Rate the Motives to Use a Seat Belt in Iran

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Abstract. The aim of this study is to investigate the motives to use a seat belt in different traveling conditions in sample car drivers in Iran. To that, a sample of 212 people (168 men, 44 women) in province of Khoozestan was selected. The questionnaire was designed to include 30 questions and was corrected, reformed and evaluated by 11 terrific and driving experts. To answer the questions of research descriptive analysis and Chi-square test were use. Conclusions showed that the most important reason for using the seat belt were the safety itself and respecting the law. Chi-square test showed the lake of a meaningful relationship between using of the seat belt and variables of sex, education and occupation of participants. Conclusions showed that the using seat belt is increasing qualitatively among Iranian driver.

Keywords: Seat Belt, Traveling Conditions, Safety, Habit, Iran

1. Introduction

One of the main reasons for unintentional injuries is car crashes. Therefore one of the problems is the car making industries which were focused by engineers, the safety of the passengers and the seat belt is an important tool in preventing this physical injuries. General, determents road nowadays are the ninth reason for death which will receive the third place in 2020. National Highway Traffic Safety Administration (2003) reported that while using seat belt saved more than 100,000 lives, over 7000 people were killed and over 100,000 people were injured because of not using seat belt in the U.S. Also, IRTAD (1995) estimated that the use of seat belts had reduced the injury severity in about 50% of road vehicle accidents, especially in accidents that would have resulted in fatal or severe injuries. Fockler and Cooper (1990) reported the suspicion of police presence, being a passenger in someone else's car, driving with family members, high speed and dangerous road conditions as the situational factors increasing seat belt use. Richard w. Kent et al., (2006) Analyzed the performance of the seat belt which the system of pulling. They analyzed the different tests and simulation the hitting an automobile with a snag found that existence of such a system can prevent the manikin from being paused forward up to 40%. Another result in this study is that using the pulling system in seat belt can distribute the keeping energy is more appropriate in the time of hitting and this energy is not increased linearly. Increasing of this energy also can be growing during the time which is very important and we can say that this can be considered as the main advantage of this system.

Despite the effectiveness of seat belt use and legislation, seat belt use rate is low in Turkey. The aim of this study was to investigate the motives to use and not to use a seat belt in different travelling conditions in a sample of car drivers and passengers. Frequently reported reasons for using a seat belt were travelling conditions, safety, situational conditions, habit of using a seat belt, and avoiding punishment. Frequently reported reasons for not using a seat belt were situational conditions, not believing in the effectiveness, discomfort and having no habit. Safety was the strongest predictor of reported seat belt use in both low and high risk travelling conditions. Findings suggest that seat belt campaigns should mainly emphasize seat belt's safety impact and aim at habit formation (Ozlem Simsekoglu and Timo Lajunen 2007).

Seat belts are effective safety devices for protecting car occupants from injuries and fatalities in road vehicle accidents. Seat belt use has been reported to be related to some health and driving-related behaviours. Results of factor analysis showed that seat belt use in front seat grouped with driver behaviours (e.g., driving errors and violations) but not with health-related behaviors (e.g., healthy diet and sports participation). Regression analyses showed that seat belt use in back seat; and, regular walking and adequate sleep were

positively related to seat belt use in front seat, whereas being male, driving errors and smoking frequency were negatively related to seat belt use in front seat. The present findings suggest that seat belt use can be considered in the context of driver behaviors such as driving errors and violations (Ozlem Simsekoglu and Timo Lajunen 2008).

Matthieu de Lapparent (2007), studied the using seat belt and the level of injuries in a given car accident. They develop a bivariate ordered Probit model to analyze the decision to fasten the safety belt in a car and the resulting severity of accidents if it happens. The approach takes into account the fact that the decision to fasten the safety belt has a direct causal effect on the category of injury if an accident happens. Their application to a sample drawn from the database of French accident reports in 2003 for three populations of car users (drivers, front passengers, rear passengers) shows that fastening the safety belt is significantly related to a decrease in severe injuries but it shows also that these car users compensate partly for this safety benefit. Furthermore, it is observed that demographic characteristics of car users, as well as transport facilities, play important roles in decisions to fasten safety belts and in the eventual resulting accident injuries.

Naveen Eluru and Chandra R.Bhat (2007) have used a common parametric analysis of the using seat belt and its relation with intensity of the hit in the road accidents. In This research effort through the development of a comprehensive model of seat belt use and injury severity that takes the form of a joint correlated random coefficients binary-ordered response system. This is the first instance of such a model formulation and application not only in the safety analysis literature, but in the econometrics literature in general. The empirical analysis is based on the 2003 General Estimates System (GES) data base. From a policy standpoint, the results suggest that seat belt non-users, when apprehended in the act, should perhaps be subjected to both a fine (to increase the chances that they wear seat belts) as well as mandatory enrollment in a defensive driving course (to attempt to change their aggressive driving behaviors).

There are considerable regional differences in seat belt use. For example, in comparison to Western Europe, seat belt use rates are relatively low in Mediterranean countries such as Turkey and Greece with lower traffic safety records (e.g., higher accident and fatality rates) (Chliaoutakis, Gnardellis, Drakou, Darviri, and Sboukis, 2000; SWEROAD, 2001). seat belt use has been found to be related to some health-enhancing behaviors (e.g., having a healthy diet and engaging in physical exercises) by previous research. For example, significant correlations between health-enhancing behaviors (including adequate hours of sleep, healthy diet, adequate exercise, low sedentary behavior and dental health) and seat belt use were found among adolescents, which were interpreted as a support for existence of a healthy lifestyle in adolescence (Donovan, Jessor, and Costa, 1993).

Among the different preventive measures to counteract this phenomenon, safety belts are economical, practical to use and widely available to car users. Their use is the single most effective means of reducing fatal and nonfatal injuries in motor vehicle crashes (Waller, 2002). Seat belt use has been mandatory in Italy under primary law for front occupants since 1989; in spite of this, national levels of observed use among drivers were only 32.1% in the year 2000 (Taggi, 2003). Lee and Schofer (2003) identified that use of seat belts would reduce the risk of fatal motor–vehicle crash injuries to front–seat occupants by 45% and the risk of moderate–to–critical injuries by 50%.

Consistent use of seat belts is the most effective way to reduce motor-vehicle crash fatalities and non-fatal injuries (Kahane 2000).

2. Method

2.1. Statistical Analysis

An interview form was developed, which included demographic and driving related background information and questions about the seat belt use in different traveling conditions. Demographic information consisted of sex, age, occupation, and education level, of the participants. Sample characteristics of the interviewees are displayed in table 1.

Table 1: Sample characteristics

Sex	Number	Percent
Male	168	79.2
Female	44	
Occupation		20.8
Caltural	21	9.9
Employe	45	21.2
Driver	18	8.5
Other	128	60.4
Education		
Elementary and high school graduates	99	46.7
University student	70	33
Bachelor	27	12.7
Master & PH.D	16	7.6
Age	31.5(M)	1.13(S.D)
Years of Driving	8.4(M)	9.4(S.D)

Table 2 showed the extent of using seat belt by the participants. Most of answers were: often, always, sometimes and never, respectively.

Table 2: Seat belt use frequencies for total case.

	Frequency	Percent
Always	80	37.7
Often	90	42.5
Sometlms	23	10.8
Rarely	18	8.5
Never	1	0.5

3. Results

Table 3 shows the frequencies for the reasons reported for not using seat belt in different traveling conditions. "Discomfort" and "no habit" were the most frequently reported reasons for not using a seat belt in most of the traveling conditions. On the other hand, "trust to self driving", "no relevance to safety' other opinion", "other reasons", "Belief to destination", "situation conditions", and "over trust to the car" were the less frequently reported reasons for not using a seat belt in most of the traveling conditions.

Table 3: Frequencies of reported reasons for not using a seat belt

Reasons	Response(N)	Percent
Trust to self driving	16	7.5
No relevance to safety	5	2.4
No habit	31	14.6
Discomfort	48	22.6
Others opinion	4	1.9
Belief to destination	3	1.4
Over trust to the car	2	.9
Situational conditions	3	1.4
Other reasons	4	1.9

3.1. Seat Belt Use Frequencies in Different Trip Types

Reported seat belt use frequencies and the mean response values for each trip type are displayed in Table 4. It shows that seat belt use frequencies were highest in trips outside city, followed by trips in bad weather and nighttime. Seat belt use frequencies were lowest in inside city trips followed by in trips made in daytime and good weather. Regarding to this table, can see that the seat belt is more used in the outside situation, when high speed, rain days and in the indirect road. These conditions are called the "high risk", therefore, it can been seen that using the seat belt in the high risk conditions is more than 80% average which is mainly because of self preservation.

Table 4.Seat belt use frequencies for different trip types

Trip type	Response category					
	Always(1)	Often(2)	Sometimes(3)	Rarely(4)	Never(5)	Mean responce value
Inside city & Over 50(Km/h)	106 50%	57 26.9%	23 10.8%	14 6.6%	12 5.7%	1.91
Inside city & Lower 50(Km/h)	87 41%	40 18.9%	36 17%	22 10.4%	27 12.7%	2.35
Outside city & Over alowed speed	181 85.4%	20 9.4%	5 2.4%	4 1.9%	2 .9%	1.24
Outside city & Lower alowed speed	150 70.8%	37 17.5%	9 4.2%	10 4.7%	6 2.8%	1.51
Distance over 50(Km)	141 66.5%	42 19.8%	15 7.1%	7 3.3%	7 3.3%	1.57
Distance lower 50(Km)	108 50.9%	41 19.3%	33 15.6%	14 6.6%	16 7.5%	2
Road conditions (Direct road)	144 67.9%	38 17.9%	19 9%	3 1.4%	7 3.3%	1.54
Road conditions (Indirect road)	161 75.9%	28 13.2%	14 6.6%	6 2.8%	2 0.9%	1.39
Weather (Rainy)	173 81.6%	21 9.9%	8 3.8%	5 2.4%	4 1.9%	1.32
Weather (Sunny)	112 52.8%	58 27.4%	21 9.9%	11 5.2%	9 4.2%	1.80
In night	141 66.5%	40 18.9%	15 7.1%	7 3.3%	8 3.8%	1.58
In daytime	138 65.1%	44 20.8%	14 6.6%	7 3.3%	8 3.8%	1.59

Regarding to the statistical test of Chi-square whit the meaningful level of 0.05, it is seen that the sex (p> 0.05 and x^2=1.032) vocation (p>0.05 and x^2=7.126) and the education (p>0.05 and x^2=11.272) have no meaningful relationship with using the seat belt.

4. Conclusions

Regarding to the conclusions rise from the statistical analysis of the data, can state that using the seat belt is seen more among the educated people and this is I it is turn affected by awareness of these people toward the necessity of the seat belt. Also among other people, the drivers had the lion's share, and it is because their fear the dangerous one may face in the road. This study shows that the most common use of the seat belt is outside the city and in the high unauthorized speed, rainy climates and the bad road. The above mentioned can be called " the high risk conditions". Therefore, it can be seen that the extent of using the seat belt in the high risk situations is average 80%, which is mainly predicted because of the safety itself and these conclusions are in accordance with those conclusions made (Fockler and Cooper 1990; Ozlem Simsekoglu and Timo Lajunen 2008). Beside, the most reasons for not using the seat belt were discomfort and no habit (Fockler and Cooper 1990).

5. Acknowledgements

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