.492	61.64	67.55	24	88
b	48	64.58	17.639	2.546	59.46	69.71	20	88
c	431	80.40	12.228	.589	79.24	81.56	28	100
Total	600	75.95	15.375	.628	74.71	77.18	20	100

ANOVA

Traffic_knowledge

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	30334.110	2	15167.055	81.380	.000
Within Groups	111264.2	597	186.372		
Total	141598.3	599			

Multiple Comparisons

Dependent Variable: Traffic_knowledge

Tukey HSD

(I) q23	(J) q23	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
a	b	.012	2.329	1.000	-5.46	5.48
	c	-15.804*	1.405	.000	-19.10	-12.50
b	a	-.012	2.329	1.000	-5.48	5.46
	c	-15.816*	2.077	.000	-20.70	-10.93
c	a	15.804*	1.405	.000	12.50	19.10
	b	15.816*	2.077	.000	10.93	20.70

*. The mean difference is significant at the .05 level.

Tables (25-B) ANOVOA Tables for question number 24

Descriptives

Traffic_knowledge

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
a	29	45.10	14.378	2.670	39.63	50.57	24	72
b	481	79.21	12.612	.575	78.08	80.34	20	100
c	90	68.44	15.607	1.645	65.18	71.71	24	92
Total	600	75.95	15.375	.628	74.71	77.18	20	100

ANOVA

Traffic_knowledge

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	37775.589	2	18887.795	108.608	.000
Within Groups	103822.7	597	173.907		
Total	141598.3	599			

Multiple Comparisons

Dependent Variable: Traffic_knowledge

Tukey HSD

(I) q24	(J) q24	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
a	b	-34.107*	2.522	.000	-40.03	-28.18
	c	-23.341*	2.816	.000	-29.96	-16.72
b	a	34.107*	2.522	.000	28.18	40.03
	c	10.766*	1.515	.000	7.21	14.32
c	a	23.341*	2.816	.000	16.72	29.96
	b	-10.766*	1.515	.000	-14.32	-7.21

*. The mean difference is significant at the .05 level.

Tables (26-B) ANOVOA Tables for question number 25

Descriptives

Traffic_knowledge

	N	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum	Maximum
					Lower Bound	Upper Bound		
a	4	48.00	.000	.000	48.00	48.00	48	48
b	41	63.41	17.563	2.743	57.87	68.96	20	88
c	555	77.07	14.656	.622	75.85	78.30	24	100
Total	600	75.95	15.375	.628	74.71	77.18	20	100

ANOVA

Traffic_knowledge

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	10268.371	2	5134.185	23.339	.000
Within Groups	131329.9	597	219.983		
Total	141598.3	599			

Multiple Comparisons

Dependent Variable: Traffic_knowledge

Tukey HSD

(I) q25	(J) q25	Mean Difference (I-J)	Std. Error	Sig.	95% Confidence Interval	
					Lower Bound	Upper Bound
a	b	-15.415	7.769	.117	-33.67	2.84
	c	-29.074*	7.443	.000	-46.56	-11.59
b	a	15.415	7.769	.117	-2.84	33.67
	c	-13.659*	2.400	.000	-19.30	-8.02
c	a	29.074*	7.443	.000	11.59	46.56
	b	13.659*	2.400	.000	8.02	19.30

*. The mean difference is significant at the .05 level.

الوعي المروري لدى السائقين في الأردن

إعداد

مصعب عبد المهيمن شاهين

المشرف

الدكتور محمد الطراونه

ملخـــــــص

هذه الدراسة تناولت موضوع الوعي المروري في الاردن و الهدف منها دراسة مجموعة من المتغيرات التي تؤثر على مستوى الوعي المروري في المملكة وقد شملت هذه الدراسة عدة مناطق في الاردن العزيز وهي عمان (العاصمة) ،الزرقاء و اربد . العوامل التي تم دراستها شملت اثني عشرة متغيرا منها العمر ، الجنس ، فئة الرخصة ، سنةالحصول على الرخصة و أعداد الحوادث و أنواعها .

لقد تم اختيار 600 **سائق من المناطق المذكورة بشكل عشوائي باعطائهم استبانة احتوت على خمسة و عشرون سؤالا.وقد تم استخلاص النتائج وايجاد العلاقة بين المتغيرات و الوعي المروري استناداعلى التحليل الاحصائي** Analysis of variance (ONE_WAY ANAONA) **باستخدام برنامج** SPSS **فوجد ان هناك علاقة تربط عمر السائق بمستوى الوعي المروري و علاقةاخرى تربط بين سنة الحصول على الرخصة و مستوى الوعي المروري. لقد توصلت الدراسة إلى توصيات، منها تقصير مدة سريان مفعول الرخص من عشر سنوات الى خمس سنوات والزام السائقين بعمل الامتحان النظري عند تجديد الرخص.**