Investigation of Psychological-Social Factors Predicative of Traffic Accidents in Shiraz City

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ABSTRACT

This study was conducted to investigate of psychosocial factors predict traffic accidents in Shiraz city .In this study, 1,853 regular and professional drivers were selected randomly. The tools of research were five questionnaires, demographic characteristics, Manchester Driver Behavior (MDB), Personality Characteristics (NEO), Attitudes to Driving and Social Health. Data analysis showed that the predictive role of attitude to driving is stronger than other variables. Personality traits as intermediary variables can indirectly effect on driving behavior. The findings also showed that there is negative significant correlation between personality characteristics (neuroticism) and driving behavior .The social health of all aspects of driving behavior has a significant negative relationship and this variable explains 23% variance in driving behavior.
Key words: psychological-social factors, traffic accidents, personality characteristics

INTRODUCTION

Traffic accidents are one of the most common incidents threatening the people's lives and endanger millions of people's lives every year. Injuries caused by traffic accidents are one of the major challenges in public health; fifty million people are seriously injured and one and a half million people lose their lives. In the recent years, mortality and injuries caused by these incidents have decreased in the developed countries, while it is still increasing in the low-income countries or the countries by average wage. The tragedy of traffic accidents is far worse in Iran compared to other regions of the world. In Iran, 14.9 percent of deaths and 26.9 percent of the years of life lost are due to traffic accidents and in this list the death caused by traffic accidents (83 in each 100000) has the highest rank. (1). Azereuse shows that in Iran, the rate of traffic accidents is increasing, in a way that it has had 10% growth during 1999-2004 and the mortality rate due to traffic accidents has been 15% more than its rate in the developed countries (2).

From the perspective of the World Health Organization (WHO) the cause of road traffic collisions has been mainly behavioral, and it could be largely prevented by modification of personal and social behaviors (3). According to the researchers conducted so far, four main factors are effective in making traffic accidents: human, road, vehicle and environment factors. Analysis of accidents occurring in the roads of Iran shows that the most important factor in making traffic accidents is human factor, and the performance of drivers in 90 to 95% of car accidents is the main or contributing factor. Car driving is considered to be a set of complex dynamic actions (behaviors) (4).

The quality of motives, feelings, attitudes, beliefs and value system and a set of individual and social behaviors could be considered as the major factor in traffic phenomenon. In this regard, the personality and psychological characteristics of drivers, conditions governing the cognitive field and their emotional, behavioral and sensory- motor feelings could play the highest role in traffic and traffic accidents.

Older & Sparser, in discussing the causes of traffic accidents, believe that road accidents could be considered as the consequence of a common situation in which the driver, environment and vehicle participate in it. In another research conducted by Shinar, it has been found that in most accidents, the main reason is the

driver's behavior. Unsafe behaviors of the individuals come to double importance when it can threaten the other's life and health as much as the driver's life.

Certain elements of psychological factors cause the law-breaking behaviors including the personality traits such as impulsiveness, affectivity, extraversion, and control source, individual differences, social and attitudinal factors (5).

Parker (6) believes that three general realms are involved in the rate of accidents which are respectively: cognitive, personality and social realms. Considering the role of human factors in accidents, identifying its human factors (errors or violations) and establishing a clear relation between them, it is difficult to make a distinction between different types of traffic violations. The noteworthy point is that modification of human errors does not cover all the human factors which cause traffic accidents. It seems that two forms of error abnormalities and traffic violations have different psychological causes and modification methods. Analyses the road accidents in Iran and divides the human factors involved into four categories: A) general pattern of driving which includes error in function such as non-compliance to the maximum speed limit and not obeying the traffic signs and error in behavior such as driving when the driver is tired or incautious, B) sensory and perceptual errors such as: lack of attention or failure to observe proper distance from other vehicles, C) driving under the influence of external factors such as the side effects of drug abuse, alcohol or diseases D) lack of skills: lack of experience and misjudgment .With regard to the point that Iran has the first rank in traffic incidents and accidents, human fatalities and its related economical loss, the social-psychological components and their role in traffic incidents bears great importance. It is estimated that if the world society members do not care to the road safety and risky driving actions, these incidents would increase. Similarly, general issues on travel's safety, road standards, technical aspects of vehicle, etc…. have been considered by authorities as the factors involved in accidents, but it is not true for human factors. In advanced countries the first factor has been discussed and the human factors have become more important and their role in traffic accidents has been focused (7).

The human factors involved in traffic accidents have been classified in to four groups: general pattern of driving, sensory and perceptual errors, driving under the influence of external factors and lack of skill, it is too said that many of the vehicles accidents are the result of the poor performance or bad actions of the driver and not the technical defects in the vehicle (8).Driving car is a set of complex dynamic actions and behaviors and is a behavior controlling process (9).

Generally driving behavior is said to a set of behaviors which the driver selects as his pattern, such as driving speed, level of concentration whilst driving, keeping standard distance from other cars. The relation between driving behaviors and personality characteristics has been studied in so many researches. It can be estimated that the personality characteristics can lead people to certain behaviors which satisfy the psychological and social needs of the person. Studying the relation between the personality characteristics and the driving behaviors may represent the factors related to driving accidents (4).

With regard to the role of human factors and studying and processing the social factors, the people's attitude to the traffic laws is also a considerable point. For example the people's attitude to the seat belt law which is not obeyed in many of countries, can decrease fifty percent of the accidents fatalities (10).

Due to the fact that accident has been recognized the first most common cause of death under forty, it not only kills the people in the best performance and efficiency period of their lives, but also imposes financial and psychological costs on the people and society. This project tries to answer the research's question after investigating the social-psychological factors in order to decrease the driving accidents and their financial and physical damages. (The question is: which of the factors of personality characteristics, attitude toward driving and social health have stronger predicative power in driving behavior?).It also seeks to identify the factors involved in accidents and explain the predicative role of these factors, study the results and provide practical solutions and suggestions and take action to prevent the risky driving behaviors and increasing the physical-psychological – social health coefficient in a way that we can gain enough knowledge about the target risky group and provide better training for public (11).

Many researches haven been done on driving behavior, its psychological component and its role in maintaining rods safety (12). Driving behavior is said to a behavior which the driver chooses as a pattern for himself such as driving speed, level of concentration whilst driving and keeping standard distance from other vehicles. Driving behaviors with regard to their causes and consequences are categorized in to two groups of positive behaviors and negative behaviors (13). Positive behaviors are usually defined as helping, forgiveness and maintain social courtesy to other drivers. Negative behaviors include two groups of error and violations (8). Errors are defined as the incapability or incompetency in right judgment and implementation of a series of actions designed to achieve the desired result. Violations are those behaviors which endanger the driving safety such as non-compliance to the maximum speed limit, failure to observe proper distance from other vehicles. There is a logical agreement based on which the errors are divided into two distinguished types: the first type are the violations which happen due to the problems in attention, memory and information processing which includes slips and laps. Other type of errors is the situation in which the driver selects the wrong action and path to reach the destination without knowing that they are wrong. The violations are divided into two major categories: unintentional violations which cover the actions happening due to defects such as slow driving in a narrow two way highway and deliberate violations which are the behaviors done with the purpose of damaging and violating

law and considered to be destructive behaviors (5). In the category of errors two aspects of recognition and information process play more important roles and the individuals suffering from cognitive failure are more in danger of different traffic errors but in violation the contextual and social motivational factors are more important. It is said that there are many factors in defining driving behavior which can predict risky driving behaviors. Emotions have been considered as a factor in driving (14). Many of the attitudes related to risk are important personality characteristics and beliefs. In addition age, gender, competitiveness, freedom, conscientiousness, extremity, anger and conflict, wrath, mental disorders, defensive capabilities, comfort and free time, weak emotions, attitudes toward driving, risk perception in driving and value of risk are factors affecting driving behavior (15). Some of the factors are discussed below:

Most of the traffic accidents are directly related to human factors. Human factors could be divided into two categories: driving skills and type of driving or in other words driving behavior. Researches prove that the accidents have been one of the problems in which the social, economic and health systems are involved and has been presented as one of the major causes of death in recent years. Old and Spasir in the discussion on causes of incidents believe that road accidents are the consequence of a common situation in which the driver, environment and vehicle share. In another study done by Shinar, It was found that in most of the cases human behavior has been the main cause. Dario knows 80 to 90 percent of the incidents the result of human error. Bilang and Renyard also present the human errors as the cause of the 70 to 90 percent of accidents. Sadri (16) found that in 95 percent of the accidents human factor has been the major factor. Human factor includes errors, driving violations, attitudes, sleepiness, tiredness and alcohol and drug use. In the analysis of road accidents in Iran, human factors are divided into four categories.

1) General pattern of driving: error in function such as non-compliance to maximum speed limit and not obeying the traffic signs and error in driving behavior such as driving when the drive is tired or cautious, 2) sensory and perceptual errors such as: lack of attention or failure to observe proper distance from other vehicles C) driving under the influence of external factors such as the side effects of drug abuse, alcohol or diseases D) lack of skills: lack of experience and misjudgment.

Personality Factors:

One of the other factors which have been considered as the general factor in driving is personality. Any human being is a combination of three generic, cultural and personal features and has a unique totality which is considered by personality psychologists. Any human being possesses a series of traits which lead them to a regular, constant and special type of behavior. These characteristics make the personality of each person. The relation between the personality characteristics and driving behavior has been studied in several cases around the world and it seems that certain elements of personality cause the law-violating behaviors. Elements of personality cause the people to do certain behaviors and these behaviors satisfy the person's personal needs related to his cognitive, biological and social features. Investigation of relation between personality, risky driving and involvement in accidents shows the causes which are directly related to accidents (7)

Since the time Metilman and Hans said "human being drives the way he lives" quoted by [17], the driver's personality is considered as a major potential factor in driving behaviors. Aggression, anxiety, social deviations and personal differences in cognitive style and information processing are among the personality characteristics affecting driving behavior. Theoretically, personality qualities through affecting the people's perception and environment evaluation lead to the risky behaviors in driving (18).

Social factors:

Keyes believes that we can't assess the people's life quality and personal function without considering the social parameters. From his point of view, social health is the quality of individual's evaluation of his performance toward community. A person having social health believes the society to be a meaningful, apprehensible and potential collection for growth and prosperity and feels that he belongs to society; he is accepted by society and shares in its growth [19].

So, another behavioral factor involved in driving accidents is the lack of social health or in other words the non-conformity with social norms and rules. Lack of social awareness, not enjoying positive attitude toward rules and having wrong attitude toward driving are the indexes of lack of social health. For example when a person decides to drink due to the work pressure or depression and sit behind role at the same time and is not able to control the machine, an accident would happen. In the first look, it seems that being drunk is the main reason of accident while, the main reason is non-compliance with this social law which leads to accidents: "do not drink and drive" (20).

MATERIALS AND METHODS

This study is based on the descriptive-correlative method which is done as a field and cross-sectional research. Its statistical population includes all the people in Shiraz who drives (professional drivers, usual drivers, drivers with the record of accident). With regard to the volume of statistical population and based on stratified quota sampling method and by considering 95 percent reliability and 80 percent power of test, the volume of sample is determined to be 1853 people. The sample population is selected randomly and based on the possession of certain conditions such as: minimum age 18 years and maximum age 50 years, at least two years of

driving experience (driving license should not be the probationary one anymore), the minimum driving experience equal to 6.5 hours per week (According to initial studies done for 150 drivers in Shiraz, they had the minimum 3 and maximum 12 hours driving experience per week and the average driving hours of the 150 people was 6.5 hours per week), no history of physical- mental illness and the minimum education level needed is junior school completion.

Instrument

In this research 5 questionnaires have been applied as follows:

Demographic questionnaire: consisting the information about age, gender, level of education, marital status, job status, years of driving experience, accident reports in the last year (accident record, accident repetition, accident resulted to injury and death) etc.

Manchester deriver behavior questionnaire: this scale was adjusted and compiled by Rissen et al in psychology department of Manchester University in 1990. This scale has been implemented and validated in different countries such as England, Australia, China and Finland. This scale is based on the substantial idea that errors and violations have different psychological causes and they must be distinguished. This questionnaire includes fifty questions which were ranked in a zero to five likert scale. The questions are different in two aspects, one in the type of behavior and the other is the level of risk that the behavior brings for other drivers. This questionnaire includes the choices related to "unintentional risky errors" and "unintentional non-hazardous errors", "illegal acts of violence", "non-violent illegal acts" in driving. In driving behavior unintentional errors mean failure to perform pre-planned behaviors to reach the desired outcome. Deliberate or illegal errors are willful disobedience from the actions which are essential to be safe. Deliberate errors, with regard to the reason of driver's aggression, are classified into two groups: first are the deliberate non-violent errors in which the purpose of the driver is not aggression but disobedience form traffic rules and second are deliberate violent errors with the purpose of aggression.

Abnormal behaviors are categorized into four groups: laps, errors, deliberate violations and unintentional violations. Also there are three classifications in these behaviors: A) behaviors bearing no risk for other road drivers which just create a sense of worry for others (low chance of risk) B) behaviors that are likely to cause danger for others (average risk) C) behaviors which certainly create danger for others (high chance of risk). For every choice, six answers are scored from zero to five. The main score for each group is obtained by calculating the average score of choices in each part. In another research by Lajonen, Parker and Summala published in 2002, it was found that all the four groups of questions have good stability. In addition in a research done by Groeger and Kerand in 1996 this questionnaire has sufficient validity.

Neo five factor inventories (NEO FFI) personality questionnaire: this questionnaire has 60 items designed for the brief and rapid assessment of five factors: Extraversion, Agreeableness, Conscientiousness, Neuroticism, and Openness to Experience.

Anxiety or Neuroticism includes having negative feelings such as fear, grief, arousal, anger, guilt and permanent and pervasive feeling of nervousness. The extroverts are social people. They are practically decisive, active, talkative and willing to discuss. They love excitement and momentum and are hopeful to success in future. The elements of openness to experience are active imagination, aesthetic sensitivity, attentiveness to inner feelings and independence of judgment. Just like extraversion, the index of "Agreeableness" focus on inclination to interpersonal relationships. The person in agreement is basically altruist, sympathizes with others and is eager to help them and believes that others have the same relation with him. Two general features of the ability to control impulses and sentiments and tendency to have certain discipline in behaviors to reach the goals under study are in the index of Conscientiousness. This test has sixty items, twelve items per domain related to each of the factors. Each choice has five types of answers: completely rejected, rejected, neutral, acceptable, completely acceptable and the testes select one. Correlation coefficient among the score of indexes has been respectively as follows: 92%, 90%, 91%, 77% and 78%.The internal consistency of indexes based on Alfa coefficient is calculated respectively as follows: 86%, 77%, 73%, 68% and 81%.

Psychology of driving questionnaire: this questionnaire is compiled by the great effort of the psychologists in the area of psychology of driving. The questionnaire is translated and collected by Rezakhani, 2003. The Rezakhani's founding proves the fact that the questionnaire has desirable validity. The driving psychology questionnaire has 36 questions which studies the driving habits, attitudes and behaviors and is scored in likert range. The questionnaire consist of three parts: part A with eleven questions which assesses the person's attitude toward different factors in driving behavior and is scored as yes or no. part B assesses the person's attitude toward driving and consists of ten questions in likert range from 0 to 3. Part C evaluates the person's driving habits. This part has fifteen questions in the likert range from 0 to four. Two kinds of scores are to be obtained after grading which show the right or wrong attitude of the person toward driving. The validity of this research is calculated by 81% Cronbach's Alfa method and has sufficient validity of content.

Social Health Questionnaire: Keyes has made this scale based on his theoretical model on social health which consists thirty three questions. Seven questions are about social acceptance, seven questions about the factor of social cohesion, six questions about social participation, seven questions about social actualization and finally six questions are about social adjustment. This questionnaire is prepared in likert scale. Keyes in his

studies has reported the Cronbach's Alfa coefficient for micro scales of social cohesion, acceptance, participation, actualization and adjustment respectively 81%, 77%, 75%, 69% and 75% and the Alfa coefficient of the total test is 80%. In this research the four micro scales of cohesion, acceptance, adjustment and participation has been applied which is totally 25 questions. Its validity in this research is also calculated in a way that the questionnaire, based on factor analysis method and Cronbach's Alfa coefficient, the questionnaire has construct validity with explanatory power of 73% and validity of 79% [19].

Research Method

By receiving the letter of introduction from health policy council of Fars province addressed to transportation agencies and organizations in Shiraz city such as: taxi management and supervision organization, bus organization, Road and transportation organization of Fars province, terminals organization and traffic department of Fars province, the questionnaires were distributed in the aforementioned organizations. Having collected the questionnaires, the data were analyzed by SPSS statistical software.

RESULTS

The variables coefficient matrix was designed to conduct a preliminary investigation on the relation between variables of research. Table 1 shows the Pearson correlation coefficient for the research's quantitative variables. In order to study the relation between the personality characteristics and driving behavior, the simultaneous regression was used and the results are seen in table 2.

Table1. Correlation Matrix of Research's Variables

Variables	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
1-Neuroticism	1															
2-Extraversion	-0.42	1														
3-Openness to experiences	0.01	-0.03	1													
4-Agreeableness	-0.49	0.45	0.09	1												
5-Conscientiuosness	-0.47	0.51	0.05	0.61	1											
6- Slips	-0.33	0.30	0.03	0.44	0.48	1										
7-Delibrate violations	-0.31	0.30	0.00	0.42	0.48	0.89	1									
8-Errors	-0.29	0.30	0.04	0.40	0.47	0.91	0.88	1								
9-unintentional violations	-0.23	0.26	-0.01	0.32	0.41	0.73	0.70	0.70	1							
10-Driving behavior	-0.33	0.32	0.02	0.46	0.50	0.97	0.96	0.95	0.78	1						
11-Cohesion	0.30	-0.31	-0.03	-0.34	-0.35	-0.35	-0.32	-0.27	-0.25	-0.23	1					
12-Adjustment	0.31	-0.25	-0.08	-0.31	-0.37	-0.31	-0.26	-0.30	-0.20	-0.30	0.34	1				
13-Acceptance	0.32	-0.29	-0.07	-0.33	-0.33	-0.32	-0.31	-0.29	-0.21	-0.35	0.502	0.37	1			
14-Participation	0.31	-0.32	-0.07	-0.40	-0.49	-0.42	-0.39	-0.38	-0.34	-0.42	0.39	0.45	0.41	1		
15-Social health	0.41	-0.38	-0.08	-0.44	-0.49	-0.44	-0.42	-0.39	-0.32	-0.45	0.78	0.67	0.78	0.73	1	
16-Attitude toward driving	-0.37	0.28	0.01	0.41	0.41	0.64	0.65	0.64	0.45	0.69	-0.27	-0.29	-0.27	-0.32	-0.34	1

Table 2. Results of simultaneous regression to investigate the relation between personality characteristics and driving behavior

Predicative variables	B	B	R	R²	T	P
Intercept	15.15				1.36	NS
Neuroticism	-0.41	-0.07			-1.91	NS
Extraversion	-0.12	-0.02	0.55	0.33	-0.43	NS
Openness to experiences	-0.11	-0.01			-0.43	NS
Agreeableness	1.76	0.26			6.61	0.0001
Conscientiousness	1.52	0.31			7.70	0.0001

N.S= None Significance

As seen in the above table, among the five main personality factors, only the aspects of agreeableness and conscientiousness have positive and significant relation with driving behavior. In other words increment in the scores of the mentioned aspects was in line with the increment in driving behavior scores. These two aspects totally explain 30 percent of the driving behavior variance. It is to be mentioned that obtaining higher score in the driving behavior questionnaire means the worse driving behavior. In order to study the relation between the attitude toward driving and driving behavior, the Pearson correlation coefficient was used and the results are seen in table 3.

Table 3. Pearson Correlation coefficient to investigate the relation between attitude toward driving and driving behavior

Dimensions	R	N	P<
Slips	0.64	1321	0.0001
Deliberate violations	0.65	1342	0.0001
Errors	0.64	1361	0.0001
Unintentional violations	0.45	1419	0.0001

Driving behavior	0.69	1161	0.0001

R= Pearson correlation coefficient, N= number of respondents, P=level of significance

As seen in above table, the factor of attitude toward driving has positive and significant relation with all the aspects of driving behavior. In other words, increment in the score of attitude toward driving is in line with the increment in the score of driving behavior. In order to investigate the relation between the social health and driving behavior, simultaneous regression was utilized. The result of this analysis is seen in table 4.

Table 4. The result of simultaneous regression to investigate the relation between social health and driving behavior

Predicative variables	B	β	R	R^2	T	P<
Intercept	168.04				25.28	0.0001
Cohesion	-1.36	-0.11			-3.40	0.001
Adjustment	-1.95	-0.11	0.48	0.23	-3.45	0.001
Acceptance	-1.87	-0.12			-3.95	0.0001
Participation	-3.69	-0.26			-7.59	0.0001

As seen in the above table, all the aspects of social health have significant negative relation with driving behavior. In other words increase in the aspects of social health is in line with decrease in the score of driving behavior (better driving). The aspects of social health totally explain the 23 percent of driving behavior variance. The stepwise regression was utilized to investigate the issue that which of the personality characteristics of attitude toward driving and social health has more power to predict the driving behavior. The result of this analysis is seen in table 5.

Table 5. The stepwise regression result investigates the power of variables of personality, social health and attitude toward driving to predict driving behavior

Predicative variables	B	β	R	R^2	T	P<
Intercept	-20.79				-2.00	0.05
Attitude toward driving	2.46	0.56			2.41	0.0001
Conscientiousness	0.67	0.14			3.90	0.0001
Openness to experiences	0.87	0.13	0.75	0.57	3.97	0.0001
Participation	-1.32	-0.09			-3.08	0.002
Acceptance	-0.95	-0.07			-2.41	0.02
Extraversion	-0.50	-0.06			-2.24	0.03

According to the result available in the above table, the most important variables predicting driving behavior are respectively: attitude toward driving, Conscientiousness (personality), openness to experiences (personality), participation (social health), acceptance (social health) and extraversion (personality). Other aspects of personality and social health were not significant predictions for driving behavior and so were not inserted into equation. Among the aforementioned variables, attitude toward driving and, conscientiousness and openness to experiences are positive predicative factors and participation, acceptance and extraversion were negative predicative factors for driving behavior.

The result analysis by regression coefficient shows that attitude toward driving in which β=0.56 among the personality characteristics, conscientiousness in which β=0.14, openness to experiences in which β=0.13 and extraversion in which β=0.06 among the social health aspects, participation in which β=0.09 and acceptance in which β=0.06 is able to explain 0.57 variance of driving behavior.

DISCUSSION

The result analysis show that attitude toward driving has more powerful predicative role compared to other variables and other researches show that attitude toward driving safety is the only variable possessing direct effect on risky driving behavior. Measurement of variables plays the role of an intermediate variable in the relation between personal characteristics and behavior. The factor of attitude toward driving with 56 percent of driving behavior variance shows the fact that measurement of attitudes could have independent effect on risky driving behavior. In other words, risky attitudes could predict other variances in behavior. In addition, indirect effect of personality characteristics as the premises in random relations as an external variable affects the attitudes and finally the driving behavior [21]. Social health has the predicative power of driving behavior with the least variance (participation in which β=0.09 and acceptance in which β=0.06) and represents the negative relation between participation and acceptance with driving behavior which show the dependency of the individual health on the society and environment health. Also the social and environment health depends on the quality of the person's life and occupation. Generally the social health is affected by the behaviors, attitudes, and beliefs of the persons living in that society and driving behavior is not separated from these elements.

Research findings show that among all the aspects of personality characteristics, Neuroticism (slips, deliberate violations, errors and unintentional errors has significant negative difference with all the aspects of driving. Extroversion, agreeableness and conscientiousness has significant positive relation with all the aspects of

driving behaviors (slips, deliberate violations, errors and unintentional violations) and agreeableness has no significant relation with unintentional violations.

These findings is not in the same line with the researches of [22, 23 , 21 ,4, 24] which show that the quality of high irritability, breaking social norms and angry driving behavior have significant relation with personality characteristics such as neuroticism, depression, openness to experiences, anxiety and nervousness. The contradiction of the research findings which proves that there is a positive relation between the anxiety and neuroticism in driving could be explained in this way: the people with neuroticism (the anxious people) have inclination to more fear and anxiousness which results in the awareness about the hazards of accidents. So, they try to be very cautious and defensive whilst driving. In addition, to explain the result that there is a significant positive relation between conscientiousness and agreeableness with all aspects of driving behaviors, we can argue that serious disturbances in driving such as aggressive driving are the evident deviations of an abnormal cultural pattern (25) and in some researches the relation between sensory and cognitive behaviors and occurrence of driving behaviors has been found (13).

The results of Pearson correlation show that there is significant positive relation with 0.01 percent variance between attitude toward driving and aspects of driving behavior, slips, deliberate violations, errors and unintentional violations. The findings of [26, 27, 12 , 28) about the attitude and driving behavior in different groups show that attitude toward awareness of traffic rules, better driving at the time of alcohol or drug abuse such as hashish and the parent's attitude toward driving behavior also explain the relation between type of attitude toward driving and driving behaviors.

With regard to the fact that models of driving behavior attitudes derived from social psychology are the most powerful models to recognize the motivational factors in driving behavior and based on the these models, the variables such as attitudes, risk perception, social norms and behavior control perception are the main determinants of behaviors and the findings of this behavior are to be explained [28].

The results of correlation matrix research show that among the aspects of social health, all the aspects (cohesion, adjustment, acceptance and participation) have significant relation with the aspects of driving behavior in 0.01 level (slips, deliberate violations, errors, unintentional violations).Since driving behavior is said to the behavior patterns that the driver selects with regard to the social-environmental characteristics to satisfy his personal needs, it is said that abnormal cultural patterns could create less cohesion, participation and acceptance of traffic rules and patterns and results in the low acceptance and more errors in driving.

The results of data analysis show that attitude toward driving with the predicative variable having higher percent of variance predicts driving behavior and the role of personality characteristics factors and social health as the next predicative variables affects driving behavior. It means that negative attitude toward driving results in the risky driving and naturally increment

In the number of accidents. Since attitude is a multiple concept related to areas of social health including: ability of performance and functions, individual's general satisfaction of life and its aspects, life quality and comfort and activities related to the general function and position in society could be an important and effective factor in formation of driving behavior patterns. Personality characters, despite having an intermediate variable role in driving behavior could be investigated as an important variable in risky driving behavior. In addition the descriptive results acquired from the interview with the drivers, affirms the findings of this research. Drivers points to the factors such as: lack of the culture to use the latest technology cars, social and financial pressure of cost of living, lack of appropriate education, etc... show the important role of society's attitude and culture as the effective factor in driving behavior. Acquiring such results in the present research is not far from mind because according to the role of factors such as life expectancy, appropriate standards of life, wisdom and gender development which are the determining and assessing factors of human development in countries and Iran's 88th rank as the life quality index among 111 countries around the world, the last rank among the Persian Gulf states in 2005 and promotion to 94th rank among 177 countries in 2007-2008 in human development index ,the Iranian people despite having rich sources have a low level of life quality and in other words spend a more difficult life, so they try to take the most of advantages of anything in their possession and the drivers are not exceptions. This makes them tired and resulted mental pressure affects their driving style. On the other hand a certain concept of driving is formed in our mind which forms our attitude toward driving. Since the rate of accidents resulted to injuries and deaths occurring in the city is more than that occurring out of the city, We come to the conclusion that: "Driving is a public matter around the world" but nowadays based on the abnormal cultural patterns which have become widespread in our society driving is considered a "personal matter" which means that "I want to get myself to the destination with my car so "the other drivers are my rivals" and I should not stay behind the competition. So driving would change into "it is possible to go from any route and not the determined routes" and it means ignoring the regulations and not obeying the traffic rules. Correct driving is a kind of participation in a public affair. But unfortunately since the rate of participation in the society under study has been low, so the attitude to correct driving is absent among drivers, because the people could not look for participation in mass movement of vehicles before thinking about reaching the destination. The act which guarantees the acceleration of vehicle's speed of movement, decrease in the probability of vehicles crashes, accelerate of relief operation, prevention of traffic jams, prevention of violations and finally driver's comfort. Factors play role in this kind of driving are the results of our attitude toward driving and the present cultural pattern, and the use of the certain

terms such as "take the road by a sudden break" or "give the road". In addition to the mentioned cases, it seems that the traffic definitions and terminologies have no importance in our society, including: "keeping appropriate distance", "safe distance", "stop". According to traffic rules, the drivers are obliged to obey all the regulations but practically our regulations are generalizations for which no true instances have been identified and people are not taught about it (for example, "stop" sign is quite meaningless in our society and its role is assigned to the speed bumps and no one does not care about lack of obedience to this sign. Everybody is accustomed to not obeying the rules and even if someone decides to respect the law he would be ridiculed by others. Also not until the disobedience caused not damages no fine would be assigned. While in other countries when the school bus stops to get the students off and on the students, the vehicles are obliged to stop 20 meters behind. Violation of this law even for the first time would bring 400 dollars fine and suspension of driving license for 6 months.

Suggestions

With regard to the results we recommend:

- Take the urban traffic rules serious by traffic police to change the attitudes toward the driving behaviors such as: using seat belt by drivers and driver assistant, intelligent controllers,

- Design and develop educational programs applied for the drivers through national mass media, education with the purpose of transformation of abnormal cultural patterns.

- With regard to the important role of attitudes to the driving behavior, design and hold educational courses in order to form more positive attitudes toward driving behavior special for the volunteers who apply for driving license and risky drivers.

- Raise the driver's life quality by decreasing the amount of vehicle's installments so that they do not have to work continuously to afford the life expenses which provide the ground for accidents.

- with regard to the fact that research backgrounds considers the lack of cognitive-movement skills and sensory cognitive weakness as one of the important factors forming the driving behavior, it is necessary to assess the sensory-cognitive abilities and reaction speed of the drivers applying for driving license and seeking for the occupation of driving

- With regard to the lack of balance between new vehicles and road infrastructures, education and taking the driving test by new and modern cars could act as an instrument for promoting the driver's readiness, control power and skills.

- Organizing the pedestrians to move in any part of the street which prevent many of the accidents by serious traffic rules such as installing red lights, traffic signs, etc…

- With regard to the abnormal cultural patterns, organizing the fines for the offending drivers and pedestrians could decrease the violations.

- Apply the method of encouragement, represent successful driving patterns and regard special points for successful drivers in order to prevent the abnormal patterns of driving.

- Transformation of men's attitude toward women's driving by introduction of capable and successful women drivers.

- Hold self-esteem workshops for women drivers in order to promote their self- confidence and acceptance of gender equality in driving behavior with regard to the men's driving.

- Design and hold educational workshops for risky drivers such as anger management, time management and self-esteem management workshops

- Coordinate roads with the situation of new cars including road development, widening streets

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