Sociological study on the course of the traffic system and the traffic accidents

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Abstract

The subject of this research is the operation of the traffic system and traffic accidents from a sociological perspective. In the research, the traffic system is taken as a sub-system of the social system. In this context the effects of the social, cultural and demographic factors on traffic accidents are examined. The data were collected from 681 people of whom 300 are drivers 300 pedestrians, 4 directors and 20 instructors of driving courses in Konya in Turkey. The research findings showed that being a male, low educated, fatalism, not obeying traffic rules, and way of traffic education were factors which affected the traffic accident mostly. According to the results of this research there is integration problem in the traffic system.

Key Words: Traffic, Traffic System, Traffic Accidents

Trafik sisteminin işleyişi ve trafik kazaları üzerine sosyolojik bir araştırma

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Özet

Bu makalenin konusunu trafik sisteminin işleyişi ve trafik kazaları oluşturur. Araştırmanın temel amacı Türkiye'de trafiğin bir sistem olarak nasıl işlediğini ortaya koyarak, ülkemizin önemli bir problemi olan trafik kazalarını bu sistemin işleyişi ve sorunları çerçevesinde açıklamaktır. Saha araştırması yöntem ve tekniklerine göre gerçekleştirilen çalışmada sürücü, yaya, trafik polisi, sürücü kursu öğretmeni ve sürücü kursu yöneticisinden oluşan 681 kişiden anket ve mülakat teknikleri ile veriler elde edilmiştir. Ayrıca, araştırmacı bir sürücü kursunda 3,5 ay süren bir katılımlı bir gözlemde bulunmuştur. Araştırmadan elde edilen verilerin çözümlenmesi sonucunda , trafik sisteminde bütünleşme sorunu olduğu ve sistemin işleyişinde informal kuralların etkin olduğu ortaya çıkmıştır. Araştırma sonucunda, trafik kazası yapma ile cinsiyet, öğrenim düzeyinin düşüklüğü, sürücülüğü meslek olarak yapma, kaderci olma, trafik eğitimini geleneksel yöntemlerle alma, ... arasında ilişkiler bulunmuştur.

 Anahtar kelimeler; Trafik, Trafik Sistemi, Trafik Kazası

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INTRODUCTION

Traffic accidents, with their negative impacts on individuals and society, is an important sociological problem. Traffic accidents lead to high rate of deaths, injuries and disabilities. They also cause big amount of economic loss.

The most important negative impact of the traffic accidents is the death of individuals. In modern society, the traffic accidents are regarded as an important reason of deaths. The related statistics show the importance of the problem. For example, in 1988, 142779 people lost their lives due to traffic accidents in 40 countries. In USA, which is a developed country, 40250 people died in traffic accidents in 1991. The %16 of the victims is pedestrians. Again in USA, traffic accidents were at the 5th place among all the causes of death in the year of 1989. In those accidents the numbers of deaths are higher than the deaths caused by other accidents or diabetes, suicide, contagious diseases (including AIDS), liver diseases or homicides (Freund and Martin, 1996: 62-63). The total number of deaths in traffic accidents in England is 54136.In France, the number of deaths is 8080 only in 1996. (Turkish Security Directorate General, 1997: 17-29). On the other hand, despite the fact that the percentage of motor vehicles is low in comparison with the developed countries, in India the number of deaths cased by traffic accidents in 1989 is 46690. (Sahdev and Others, 1994: 377). In Saudi Arabia, traffic accidents are community health problems (Bener and Jadaan, 1992: 143).

According to World Health Organization (WHO), the traffic accidents which the children are subject to are the most serious epidemic problem in the industrial world. Between %50 and %25 percentages of causes of death among 0-14 year old children is composed of accidents and approximately half of these deaths are caused by traffic accidents. The bicycle and pedestrian accidents are the main types of traffic accidents which children are subject to (Joly and others, 1991: 765).

In Australia, the most common cause of death among the 1-14 age group and registered in the hospitals in the 5th place is the traffic accidents. (Rosman and Knuiman, 1994: 215). In USA, car accidents take the first place as a cause in adolescent deaths (Freund and Martin, 1996: 63).

One of the countries where the traffic accidents are widespread and lead to important problems is Turkey. In last years, traffic accidents became a social disaster in Turkey where there has been a high increase in deaths and injuries due to those accidents. This concept which is expressed as "traffic terror" is one of the important agenda item of the society. In the traffic accidents, where approximately 20-25 people die per day, 8-10 thousand people lose their lives and 100 thousand people get injured every year. (DIE, 1992: 1 Ege, 1993:8)

Besides leading to high rate deaths, injuries and disabilities, traffic accident also lead to serious economic losses. For example, in Saudi Arabia where the traffic accident rate is high, it has been calculated that the cost of traffic accidents only in Cidde is 172,5 million dollars a year. (Bener and Jadaan, 1992: 146)

Traffic accidents also have a negative effect on family life, social and cultural life. As a result of deaths caused by traffic accidents the families dissolve; the unemployment and care of the disabled lead to serious problems in the society.

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Traffic accidents, having negative effects on individuals and society, are an important problem area which is studied by various disciplines. There exists wide a *traffic accidents literature* as a result of studies intending to explain and understand the problem. As a multidimensional problem, it has been observed that there are physical, technical, psychological and social studies. Among these studies, the abundance of the studies focusing on the human factor and sociologic variables of the problem attracts attention. The effects resulting from motor vehicles and motorways on the traffic accidents are very low (Erdem, 1994; DIE, 1992). For this reason, researchers tend to study the human factor and social factor while trying to explain the reasons of traffic accidents.

Human factor in traffic is composed of the driver, pedestrian, passenger and the traffic police. Moreover, starting with the drivers, the traffic trainers of the individuals are also evaluated under the concept of human factor. On the other hand, social factors such as gender, age, education level, income level, unemployment, religion which shape the social behavior of the individuals are the economic, cultural and demographic variables.

In the studies explaining the causes of traffic accidents, it is observed that education is the most important factor. A lot of researchers concluded that education is an important factor in explaining and preventing the traffic accidents. (Asogwa, 1992; Bener and Jadaan, 1992; Geray, 1981). On this subject an emphasis is given to drivers' education. Basic understanding shared in these studies is that drivers who are familiar with the traffic rules and who obey those rules engage in less traffic accidents. Also, it is underlined that it is important to give traffic education to society members at school and in the family.

The effects of economic and social factors on traffic accidents such as unemployment, poverty, low income, car production is an important conclusion in researches on traffic accidents. Bagley (1992), indicates that the majority of the traffic accidents occur in poor areas and where juvenile delinquency is high. And Jock (1984:207-210) claims that there is a parallel relation between the changes in industrial production indicators and annual changes in the number of deaths caused by traffic accidents. This relation is particularly strong in short periods.

Culture and way of living are another important factors examined in the studies on traffic accidents. Schulze (1990) who studied the effect of way of living on German youth, claims that the 'activity groups' who are spending most of the time outside their home, in pubs, discos; and who are active in subjects such as driving, listening to music, playing football, going to cinemas, drinking are risky groups in traffic.

The effect of the cultural factor on traffic accidents are also examined by Hayden (1980) under the framework of "respect to laws". On the other hand, Erdem (1994) examined cultural factor with respect to *automobile culture.*

The effects of rules of law on traffic accidents are studied by Homel (1993: 147- 155), Ross and Gonzales (1988: 379-391) and Williams and others (1986: 73). Homel (1993) discovered that in New South Wales, traffic accidents decreased after the law lowering the alcohol amount in the blood. Ross and Gonzales claims that cancellation of driving licenses imposed on drivers who drive drunk has positive outcomes.

Demographic variables are also among the variables whose effects on traffic accidents are examined. Gender and age factors are the most significant demographic variables.Gender and age factor is studied by Hiakivi and others (1989), Gregersen and Berg (1994), Garder (1989) and Blomqvist (1994). Gregersen and Berg (1994: 297- 303) found out that the young drivers in traffic are within the high risk group for accidents. Gerder (1989: 443), in this study on pedestrians, concludes that females are better than males in obeying the traffic rules.

Above mentioned researches show that the behaviors such as driving or obeying the rules can differ if the individual is young or old; female or male.

If the literature on traffic accidents is generally evaluated, we can see that most of the researches are focused on some dimensions of the problem rather than examining it as a whole. For example, some researchers examined the education factor in details (Asogwa, 1992; Geray, 1981). In some researches law (Homel, 1993), way of living (Schulze,1990), economy (Jocks, 1984) and demographic factors (Garder, 1989; Gregersen and Berg, 1994) are examined. It has been observed that some subjects are not examined. For example, there are no researches about the education institutions for drivers and traffic policemen.

Traffic accidents bear a multidimensional problem characteristic. For this reason, identification of the reasons of traffic accidents require an examination of the problem as a whole. While examining the effects of human factor and social factors in traffic on traffic accidents, it is important to conceptualize the variables as related to each other and study them as a whole.

Traffic accidents can be evaluated as a dysfunction of the traffic system. Traffic system is a phenomenon related to society's other sub-systems such as economical, political, legal or religious systems. In this context we can conceptualize the traffic as a sub-system. Identifying the elements in traffic sub-system, finding the relation between these elements and showing the functions undertaken by each element is an important approach for explaining and understanding the traffic-related questions, including traffic accidents.

This study examines the traffic accidents in the context of socio-economic, cultural and demographic reasons of the traffic system and its operation within the framework and approach expressed above. Examining the driver, pedestrian, traffic police, driving course instructor and manager of the driving course, which are within the traffic system, under the human factor concept, and associating them with each other, intend to study them as a whole.

This study is undertaken in Konya which is one of the medium-sized cities in Turkey and going through a dynamic change in terms of industrialization and urbanization.

METHODOLOGY
The Approach of the Research

This research analyzing the traffic system, examines the reasons of traffic accidents with in the context of socio-economic, cultural and demographic variables. In the research, the traffic system is theoretically conceptualized as the sub-system of the society and the variables related to human factor within the traffic sub-system (such as gender, education, economy, religious attitude etc.) are studied with a sociological point of view. A multi-factored attitude is adopted

to explain the problem of research. In this context, system approach is chosen as an appropriate approach to conceptualize and analyze the research problem.

System approach is regarded as an approach studying the facts based on interaction and integrity principle within the concept of system framework. (Sariarslan, 1984: 53). System approach is widely accepted in science frameworks and is used in analyzing different subjects. (Weinstein, 1971; Etzioni, 1969: Smelser, 1963; Can, 1992: Çelebioglu, 1982).

In system analysis, identifying the systems elements and sub-systems, how the relations among the sub-systems occur is observed. In system analysis, the functions of the elements of system are examined. In this study, the traffic system, composed of motorway, vehicle, and human factors, is described as an organized whole. The reason of being a sociological research is that the emphasis is not given to motorway or vehicle factors but the human element is studied multidimensional and in details. In the research, human factor is composed of the driver, traffic policeman, pedestrian, instructor of the driving course and the manager of the driving course. Also, in the research, the rules regulating the traffic system are paid attention in the analysis.

The Population of the Research and the Choice of the Sample

The research population is composed of the drivers, traffic policemen, pedestrians, instructors of the driving courses and the managers of the driving courses in Konya in Turkey.

Drivers: This research basically focuses on five human factor-related elements within the traffic system. For this reason, samples are given related to these elements in this study. 300 drivers are selected pursuant to systematic sampling technique among the drivers registered in traffic in Konya. (Aziz, 1990). In chosing the drivers we have benefited from the data of *Konya Emniyet Mudurlugu Trafik Burosu Bilgi Islem Dairesi.*

Pedestrians: The environment related to the pedestrians is composed of the pedestrians in the traffic in Konya. 6 neighborhoods are identified in Konya where the traffic is heavy and 50 people from each neighborhood are selected according to "purposive sampling technique" (Aziz, 1990) and a sample with 300 people is formed.

Traffic Policemen: The total number of traffic policemen including their supervisors is 100 in Konya. 87 of them are the traffic policemen. In the research it has been intended to make a survey with all of them but only 57 of them took part in the research.

Instructors of the Driving Courses: In Konya, 126 driving instructors are employed in total 21 driving courses. Among these instructors, 20 of them agreed to take part in the research.

Managers of the Driving Courses: There are 21 driving courses in Konya. In the research, 4 of the managers agreed to meet with us. To those managers structured interview technique is applied.

Survey Sheet: A survey is applied to the drivers, pedestrians, traffic policemen, driving instructors and managers of the driving courses in this research. The driving course survey is composed of 80 questions. The questions are related to the drivers' socio-economic, cultural, demographic characteristics and their behavior in the traffic. The pedestrians' survey is

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composed of 14 questions and it aims to identify their socio-economic characteristics and their observations and behaviors about the traffic. The survey for the traffic policemen is composed of 20 questions. These questions are about the socio-economic characteristics of the policemen, their observations about the drivers and about the traffic. The survey sheet for the instructors has 13 questions. These questions are about the socio-economic characteristics of the instructors, the operation of the driving courses and the problems of the courses, also about the traffic accidents.

Application

These surveys are applied face to face to the participants within approximately 3 months period. Also, an observation is undertaken with the participation of the researchers about the driving courses which lasted for three and a half months.

Analysis

The date obtained with the survey technique is solved with the SPSS program. In the data analysis mostly straight and cross tables are used and for the test of the relation between the variables (chi square) technique is applied. In the research traffic accident is taken as the dependent variable. Independent variables are composed of gender, age, education level, income level, religious attitude and traffic education.

FINDINGS

General Characteristics of the Drivers

In this sub-part of the research the demographic, socio-economic, cultural and driving-related characteristics of 300 drivers who have answered the survey questions will be submitted and interpreted. The aim of this sub-part can be expressed as the general profile of this sample.

The majority of the 300 drivers are male (%82). The female drivers are lower in percentage. (%18). A conclusion like this is related to the fact that in Turkey driving is an activity done by mostly men. Women are becoming more active in driving in Turkey pursuant to socio-economic and cultural developments, which was previously perceived as a talent or job for men, with mostly the effect of the developments in automotive sector. However, despite all the developments in driving men are still surpass over women.

The participants of the research are mostly the drivers between the age of 31-35 (%23), 20-25 (%22) and 26-30 (%19). The drivers in the age categories 46-50 (%7) and 51-55 (%3) are less than the others. This proportions show that the participants answered the questions are not advanced in years. In the research, when the data about the age variable is categorized for their age structure, it is observed that the drivers are mostly in the "young" (%65) category. The rate of the "old" drivers (%5) is low.

The participants formed the sample with regard to the birth place factor are in the category of people living in the city (%47). The percentage of the villagers is %36 and the percentage of the burghers is %17. It draws attention that the percentage of the burgher is lower than the people born in cities or villages.

Another characteristic of the participants is related to the fact about the place where they have lived the most before starting to drive. The majority of the drivers (%75) have lived in cities for long periods. This finding is parallel to the fact that most of the drivers are born in cities.

The education level of the drivers is high (%64). The percentage of participants with low education level is %27 and with middle level is %9. It is meaningful that the education level of the drivers is high. This finding is related to the fact that the majority of the participants (%72) are not doing the driver as an occupation and they drive automobile more than the others (%79).

When the education level and gender variables are evaluated together, it has been found that the education level of the females (%98) is higher than the males (%64). When the education level of females increase, the use of automobiles get higher.

The most of the participant drivers' income level is low (%61) in the research sample. The percentage of the high income level is %8. The drivers, despite having a low income level, they mostly regard this economic problem as "normal".

Pursuant to the data obtained, most of the drivers do not drive as an occupation (%72). The percentage of the drivers, doing this as an occupation is low (%28). Not driving as an occupation also affects the type of the vehicle driven. Most of the drivers drive cars (%79). The percentage of the usage of vehicle types for business reasons such as minibus (%13), truck (%5) and bus (%3) is low. With the increase of the education level of the drivers, the types of the vehicles used also differ. While the drivers with higher education level mostly use cars (%72), the drivers with lower education level use trucks (%60) and buses (%67).

Unemployment is also an important problem in Turkey, like in other countries. Within the framework of the effects of unemployment on the traffic, the participants are also asked questions about unemployment. According to the data obtained from the research %55 of the drivers do not have an unemployment problem. The percentage of the drivers having unemployment problem is %25. %20 percent of the participant did not answer this question.

Religion factor is an important variable in social studies. In a country like Turkey, where the majority of the population is Muslim, the effect of religion on traffic and driving is a problem which is studied. On this subject adopting a "fatalistic attitude" is important. In this research drivers answered as "everything is fate" (%53) to the questions which are within the fatalistic attitude adoption, which confirms this fatalistic attitude. The percentage of the ones not having fatalistic attitude is low (%12). The percentage of the participants who are "indecisive" on the fatalistic attitude is %35.

In the research the drivers are also examined about their fulfillment behaviors towards the acts of worship which belongs to the Islam religion. According to the data obtained, the percentage of the drivers who say that they fulfill all the worships is %35. The percentage of the ones only going to Friday and religious festival (Bayram) prayers is %36 and the percentage of the ones who claim that they believe but they do not practice is %25. The percentages show that the religious belief is widespread among the drivers but they have different attitudes and behaviors.

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The characteristics related to driving of the participants is composed of, ways of obtaining the driving license, the length of driving and the existence of a vehicle in the family before starting to drive.

The majority of the drivers answered the survey (%58) obtained their license from the traffic bureau. Obtaining the license from the traffic bureau was the most common way until 1990 in Turkey. However, starting with 1990 after the driving courses became prevalent; the way of obtaining the license has changed. The %42 percent of the participants obtained their licenses from driving courses. This practice is getting more common. The driving courses are a school-like system where the formal application is standing in the forefront, giving equal importance to theoretic knowledge and application. This system is managed in the framework of the Ministry of Education. Although the driving course system is found affirmative, there also exist some criticisms claiming that there is a commercial approach in driving courses which negatively affects the driving education (getting the driving license easily).

When the drivers are evaluated in terms of the time that they have been driving, the percentages of regular use of 1-5 years (%31), 6-10 years (%24) and irregular use of 1-5 years (%19) have the majority. Other categories have low percentages. With regards to owing a vehicle in the family before learning to drive, the majority of the participants' family has a car (%54). The percentage of the participants who did not own a car is %44.

The Relationship between Socio-Economic, Cultural and Demographic Factors and The Traffic Accidents

Traffic accidents are regarded as the basic indicator that there is a dysfunction in the traffic system. In lots of countries, including Turkey due to the traffic accidents, large number of people loses their lives, get injured or become disabled. It is also known that traffic accidents also cause serious economic problems. With this regard, the answer sought in the researches is for the question "why drivers make traffic accidents".

The question "why drivers make traffic accidents" is also examined in this study. The sociological feature of this research requires an emphasis especially on socio-economic, cultural and demographic factors. In the study a multidimensional approach is adopted in order to explain the traffic accidents. In this regard, the act of making an accident of the drivers is taken as a dependent variable and a relation is established with the gender, age, education level, income level, adoption of fatalistic attitude and the way of getting traffic education of the drivers.

Table 1. Have you ever caused a traffic accident?

Answers	Number	%
Yes	138	46
No	162	54
TOTAL	300	100

The %46 percentage of the drivers have made a traffic accident and %54 did not make any. The participants who have not made an accident are more than the ones who have made. However, the difference between them is not much. The distribution can be regarded as normal.

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Table 2. How many accidents have you caused?

Number of Accidents	Number	%
1	62	44
2	33	24
3	26	19
4	5	4
5	10	7
6	1	1
9	1	1
TOTAL	138	100

The *frequency of the accidents* is also an important variable like causing an accident. Because, drivers can both make important accidents or unimportant traffic accidents. The high frequency of the accidents indicates the importance of the problem. Within this framework, if we look at Table 2, the frequency of the accidents is mostly collected at the options 1 (%44), 2(%24) and 3(%19) accidents. It draws attention that with the increase of the number of accidents, the percentage of causing an accident is decreasing.

Table 3. Causing traffic accidents according to gender

Causing traffic accidents		Gender		TOTAL
		Male	Female	
Yes	Number	125	13	138
	%	51	25	46
No	Number	122	40	162
	%	49	75	54
TOTAL	Number	247	53	300
	%	100	100	100

$x^2=11.94$ $p<0.05$

In the studies about the traffic accidents (Gregersen and Berg, 1994: Garder, 1989) a great emphasis is given to gender. According to researches, females make fewer accidents than males. A similar result is found in this research. As seen in the table 3, while the percentage of males making traffic accidents is %51, the percentage is %25 for females. Driven from the table, the state of making accidents varies according to gender. There is a relation between the variables.

The case that women make less accidents then men can be evaluated in different perspectives. First of all, the percentage of female drivers is lower than the male drivers. In that case the females go less into traffic and thus the possibility of making accidents decrease. It can also be claimed that the fastidious character of women and their respect to the traffic rules decrease the percentage of traffic accidents. In this research, with regard to respect to the traffic rules, "obeying the traffic rules where there is no traffic policeman" attitude is higher in women (%80) than men (%53). This result shows that women respect the traffic rules more then men.

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Table 4. Causing traffic accidents according to age

Causing traffic accidents		Age Groups								TOTAL
		20-25	26-30	31-35	36-40	41-45	46-50	51-55	56+	
Yes	Number	31	26	30	17	17	8	7	2	138
	%	47	46	43	45	49	40	70	50	46
No	Number	35	31	40	21	18	12	3	2	162
	%	53	54	57	55	51	60	30	50	54
Total	Number	66	57	70	38	35	20	10	4	300
	%	100	100	100	100	100	100	100	100	100

$x^2=3.05$ $p>0.05$

Age factor is an effective variable on traffic accidents. In the traffic studies how the age of drivers and pedestrians affect their behavior in traffic? According to Hilakavi and others (1989: 418) young drivers form a serious risk group. The young adults between the ages of 15-24 are one third responsible for the mortal traffic accidents among the other age groups. Gregersen and Berg (1994: 297-303) also stated that the young drivers are within the high risk group for traffic accidents. Blomqvist (1994: 107-109) who also studies age factor claims that driving is a complex action affected by the age of the driver.

Table 4 shows the relation between the age and traffic accidents. According to the statistical analysis, there is no significant diversification between the traffic accidents and age. Driven from the table the highest percentage of the traffic accident rates are within 51-55 (%70), 56 and above (%50), 41-45 (%49) and 20-25 (%47) age ranges. According to the table, it can not be said that when the age increases the traffic accidents decrease; there is no important difference among the young, adult, and middle age drivers.

Table 5. Causing traffic accidents according to education level

Causing traffic accidents		Education Level			TOTAL
		Low	Medium	High	
Yes	Number	53	15	70	138
	%	67	54	36	46
No	Number	26	13	123	162
	%	33	46	64	54
TOTAL	Number	79	28	193	300
	%	100	100	100	100

$x^2=22.146$ $P<0.05$

Driven from Table 5 the traffic accidents also differ according to education levels. The chi square value obtained by the statistical analysis states that there is a relationship between the variables. As it can be understood from the table, when the education level of the drivers increase the traffic accidents decrease. According to this distribution, it can be said that there is a relation between the education level of the driver and the traffic accidents. This result indicating the relation between the education level and the traffic accidents shows the importance of the education on traffic accidents. Asogwa (1992: 152) claims that education is

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an effective factor in preventing traffic accidents. Guner, (1954: 66) saying that human factor is a determining factor in traffic and traffic accidents, claims that in preventing the accidents the education should be given continuously in different dimensions. According to Guner, it can be benefited from the media on this issue.

Table 6. Economic problem level and causing traffic accidents

Causing traffic accidents		Economic problem level				TOTAL
		Very hard	Hard	Normal	Other	
Yes	Number	8	10	65	1	84
	%	47	47	67	50	60
No	Number	9	14	32	1	56
	%	53	58	33	50	40
TOTAL	Number	17	24	97	2	140
	%	100	100	100	100	100

$x^2 = 6.88$ $P > 0.05$

In the research, no statistical relation is found between traffic accidents and level of economic problem. The state of causing traffic accidents changes in a specific way according to the level of economic problems; very heavy, heavy or normal. As it can also be understood from the distribution, there are pro data differences among the categories. Although generally there is an effect of the economic factors on traffic accidents (Jocks, 1984), there are no researches in the literature studying the relationship between the economic problems of drivers and traffic accidents. Mostly there is a relation observed between traffic accidents and the economic factors, such as industrial production, unemployment rate, car production etc. In this context, there has to be researches with more wide samplings examining the effects of variables such as income level, economic problems and unemployment on traffic accidents.

Table 7. Causing traffic accidents according to whether the person's profession is related to driving

Causing traffic accidents		Whether the profession is related to driving		TOTAL
		Yes	No	
Yes	Number	59	79	138
	%	71	36	46
No	Number	24	138	162
	%	29	64	54
TOTAL	Number	83	217	300
	%	100	100	100

$x^2 = 29.066$ $P < 0.05$

The majority of the participants (%72) do not drive as an occupation. The percentage of the drivers doing this as an occupation is %28. Driving as an occupation requires driving for longer periods. Driving for long hours causes fatigue and as a result of this it results in inattention. With this kind of an assumption, a relation is sought between the traffic accidents and the drivers who drive as an occupation. According to the data obtained (Table 7), there exists a

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statistical relation between making a traffic accident and driving as an occupation. Driven from Table 7, the percentage of making traffic accidents of drivers who drive as an occupation (%71) is higher than the others who do not drive as an occupation (%36). A similar situation is also valid for not causing traffic accidents. Looking at the Table 7 we can conclude that driving as an occupation is increasing the traffic accidents.

Table 8. Causing traffic accidents according to whether the person's is fatalist

Causing traffic accidents		Whether the person's is fatalist			TOTAL
		Totally fatalist	Not fatalist	Unsure	
Yes	Number	94	15	29	138
	%	60	43	27	46
No	Number	64	20	78	162
	%	40	57	73	54
TOTAL	Number	158	35	107	300
	%	100	100	100	100

$x^2=27.103$ $P<0.05$

Having fatalistic attitude is defined as having a belief that everything is determined by God in advance and human beings can not do anything to change this. Fate is one of the basic beliefs in Islam. In Turkey fatalism is very common in society (Kalaycioglu and others, 1991). Fatalism is cultural factor which is claimed to be effective on problems including traffic accidents. In this context, a relation is sought between the drivers having a fatalistic attitude and traffic accidents in this study.

Looking at Table 8 we can say that drivers' engagement in traffic accidents differs according to their fatalistic attitude. The chi square analysis which is used to test the relationship between the variables shows that the variables are interrelated. In the table, it has been observed that the drivers who believe that "everything is fate" make more accidents (%60). The percentage of making accidents by those who believe that "there is no fate" is %43. The most significant percentage in the table is of the indecisive drivers. The percentage of the traffic accidents made by indecisive drivers is low (%27).

Table 9. Causing traffic accidents according to how the traffic training has been acquired

Causing traffic accidents		How the traffic training has been acquired				TOTAL
		Through driving courses	Master-apprentice relationship	From people around	Other	
Yes	Number	47	43	40	8	138
	%	36	67	49	33	46
No	Number	83	21	42	16	162
	%	64	33	51	67	54
TOTAL	Number	130	64	82	24	300
	%	100	100	100	100	100

$x^2=18.445$ $P<0.05$

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Drivers in Turkey get the traffic education in different ways. Since 1990, the driving courses are legally authorized for giving traffic education and driving licenses. However, before the driving courses got common, the education was with the traditional methods; with master- apprentice relationship, close friends or family members (father, brother, sister etc…) and in military service. These traffic education methods are decreasing with the driving courses. A relationship is set between the methods of driving lessons in Turkey and traffic accidents. The basic claim on this subject can be regarded as "the education through driving courses is more qualified".

In this research, in order to examine this hypothesis the relationship between the method of learning driving and the traffic accidents is studied. Per the data obtained (Table 9), causing traffic accidents differ according to the methods of driving lessons. Looking at Table 9, the drivers who got their traffic education from driving courses make fewer accidents than the drivers who learned driving through master- apprentice relationship or from friends and family. The percentage of not making accidents of the drivers who attended driving courses is high (%64).

In the table, it is observed that, the percentage of causing traffic accidents of the drivers who learned driving from "other" sources (during military service, from abroad etc.) is low (%33). When a comparison is made between other methods of driving education, it has been concluded that the drivers who learned driving from driving courses make fewer accidents than the others.

Table 10. The reasons of the accidents according to the drivers

The reasons of the accidents	Number	%
Not obeying the traffic rules	101	15
Not knowing the traffic rules	79	12
Insufficency of the traffic education	200	30
Inexperience	86	13
Insufficiency of the traffic laws	69	10
Driving with alcohol	88	13
In sufficiency of motorways	28	4
Other reasons	24	3
TOTAL	675	100

The drivers form an important component of the traffic system. At traffic, the driver is within the human factor concept. The drivers are seen as the actors who live, observe and evaluate various problems in traffic. It is necessary to learn their point of views to explain and understand traffic accidents. In this study, it is aimed to learn the opinions of the drivers about the reasons of traffic accidents. According to the data obtained from this research (Table 10), the drivers connect the reasons of traffic accidents to various factors. The low education level (%30), not obeying the traffic rules (%15), insufficiency of traffic controls (%13), the drivers' ignorance of the traffic rules (%12), driving with alcohol (%13) and insufficiency of traffic laws (%10) are coming at the first place of the list. The insufficiency of the motorways owns a low percentage (%4).

The drivers' opinions about the reasons of the traffic accidents are very meaningful and reflect the reality. The drivers relate the traffic accidents with more than one factor. The mentioned

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reasons of traffic accidents are parallel to the results obtained from the researches on the subject. (Asogwa, 1992; Erdem, 1994; Geray, 1981).

The Traffic System and its Operation According to the Drivers

The traffic system can be defined as an organized totality composed of the motorway, motor vehicle and human element. These elements which constitute the traffic system can also be conceptualized as sub-systems. The sub-system functions within the system are customized elements complex. The aim of the traffic system is by organizing the motor vehicles on motorways, the movement of the people and their behavior, providing safe, comfortable and organized access.

In this research, while analyzing the traffic system, no emphasis is given to road and vehicle element but the relationship between the human sub-system and the elements are examined. Human sub-system is composed of the driver, pedestrian, passenger, traffic police, the foundations giving driving lessons and the employers in those foundations. Besides, the formal rules (norms) and informal rules which organize the movements and behaviors of these elements are studied. In this context, while examining the traffic system, the research is intensified on traffic education which affects the system (traffic rules, knowledge and talent of driving), the state of obeying the traffic rules, the informal norms in traffic, the control of the traffic and the police, the way of solving the disputes of pedestrians and traffic.

The Traffic Education According to the Drivers

Traffic Education can be defined as the period of gaining the knowledge and talent of the traffic rules, operation of the traffic and the usage of motor vehicles. Traffic education operates important functions with regard to the operation of the system. In various studies, it has been proved that the traffic education affects the problems in traffic including the traffic accidents (Asogwa, 1992; Bener and Jadaan, 1992).

Table 11. The level of traffic education that has been acquired according to the drivers

Answers	Number	%
Low	43	14
Medium	105	35
High	152	51
TOTAL	300	100

In this research, traffic education is studied initially with regard to the drivers. According to the data obtained from the study, the drivers mostly acquired their training from driving courses. The percentage of this group is %44. The percentage of the drivers who learned driving through master-apprentice relationship is %21. The drivers, within the framework of driving education, who learned driving by informal methods, are at the percentage of %28. Looking at these percentages we can conclude that the driving courses are dominant in getting traffic education.

Another important variable studied in traffic education is the level of the traffic education and the quality. %51 of the participant drivers evaluated the traffic education they acquired as high. The percentage of the others evaluating the education as low is %14. The percentage of the answers indicating "normal" is %35.

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In order to test the traffic knowledge of the drivers, some questions related to the traffic rules and the operation of the traffic are asked to the drivers. According to the answers of the drivers it has been concluded that the knowledge level of the drivers is low. The percentage of the ones who got low points in the test is %46, middle points is %36 and high points is %18. These percentages show that the driving education level is actually low. We can say that the drivers have given subjective answers to the questions asked in Table 11.

Table 12. How successful are the Driving Courses in Traffic Education?

Answers	Number	%
Very successful	7	2
Successful	98	33
Unsuccessful	141	47
Very Unsuccessful	84	18
TOTAL	**300**	**100**

Table 12 shows the attitude of the drivers towards the success of the driving courses. According to the table, the drivers do not see the driving courses as successful. The total number of the drivers who think that the driving courses are unsuccessful (%47) and very unsuccessful (%18) is %65. The participants find the courses unsuccessful for working for commercial benefits (%47), focusing mostly on theoretic knowledge rather than practical application (%26) and the course period being short (%24).

The Behavior of the Drivers in Obeying the Traffic Rules

Table 13. Do you obey the traffic rules?

Answers	Number	%
Yes	183	61
No	100	33
No answer	17	6
TOTAL	300	100

The operation of the traffic system requires the drivers to obey the rules. As we know, the human behavior in traffic is organized according to previously set rules. In this research, the drivers' obedience to the traffic rules is also examined. According to the data obtained from this study, the majority of the drivers claim that they obey the traffic rules (%61). The percentage of the ones accepting that they do not obey the rules is %33. This percentage is very meaningful in reality. Because, the traffic is a structure where the formal rules are determining. It is known that the violation of the traffic rules lead to traffic accidents and negatively affects the traffic. The participant drivers are asked: "Do you obey the rules where there are no traffic policemen?" which is based on an assumption. The majority of the drivers answered as "I do" (%58). The percentage of the drivers who say that they sometimes obey is %16. The percentage of the drivers who say that they do not obey is low (%6). The percentage of the negative answers is %20. These percentages show that the drivers obey the rules more with the assumption that there is no policeman. However, in a similar situation the drivers claim that the other drivers mostly do not obey the traffic rules (%82). This result shows a controversial situation. It could

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be assumed that the drivers give subjective answers about themselves and the others on this issue.

Table 14. The Traffic Accidents According to the Obedience to the Traffic Rules in the Absence of Policeman

Obeying the traffic rules		Causing accidents		TOTAL
		Yes	**No**	
I do	Number	55	119	174
	%	31	69	58
I sometimes do	Number	28	20	48
	%	59	41	16
I do not	Number	16	1	17
	%	94	6	5
I sometimes do not	Number	38	21	59
	%	64	36	20
Others	Number	1	1	2
	%	50	50	1
TOTAL	Number	138	162	300
	%	100	100	100

$x^2 = 41.351$ $\qquad\qquad\qquad\qquad\qquad\qquad$ $p < 0.05$

Per the data obtained from the study, the obedience to the traffic rules in the absence of policeman differs according to gender. The obedience of the traffic rules of females (%79) is higher than males (%53). Moreover, there exists a relationship between the traffic accidents and the obedience to the traffic rules in the absence of policeman. Table 14 shows that the percentage of traffic accidents in drivers not obeying the traffic rules in the absence of police (%94) is much higher then the drivers who obey (%55).

Informal Rules According to the Drivers

Table 15. Informal Rules According to the Drivers

Informal Rules	**Number**	**%**
Larger vehicles have the access advantage	130	18
Male drivers are superior to females; females should give way to male drivers and should not pass them	82	12
Under some circumstances red light running is possible	162	22
If the traffic policeman is familiar, he might not ask for motoring fine	145	20
Official vehicles cannot be penalized	144	20
Taxi drivers are privileged than the private car drivers	60	8
TOTAL	723	100

Table 15 shows that in Turkey's traffic system there are informal rules. The informal rules in the table above are formed based on Cuceloglu's Studies (1985).

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The participant drivers claim that generally together with the formal rules, informal rules also apply in traffic. Informal rules differ according to the type of the vehicle, quality of the vehicle, gender of the driver, traffic policeman and the type of the traffic rule. The existence of informal rules in traffic, while indicating that the social structure is reflected in traffic, also shows that there is a control problem in traffic and an insufficiency of the traffic education.

Control in Traffic According to the Drivers

The concept of control in traffic is one of the important factors affecting the operation of traffic. Similar to the other systems, insufficiency of control increases the rule violations in the traffic system as well. The insufficiency of control in traffic has also an effect on traffic accidents.

In this research, it is aimed to understand the observations and the thoughts of the drivers about the control in traffic. According to the research data, the majority of the drivers claim that the control in traffic is not sufficient (%67). The percentage of the ones believing that "there is an effective control" is very low (%4). The percentage of the drivers who claim that the control is "normal" is %26.

The drivers, who participated in this research, hold the traffic policemen responsible for the control in traffic and criticize their behavior and attitude related to control in traffic. The majority of the drivers state that while controlling the traffic, the policemen do not treat equally to the drivers (%87). The percentage of the drivers who believe that the policemen treat equally is very low (%10). Drivers, claiming that the policemen do not treat the drivers equally, gave some examples. Some of the examples given are:
- The policemen treat differently to the cars with 06 Plate (Ankara city, capital of Turley) and high model (expensive, luxurious) cars; the laws are not applied to them.
- There is almost no control in local traffic for official vehicles.
- Traffic control is mostly applied to the drivers of minibuses (*dolmus*, one type of public transportation vehicle).

Table 16. Is there bribery in the traffic?

Answers	Number	%
Yes	247	82
No	23	8
No answer	30	10
TOTAL	300	100

One of the most important problems which are related to the traffic control in Turkey and mostly with the traffic police is the concept of "bribery in traffic". Generally bribery is an important social problem in Turkey. In this context, the existence of bribery in traffic is meaningful. According to the majority of the participant drivers (%82) there is bribery in traffic (table 16). In drivers' opinion bribery exists in frequent (%58) and very frequent (%24) degrees. The percentage of the drivers claiming that there is a low level of bribery is low (%6).

In the research, the drivers are asked who proposes bribe. According to the drivers, mostly the proposal of bribe comes from both the traffic policeman and the driver (%68). The percentage

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of the answers claiming that the proposal comes from the traffic police is %7 while the percentage of the answers claiming it is from the driver is %25.

One of the other problems encountered in Turkey is related to the relationship between the driver and the traffic policeman. Generally this relationship in traffic is problematic in Turkey. The misunderstandings between the parties and the problems faced in traffic are effective on this issue. According to the date in this research the majority of the drivers do not trust the traffic policemen (%58). The drivers think that the traffic policemen do not behave in respect of the laws. The percentage of the drivers who trust the policemen is %42.

The drivers explain their mistrust giving such justifications: the traffic policemen do not treat equally to the drivers (preferential treatment, %52); they do not do their job in respect of the laws (%33) and they get bribes (%13). All these mentioned reasons mean that the policemen are violating the laws.

Disagreement between the Drivers in Traffic (conflict, problem) and Means to Solve These Disagreements

There exist some disagreements between the drivers in traffic. These disagreements consist of: various traffic accidents with physical damage, parking problems, obedience to the traffic rules and harassments by car (mostly encountered by females).

The approaches aiming to solve the above mentioned problems are within the factors effective on traffic. With this regard, the participant drivers are asked about "the most effective method in solving the disagreements". According to the data observed, the majority of the drivers stated that "the most effective method is communication" (%85). The percentage of the drivers who preferred use of force is low (%8). Generally, the drivers describe solving problems with communication as an effective and problem solving method (%76).

Although the participant drivers mostly adopt the communication method, they also claim that the aggressiveness with the use of force is also common in solving the disagreements in traffic. According to the drivers force is used frequently (%63) and very frequently (%16). Being aggressive in traffic also differs according to the gender of the drivers. Aggressive behavior is more common in male drivers (%23) then female drivers (%8). Drivers relate the aggressive behavior to some factors such as: to other driver's negative behavior (%30), to physiologic reasons (%10), to unemployment (%8), to ignorance (%7), to the thought of being right…etc. According to the drivers, some behaviors such as being hit by another driver, his way getting cut by another vehicle, not giving way are behaviors that cannot be forgiven (%41), behaviors which lead to fights (523) and regular behaviors in traffic (%33).

Per all these information and explanations we can conclude that aggressiveness exists in solving the disagreements in traffic.

The Traffic System and Its Operation According To the Policemen

The traffic police is an important factor in putting the traffic operation in order. The traffic policemen are effective on applying the traffic rules, preventing violations of rules, solving the disagreements between the drivers. In this study examining the operation of this system and

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traffic accidents, traffic policemen who are important factors of the traffic system have also participated. To 57 policemen working in Konya, a survey composing of 20 questions is applied.

The majority of the participant policemen are males (%96). The percentage of policewomen is %4. In Turkey, including the traffic policemen, being a policeman is an occupation undertaken mostly by males. Within this context, these percentages about the gender of the policemen reflect the general situation in Turkey. According to the data obtained from this research generally the policemen have middle education level. The percentage of the policemen graduated from high school or equivalent is %64. Among the policemen the percentage of university graduates (%4) is low. The participant policemen see their education level as sufficient (%70) and very sufficient (%16). The percentage of the traffic policemen evaluating their education level as not sufficient is very low (%4).

The traffic policemen participated in the research was asked about the drivers. According to the traffic policemen, the level of traffic education of the drivers is insufficient (%100). The traffic policemen indicate that the education level of the drivers is particularly effective. According to the traffic policemen, the higher the education level of the drivers, the more they obey traffic rules (%53). The percentage of obeying the traffic rules is %27 among the drivers whose education level is low.

According to the traffic policemen, the drivers in Konya generally do not obey the traffic rules (%68). The drivers who do not obey the rules usually apologize to the police and make excuses for their behaviors (%63). Additionally, there are some drivers (%20) who bargain for the amount of the fine.

Another important observation of the traffic policemen is about the solutions to the problems related to traffic. According to the traffic policemen, majority of the drivers resort to physical force and act in an aggressive way for the settlement of the disputes (%77). This observation of policemen is in line with the observation of the drivers.

On the contrary of what the drivers believe, the majority of traffic policemen that participated in the research (%79) claim that they treat the drivers in a just way. The percentage of the traffic policemen who claim that they do not treat the drivers in a just way is low (%19).

Table 17. Are the driving courses successful in training the drivers?

Answers	Number	%
Unsuccessful	42	74
Very Unsuccessful	15	26
TOTAL	57	100

Table 17 indicates that the traffic policemen do not believe that the driving courses are successful in training the drivers. The percentage of the ones who believe the driving courses are unsuccessful is %74 and the percentage of the ones who believe the driving courses are very unsuccessful is %26. The opinions of policemen about the success of the driving courses are in line with that of the drivers. The majority of the drivers (%65) believe that the driving courses are unsuccessful. According to this finding, the driving courses should be investigated in a multi-dimensional way.

The traffic policemen were asked about the reasons of the traffic accidents in the research. The traffic policemen relate the traffic accidents to more than one factor. According to the traffic policemen, low level of education (%31), not obeying the traffic rules (%10), inadequacy of the highways, driving under the influence of alcohol (%8), high-speeding (%6), inadequacy of the traffic fines (%4) are the main reasons of the traffic accidents. The traffic policemen believe that especially the low amount of the fines paid for the traffic crimes aggravates the traffic accidents (%81). In this context, the fines paid for the traffic crimes are not adequate (%96). The opinions of the traffic policemen about the fines paid for the traffic crimes are in line with that of the drivers. The percentage of the drivers who believe the fines paid for the traffic crimes are inadequate is %84.

The existence of informal traffic rules is also mentioned by the traffic policemen. According to the traffic policemen, the common informal traffic rules are as follows: the official vehicles cannot be penalized (%24), under some circumstances red light running is possible (%24) and larger vehicles have the access advantage (%17). It is very meaningful that the existence of informal traffic rules is observed also by the traffic policemen. Existence of informal traffic rules within a structure that functions with formal rules can affect many problems, especially the traffic accidents. Conducting a scientific research on this issue can be suggested.

The opinions of the traffic policemen about the pedestrians are attempted to be discovered as well in the traffic police research. The traffic policemen participated in the research indicates that the pedestrians do not obey the traffic rules. The percentage of the traffic policemen who indicate that pedestrians usually do not obey the traffic rules is %53, the percentage of the traffic policemen who indicate that pedestrians obey the traffic rules when a traffic police is available is %36. These percentages demonstrate that the pedestrians usually do not comply with the traffic rules. The opinions of the traffic policemen about the behaviors of the pedestrians are in line with that of the drivers.

PEDESTRIANS IN TRAFFIC

With their behaviors, the pedestrians are among the elements that affect the traffic. It is known that a lot of traffic accidents occur because the pedestrians do not comply with the traffic rules. There is a series of researches (Garder, 1989) on the pedestrians and the traffic accidents. Majority of these researches is related to the behaviors of the pedestrians in traffic.

The pedestrians are also a part of this research. 300 pedestrians were given a questionnaire that consisted of 14 questions in the research. Of the pedestrians who answered the questions, % 84 is male and % 16 is female. The pedestrians that form the sample mainly belong to the young age group. The majority of the pedestrians were born in the cities (%52). The pedestrians that participated in the research have mainly medium or high level of education (%39).

According to the data obtained in the research, the level of obeying the traffic rules among the pedestrians is low (%40). The percentage of the ones who say that they do not obey the rules when there is no traffic jam is %46. The percentage of the ones who say that they obey the rules when a traffic policeman is available is %14. These percentages demonstrate that the attitude

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towards obeying the traffic rules among the pedestrians is low. The data obtained is in line with the observations of the traffic policemen and the drivers.

According to the data obtained in the research, although the attitude towards obeying the traffic rules among the pedestrians is low, it is discovered that the level of knowledge of the traffic rules among the pedestrians is generally high (%58).

The observations of the pedestrians about the drivers and the traffic policemen are attempted to be discovered. The observations of the pedestrians about the drivers are mainly negative. The %22 of the pedestrians that participated in the research indicates that the level of obeying the traffic rules among the drivers is low. The percentage of the ones who say that drivers obey the rules when a traffic police is available is %28. Additionally, the pedestrians do not believe that the drivers who disobey the traffic rules are penalized adequately(%76).

The pedestrians generally have negative attitudes towards the traffic policemen as well. The percentage of the pedestrians who say that the traffic policemen are unsuccessful in regulating the traffic is %59. The pedestrians' attitudes towards the driving courses are negative too. The %71 of the pedestrians that participated in the research believes that the driving courses are unsuccessful in training the drivers.

DRIVING COURSES

The driving courses in Turkey are important institutions that offer traffic training and deliver the driving license. The impact of the driving courses on traffic has especially increased since 1990. The driving courses are within the Ministry of National Education and carry on their studies as a formal education institution. The launching and the management of the driving courses are conducted by the private sector upon the permission of the Ministry of National Education. The driving courses can be defined as the traffic training institutions that are realized within the relationship between the public and private sectors.

There are driving course manager and driving teachers within the driving courses. The driving courses simultaneously work in coordination with the traffic office and province health institutions.

The driving courses have been investigated in this research since they are an important part of the traffic system in Turkey. More than one type of data collection techniques are employed in the research in order to understand the way the driving courses operate and their problems. Within this framework, the teachers of the driving courses were given a questionnaire that consisted of 13 questions. As regards the driving course managers, the interview was realized through the *structured interview technique*. Additionally, the researcher has conducted a participant observation in a driving course in Konya for three and a half months.

The basic finding as a result of research conducted on the driving courses is that training through the driving courses is a modern and good system but the implementation is inadequate with respect to many aspects. For example, there are a lot negative implementations such as the participation of the candidates in the courses, examinations, the conduct of the courses in line with the legislation, not giving necessary importance to the driving practice, the inadequacy of

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the inspection, the negative impact of commercial logic on the management of the courses. These implementations harm the operation of the system and avoid the driving courses to realize their functions (the basic function is to train qualified drivers).

As a result of the interviews conducted with the driving course managers within the driving courses, it is discovered that the education level of the managers is mainly "higher education". The managers of the driving courses say that the courses primarily have a commercial aspect but the management of the courses is not based upon commercial logic. According to the managers of the driving courses, the courses are useful when the education aspect of the traffic is taken into consideration. According to the managers, the criticisms made against the driving courses are merely allegations. However, the driving courses also have problems. The major problem is that the state intervenes in the courses as if they are public institutions. According to the managers of the courses, there is a competition among the courses which is mainly an issue of price. The managers of the courses also believe that "lack of education" is the major reason of the traffic accidents in Turkey and "education" is the major preventative measure that can be taken against the accidents.

According to the questionnaires conducted on the teachers of the driving courses, it is discovered that the %80 of the teachers is university graduates and provides driving training not as a profession. The %80 of the teachers acquired the training for their jobs (course teaching) from the course that was supplied by the Ministry of National Education. The %75 of the teachers indicates that they face problems at workplace and these problems are mainly about participation to the courses (%67) and course materials (%33). According to the driving course teachers, the driving courses have problems. The major problems are the course materials (%42) and not implementing the course regulation (%33). The driving course teachers generally accept the opinion that the courses function with a commercial logic (%65). This finding contradicts with the opinions of the managers.

The driving course teachers generally consider the training that is supplied in the courses as adequate in terms of duration, examinations and course materials but as inadequate in terms of implementation.

The driving course teachers explain the basic reasons of the accidents that occur in Turkey in terms of "lack of education" (%29), "lack of inspection" (%14), and "not obeying the traffic rules" (%14). This opinion of the driving course teachers are line with that of the drivers, managers and traffic policemen. The driving course teachers believe that "education of the drivers" is the major preventative measure that can be taken against the accidents (%38). Additionally, according to the driving course teachers, preparation of a contemporary legislation (%22) is among the preventative measures that can be taken against the accidents.

CONCLUSION AND EVALUATION

This study that investigates the socio-economic, cultural and demographic reasons of the traffic accidents by resolving the traffic system primarily demonstrated us the socio-cultural dimension of the traffic. In this context, we can say that technical and physical approaches are unsatisfactory and incomplete in explaining many problems related to the traffic, including the traffic accidents.

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According to the findings of the research, drivers, traffic policemen and pedestrians have a direct impact on the operation of the traffic. On the other hand, teachers and managers of the driving courses have an indirect impact on the traffic.

The drivers have a major role in the traffic. According to the findings of the research, the socio-economic, cultural and demographic characters of the drivers have an impact on the traffic accidents. Especially male drivers who have a low education level and are fatalist have a high percentage of causing traffic accidents. No relationship between the age of the driver, level of economic problems and causing traffic accidents was found. Relationship between how the traffic training has been acquired was found. Accordingly, the drivers who have acquired the traffic training through traditional ways cause more traffic accidents than the ones who have acquired the traffic training through the driving courses. This finding shows that the driving courses are more successful in traffic training than the traditional ways. However, the driving courses should be improved and their problems should be overcome. The criticisms of the driving courses by the drivers, traffic policemen and pedestrians should be taken into consideration.

Another finding of the research is that the drivers, traffic policemen and the teachers of the driving courses should adopt a multidimensional way of explanation for the reasons of the traffic accidents. According to the findings of the research, traffic policemen and driving course teachers explain the traffic accidents in terms of factors such as low education level of the drivers, not obeying the traffic rules, inadequacy of the traffic legislation, inadequacy of the traffic inspection, driving under the influence of alcohol, unemployment. The impact of these factors on the traffic accidents is known. These findings demonstrate that the traffic accidents are mainly explained in terms of social and cultural factors.

The research showed that there are important problems related to the operation of the traffic. These problems are low level of obeying the traffic rules among the drivers and the pedestrians, the problems related to the control of the traffic, inadequacy of especially the traffic policemen in inspecting in accordance with the laws, increase in bribery in the traffic and use of aggressive method that involves physical force and assault in resolving the conflicts among the drivers.

The above mentioned problems can be evaluated as an indicator of malfunctioning of the traffic system. As it is a well-know fact, the traffic system that malfunctions and suffers from dysfunctioning results in traffic accidents.

Another important finding related to the operation of the traffic is that informal traffic rules exist in the traffic. According to the drivers and traffic policemen informal traffic rules exist in Konya. Existence of informal traffic rules in the traffic indicates the inadequacy of the level of education, traffic inspection and the traffic rules. In this context, the low level of drivers' knowledge on the traffic and existence of widespread bribery in the traffic are meaningful. Additionally, negative attitudes of both the drivers and the traffic policemen towards the level of education of the drivers and considering the driving courses as unsuccessful can be evaluated within this framework.

Especially, existence of the bribery in the traffic is significantly meaningful. The fact that bribery is an important social problem in Turkey is well-known. Existence of bribery in the

traffic as well is an interesting example for demonstrating the dimensions of bribery. This finding simultaneously demonstrates that any problem of the society can be reflected in other fields.

Another important finding of the research is the problem of integration within the traffic system. Problem of integration is mainly related to the attitudes and evaluations between the actors that are included within the category of human factor in the traffic. Drivers, pedestrians, traffic policemen, teachers of the driving courses and managers that are the important elements of the traffic have an approach that lays blame on each other. For example, traffic policemen have negative attitudes towards the pedestrians or vice versa. Additionally, behaviors of the drivers, pedestrians and traffic policemen that are not in line with the traffic rules have negative impact on the operation of the traffic. The problem of integration is available within the framework of the functions of the elements in the system.

Within the context of Konya research, with respect to all these findings we can conclude as follows: There are problems concerning the operation of the traffic in Turkey. Highway transportation has become the basic transportation model as a result of the rapid growth, industrialization and urbanization in Turkey. Political choices also have an impact on the highway transportation's becoming the basic transportation model. In this context, problems related to the traffic, especially the traffic accidents have become an important problem that is pending for a solution in the agenda of the society. This problem will continue its existence in the future. In order to solve this problem, a series of studies that involves variety of issues such as education and law concerning the human factor in the traffic. Additionally, the share of highway transportation within the transportation system of Turkey should be decreased and especially public transportation models for local transportation should be intensified.

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