

## Tehlikeli Araç Kullanma: Kamuda Çalışan Şoförlerin Emniyet Kemerini Kullanımı

### Risky Driving: Understanding Seat Belt Use of Drivers Working in Public Sector

**Dr. İsmail Cenk Demirkol - Asst. Prof. Dr. Hamza Tosun - Dr. Yusuf Yüksel**

#### Öz

Bu çalışmanın amacı değişik koşullarda emniyet kemeri kullanımına etki eden faktörleri incelemektir. Sürücülerin emniyet kemeri kullanımı ile ilgili belirtmiş oldukları tutumlar ile çeşitli davranış ve tutumları incelenerek her ne kadar jandarma ve polis emniyet kemeri kontrolü yapsa da bazı sürücülerin neden emniyet kemeri kullanmadıkları anlaşılmaya çalışılmıştır. Sonuçlar, emniyet kemeri ve trafik güvenliğiyle ilgili programları takip eden ve trafikte daha az heyecan arayan kişilerin daha büyük olasılıkla emniyet kemeri kullandıklarını göstermiştir. Bununla birlikte, katılımcıların saldırgan tutumları ve polis ve kameraların varlığı da katılımcıların bazı şartlarda emniyet kemeri kullanmalarına yol açtığını göstermiştir. Ancak, sonuçlar sürücülerin kaza geçirme ile ilgili algılarının emniyet kemeri kullanmalarına bir etkisinin olmadığını göstermiştir.

**Anahtar Kelimeler:** Emniyet Kemerini Kullanımı, Heyecan Arayışı, Saldırganlık, Yaptırım

#### Abstract

The aim of this study is to examine the factors affecting drivers' seat belt use behaviors in different conditions. Drivers' self-reported seat belt use attitudes and behavioral and situational factors were examined to understand why some drivers do not wear seat belts; even though a mandatory seat belt law is enforced by police and gendarmerie. The results indicate that drivers who attend seminars, watch programs related to traffic safety on media and have lower sense of sensation seeking

are more likely to wear seat belt. Further, participants' sense of aggressiveness and presence of police and camera are found significant factor affecting drivers' seat belt use in specific driving conditions. However, the result indicated that drivers' risk perception regarding likelihood of being involved in traffic crashes is not related to seat belt use attitudes.

**Keywords:** Seat Belt Use, Sensation Seeking, Aggressiveness, Enforcement

#### Introduction

Drivers and passengers who hurt or killed in traffic crashes cause social and economic losses. One of the most feasible and influential method to avoid fatalities and economic losses is using seatbelts (Molnar et al., 2012). Seatbelts protect drivers and passengers by holding people in the vehicle during a crash including rollovers and reducing the likelihood of people to hit the hard surfaces in the vehicle (Evans, 1990). Experimental and empirical research examining the effectiveness of seat belt use on fatalities reveals that seat belts are important driving devices which save lives and reduce the risk of fatal injury to drivers and passengers (Evans, 1991, 1996; Cohen & Einav, 2003; Cummings et al., 2003). For example, in a study, Evans (1986) found that seatbelts are overall 41% effective in preventing fatalities for drivers and right front passengers. Another study conducted by Evans and Frick (1986) show that effectiveness of seatbelts in preventing fatalities reaches 62% for single-car

Dr. İsmail Cenk Demirkol, Police Academy, [icdemirkol@tugam.net](mailto:icdemirkol@tugam.net)  
Asst. Prof. Dr. Hamza Tosun, Police Academy, [htosun@tugam.net](mailto:htosun@tugam.net)  
Dr. Yusuf Yüksel, Police Academy, [yyuksel@tugam.net](mailto:yyuksel@tugam.net)

crashes, whereas seatbelts effectiveness is 30% for crashes involving two cars. Seatbelts are also found to be useful and effective devices to reduce the risk of fatalities for the right and left rear passengers (Evans, 1988).

Although today almost all cars come with seatbelts which are important for saving lives of the drivers and passengers, existing literature on the prevalence of seat belt use suggests that some drivers and passengers tend not to use seatbelts. According to European Transport Safety Council (2010), it is estimated that about 88% of the drivers and front seat passengers and about 72% of the rear seats passengers in the European Union member states use seatbelts. However, the range of the prevalence of the seatbelt use by member countries goes from about 80% to 95% for drivers and front seat passengers and about 30% to 80% for rear seat passengers. Further, while wearing seat belt is mandatory in all European Union Member countries, failure to wear seatbelt is one of the most leading factor causing fatalities of drivers and passengers with speeding and drink driving. The prevalence of seat belt use in the United States was about 82% with the range of 58% to 92% by state (Beck & Schultz, 2009).

When it comes to developing countries, there is no sufficient data to evaluate prevalence of seat belt use. According to World Health Organization report (WHO, 2013), only 6% of the low income countries and only 43% of the middle income countries have data on seat belt wearing rates. According to the report, those countries also do not enforce laws on seat belt use, if any, strictly. Thus it could be argued that the prevalence of

seat belt use is lower in these countries comparing to developed countries. For example, the prevalence of seat belt use is only 29% in Argentina, 57% in Columbia, only 2% in Congo, and 27% in India. These results suggest that there is a need for more comprehensive, cross-cultural, and reliable data to evaluate traffic safety and behavior across the world.

### Turkey Context

As mentioned earlier, seat belt use is the most effective way to save lives and reduce injuries in traffic crashes. It was shown that drivers and passengers can protect themselves from being injured or death by using this simplest device in traffic crashes. The data provided by the Turkish National Police (TNP) also supports this argument. The number of accidents involving death and personal injury were 110,803 in 2011, 130,360 in 2012, and 135,241 in 2013. Table 1 represents the number of the crashes in which police officers were able to identify whether the drivers were used seatbelt or not and percentages of fatalities by the seatbelt use. As it can be seen in the table, overall 27% of the drivers did not use a seatbelt during the crashes. Based on the data presented in the Table 1, it could be argued that individuals not wearing seat belt are more likely to die in traffic crashes than the drivers wearing seat belt. Although the percentage of the driver fatalities have dropped in the last three years, deaths in traffic crashes still remain one of the most common causes of death. Additionally, tickets for failure to wear a seatbelt are among the most common types of traffic fines. Police officers issued a total of 528,577 seatbelt tickets in 2013 across the Turkey.

**Table 1. Number of Driver Fatalities in Turkey**

	2011			2012			2013		
	Number of Drivers	Killed in Crashes	%	Number of Drivers	Killed in Crashes	%	Number of Drivers	Killed in Crashes	%
Seat belt used	2,163	42	1.9	2,185	26	1.2	4,589	32	.7
Seat belt not used	705	88	12.5	783	63	8.0	2,015	73	3.6

Despite all these facts and mandatory seatbelt use laws in Turkey, the prevalence of seat belt use in Turkey is low comparing to EU countries and other developed countries (Akbas et al., 2010). Although WHO report (2013) indicates that seat belt wearing rates are 50% for the drivers and front seat passengers in Turkey, previous research suggests inconsistent findings on the prevalence of seatbelt use in Turkey. One of the first study on the prevalence of seatbelt use in Turkey conducted by Turkish National Police (2014) in 1999. The study was conducted in Ankara, the capital of Turkey, by observing 40,587 drivers at 27 different junctions. The results suggest that seatbelts were used only 21% of the drivers (8,557). Unfortunately, it was found in the same report that none of the rear seat passengers wore seatbelts.

A series of studies, examining the prevalence of seat belt use in Turkey, was conducted by Simsekoglu and Lajunen (2008a, 2008b, 2009). In the first study, drivers' and front seat passengers' seatbelt use were observed in two different phases in Ankara (Simsekoglu & Lajunen, 2008a). The sample of the study consisted of 1670 drivers and 2293 front seat passengers for the first phase and 963 drivers and 435 front seat passengers for the second phase. The result of the first phase observation showed that overall 20% drivers and 14% of the front seat passengers wore seatbelts on city roads and overall 35% the drivers and 33% of the front seat passenger wore seatbelt on the intercity roads. In the second phase, it was found that 39% of the drivers and 32% of the front seat passenger wore their seatbelt. The results suggest that women relative to men and older people relative to younger people are more likely to use seat belt.

In the second study, Simsekoglu & Lajunen (2008b) interviewed with 221 participants including drivers and front seat passengers. Based on participants' self-reported seat belt use behaviors, about 46% of the participants stated that they always wear seat belt on the inner city roads, while about 74% of the participants wear seat belt outside the city. The results also showed that participants' attitudes varied regarding road conditions. The self-reported seat belt use rates were higher in bad weather (71%) and nighttime (62%) than in daytime (45%) and in good weather (44%). In the final study, Simsekoglu and Lajunen (2009) examined the seatbelt use rate with 252 drivers. Results of the study showed that the percentages of the drivers wearing seatbelt almost all the time

was overall 36% as driver, 31% as front seat passenger, and 15% as rear seat passenger on city roads, whereas 60% as driver, 51% as front seat passenger, and 16% as rear seat passenger on outside city roads.

Porter et al. (2010) observed 1423 vehicles to examine the seatbelt use rate of drivers and children in Ankara. The findings indicated that overall 52% of the drivers wore seatbelt. Bilgic et al. (2011) conducted a study in Antalya, one of the major resort destinations, to examine the prevalence of the seat belt use among drivers. They observed drivers both in city centers and on an intercity road. It was found that about 50% of the drivers and overall 35% of the front seat passengers used seat belt in city centers. Further, the study indicated that the prevalence of seat belt use was higher among female drivers (65%) than male drivers (47%). When it comes to intercity roads, the result showed that about 66% of the drivers and 60% of the front seat passenger used seat belt.

Ozkan et al. (2012) conducted a study with a total of 990 drives in two cities, Afyon and Ankara. They collected data on drivers' self-reported seatbelt use. Further, they observed participants' actual seatbelt use before the data collection process so that drivers were not aware of being observed their seat belt use behaviors. The results show that 39% of the drivers interviewed in Afyon and 45% drivers interviewed in Ankara reported that they always use seatbelt. However, the results of the observation indicated that only 47% in Afyon and 70% in Ankara of these participants actually use seat belt. In other words, the actual seat belt use was lower than self-reported seat belt use.

Another study on the seatbelt use was conducted by Demirer et al. (2012) with 1000 participants in Sakarya. The study indicated that 68% of the participants (28% definitely use and 40% use) reported they wear seat belt. The result also suggested that the education level affects drivers' self-reported use of seat belt in Turkey. It was found that seat belt use was more common amongst drivers having graduate degree followed by drivers having college degree, high school degree and primary school degree respectively. Further, the results suggest that education level also has an effect on belief about seat belt protection. That is, higher the education level of the participant is, the more likely they see seat belt as a necessary tool to protect their life.

These research suggest that highest self-reported seatbelt use rate was 74% on intercity roads. However, the highest seat belt use rate in Turkey is still lower than the seat belt use rate of developed countries. Despite the importance of seatbelt use in relation to prevention of fatalities in traffic crashes, predictors of drivers' seat belt use behavior in Turkey have received very little attention. While previous studies mostly focused on public attitudes toward seat belt use, this study examined public drivers' seat belt use behaviors whose daily average driving time is four hour during their eight-hour shift. Thus, it is important for researchers to examine the predictors of their non-use of seatbelt.

### The Model

Researchers examine drivers' seatbelt use under the category of risky driving (Deffenbacher et al., 2001; Jonah, 1990, 1997; Jonah et al., 2001; Iversen, 2004; Fernandes et al., 2010). However, according to Fernandez et al. (2010) previous research on risky driving used general index of risky driving or used only one or two risky driving behaviors as dependent variable. Thus, the existing research does not allow researchers to examine the effect of predictors across the other risky driving behaviors comprehensively.

Existing literature suggests some attitudinal and situational factors which are related to drivers' risky driving behavior. Existing research shows that since it stimulates high sensation seekers to anticipate pleasurable sensations (Arnett, 1996), sensation seeking is related to drivers' risky driving behaviors (Xie & Parker, 2002; Iversen & Rundmo, 2002; Zuckerman, 2007; Fernandes et al., 2010). For example, Arnett (1994) and Arnett et al. (1997) found that sensation seeking is related to various types of traffic violations including speeding, racing another car, and passing another car in no-passing zone. Another factor found to be predictor of risky driving is aggressiveness (Lajunen et al., 1998; Deffenbacher et al., 2001; Deffenbacher et al., 2003; Xie & Parker, 2002). Researchers found that aggressive drivers are more likely to involve traffic violations (Lajunen & Parker, 2001; Ozkan & Lajunen, 2005). According to Plight (1996, 1998), perceived risk consisting of the likelihood and the severity of losses is a determinant of precautionary behavior which people employ to reduce the possible losses. Researcher argued and found that the perceived risk of involving in accident and being in-

jured also affects people's seat belt usage (Slovic et al. 1978; Swenson et al., 1985; Stasson & Fishbein, 1990; Chaudhary et al., 2004).

Another factor researchers have examined includes the effect of intervention campaigns on risky driving behaviors (Ulleberg, 2002). Stead et al. (2005) examined the effect of a three-year mass media campaign to reduce speeding in Scotland. The result showed that the campaign caused participants to change their attitudes and beliefs about speeding in a positive manner. Researchers also examined the relationship between the effectiveness of enforcement of seat belt law and seat belt use rates (Campbell, 1988; Williams & Wells, 2004). The research conducted in Elmira, New York, (Williams et al., 1987), in Modesto, California, (Lund et al., 1989), in North Carolina (Williams et al., 1996), and in New York State (Williams et al., 2000) showed that when the law was strictly enforced, it led people to comply seat belt use laws. Further, these research suggest that the majority of the public living in the research site showed sympathy for such programs. Further, Chaudhary et al. (2004) found that people having higher sense of perceived risk of being ticketed were more likely to wear seatbelts.

## Methodology

### Participants

The aim of this paper was to understand seat belt use of drivers working in public sector. Thus, the research was conducted in Ankara, capital of Turkey. Since it houses many public organizations and institutions, it has the most number of public drivers in Turkey. Researchers sought permission via gatekeepers (people who have access to population) from about 35 public organizations to conduct study and to create a diverse sample. However, less than half of the organizations showed their willingness to participate in the study. The respondents of this study were professional drivers of 13 different public organizations including ministries, their sub-agencies, regional agencies, and local municipalities located in Ankara. A total of 400 hundred surveys were delivered to participants working in these organizations. They mostly drive cars during their working hours. The number of returned usable survey was 349 with a response rate of 87 percent. All scales were measured based on the four-point Likert type scale (1=Strongly Disagree to 4=Strongly Agree or 1= Never to 4= Always). The questionnaire was developed and adapted from

earlier studies (Lajunen & Summala, 1995; Lajunen & Ozkan, 2011; Rundmo & Iversen, 2004; Hennessy & Wiesenthal, 1999; Deffenbacher et al, 2004; Freedman & Goldstein, 1999). Results of the bivariate and multivariate analyses were presented after conducting principal component analyses and examining scale reliabilities (see appendix).

### Measures

The dependent variable of this study is the participants self-reported seat belt use. Respondents were asked "Do you wear seat belt?" with the possible answers 1=never and 4=always in six different situations including always wear, during short distances, on intercity routes, at high speed and in bad weather, with my supervisor, and in my private vehicle. Answers were recoded to create a dummy variable, in which 0 denotes to never and sometimes and 1 usually and always.

Four items sensation seeking scale was used to measure participants' attitudes related to activities in traffic. The intent of the scale is to measure whether participants seek novel or risky stimulation in traffic ( $\alpha=.75$ ). Aggressiveness was assessed by using two item scale. The scale was used to measure participants self-reported aggressive behaviors in the traffic ( $\alpha=.54$ ). An adapted single item from Rundmo & Iversen (2004) was used to measure participants' traffic accident risk perception. Similar to participants self-reported seat belt use, this item was also recoded as a dummy variable indicating whether the subject perceive that he will involve in a traffic accident or not (0=no and 1=yes). A scale to measure whether media affects participants' seat belt use behavior or not consisted of two items. The scale was used to examine the effect of viewing any programs on media and following any seminars related to traffic rather than a specific media campaign or activities ( $\alpha=.73$ ). A scale consisting of four items included in the study to measure whether the presence of police and cameras are related to participants' seat belt use ( $\alpha=.89$ ).

The study included three demographic and other variables. Education level of the study participants was coded as 0=high school or less and 1=bachelor's degree or higher. Participants' age was collected on a ratio scale ranging from 21 to 62. Finally, the daily driving distance made by participants was measured on a ratio scale, too. The values of participants' daily driving distance ranged from 20 km to 250 km.

### Results

Descriptive statistics are represented in Table 2. According to Table 2, the mean age of the participants was 41 with a range from 21 to 62. Ninety two percent of the participants were married. The lowest degree of education was primary school and the highest education degree was college or above. The most indicated education level of the participants was high school (51%). The average seniority level of the participants was 18.81. Overall half of the participants indicated they worked 20 years or less in their department while the other participants stated they work 21 years or more in their department. Participants stated that they made about 125.64 km and drove vehicles overall four and half hour daily. When participants were asked about their seat belt use, the prevalence of self-reported seat belt use for the given conditions are 85% for always use seat belt, 70% for on short distances, 92% for on intercity routes, 89% for at high speed and in bad weather condition, 81% for while with my supervisor, and 84% for while using private vehicle. The results indicated that highest seat belt use falls in the situation of intercity routes as expected and as previous research conducted in Turkey indicated.

Table 3 presents the mean scores of participants' behaviors on test measures by seat-belt use. The result of the t-test analyses revealed significant differences between participants wearing seat belt and participants not wearing seat belt for "sensation seeking", "media interest", and "enforcement" scales in all models as expected. Participants wearing seat belt scored higher than participants not wearing seat belt on "media" and "enforcement" scales. However, participants not wearing seat belt rated significantly higher score for aggressiveness scale than participants wearing seat belt. The results indicated that there was a significant differences between the groups on aggressiveness in all models but "at high speed and in bad weather" model. Participants wearing seat belt indicated less aggressiveness score than participants not wearing seat belt. However, the results suggested no significant differences on risk perception scale between the groups.

Logistic regression analyses were used to examine factors affecting participants' seat belt use attitudes in two steps and in six models as shown in Table 4. In step one, only demographic variables age, education, and daily driving distance were entered in the

**Table 2. Descriptive Statistics of Participants (N=349)**

Variable		N	%	Mean	SD	Min	Max
Age	1 = ≤ 30 years	58	17	41.15	9.25	21	62
	2 = 31 - 40 years	114	33				
	3 = 41 - 50 years	115	33				
	4 ≥ 51 and above	62	19				
Marital Status	Married	322	92	1.08	.28	1	3
	Single	26	7				
	Widow	1	.3				
Education	Primary School	22	6	3.10	.99	1	5
	Secondary School	54	16				
	High School	177	51				
	Two Year College	59	17				
	College or Above	37	11				
Years of Experience	1 = ≤ 10 years	84	24	18.81	9.60	1	43
	2 = 11 - 20 years	129	37				
	3 = 21 - 30 years	103	30				
	4 = ≥ 31 years	33	10				
Daily Driving Distance	1 = ≤ 50 km	60	17	125.64	73.44	20	250
	2 = 51 - 100 km	123	35				
	3 = ≥ 101 km	166	48				
Daily Driving Time	0 = ≤ 4 hours	183	52	4.60	2.41	1	10
	1 = ≥ 5 hours	166	48				
Always Wear	0 = No	53	15	.85	.36	0	1
	1 = Yes	296	85				
During Short Distances	0 = No	106	30	.70	.46	0	1
	1 = Yes	243	70				
On Intercity Routes	0 = No	28	8	.92	.27	0	1
	1 = Yes	321	92				
At High Speed and in Bad Weather	0 = No	38	11	.89	.31	0	1
	1 = Yes	311	89				
While with My Supervisor	0 = No	67	19	.81	.39	0	1
	1 = Yes	282	81				
While Using Private Vehicle	0 = No	55	16	.84	.36	0	1
	1 = Yes	294	84				

models. However, none of the model was significant in step one. In step two, predictor variables of the study were entered in the models. The full models show that sensation seeking ( $\beta = .80$ ,  $SE = .06$ ,  $p < .001$ ) and media ( $\beta = 1.43$ ,  $SE = .09$ ,  $p < .001$ ) in “always wear” model; sensation seeking ( $\beta = .87$ ,  $SE = .05$ ,  $p < .01$ ), media ( $\beta = 1.15$ ,  $SE = .06$ ,  $p < .05$ ), and enforcement ( $\beta = 1.09$ ,  $SE = .04$ ,  $p < .05$ ) in “during short distances” model; education ( $\beta = 4.43$ ,  $SE = .71$ ,  $p < .05$ ), sensation seeking ( $\beta = .70$ ,  $SE = .08$ ,  $p < .001$ ) and media ( $\beta = 1.68$ ,  $SE = .14$ ,  $p < .001$ ) in “on intercity routes” model; sensation seeking ( $\beta = .79$ ,  $SE = .07$ ,  $p < .001$ ), media ( $\beta$

$= 1.64$ ,  $SE = .11$ ,  $p < .001$ ), and enforcement ( $\beta = 1.15$ ,  $SE = .05$ ,  $p < .01$ ) in “at high speed and in bad weather” model; aggressiveness ( $\beta = .75$ ,  $SE = .11$ ,  $p < .01$ ) and media ( $\beta = 1.22$ ,  $SE = .07$ ,  $p < .01$ ) in “while with my supervisor” model; and sensation seeking ( $\beta = .77$ ,  $SE = .12$ ,  $p < .001$ ), aggressiveness ( $\beta = .80$ ,  $SE = .08$ ,  $p < .05$ ), and media ( $\beta = 1.05$ ,  $SE = .05$ ,  $p < .001$ ) “while using private vehicle” model were significant predictors of participants seat belt use behavior. With regard the personal characteristics and participants’ risk perceptions, none of the factor was significant in any of the full model.

Table 3. T-Test Results for Seat Belt Use and Seat Belt Not Used Group Comparisons for Test Measures (N=349)

	Always Wear			During Short Distances			On Intercity Routes			Mean	Min	Max
	Not Used	Used	t	Not Used	Used	T	Not Used	Used	t			
Sensation Seeking	7.94 (3.22)	5.80 (2.21)	6.00***	6.93 (2.64)	5.78 (2.36)	3.86***	9.35 (3.30)	5.85 (2.21)	7.68***	13.87 (2.50)	4	16
Aggressiveness	3.45 (1.55)	2.93 (1.22)	2.76**	3.24 (1.38)	2.91 (1.23)	2.09*	3.82 (1.72)	2.94 (1.22)	3.54***	3.01 (1.29)	2	8
Risk Perception	.38 (.49)	.43 (.50)	-.71	.42 (.49)	.42 (.49)	-.15	.43 (.50)	.42 (.49)	.08	.42 (.49)	0	1
Media	6.54 (2.26)	8.41 (2.11)	-5.57***	7.44 (2.37)	8.41 (2.10)	-3.66***	5.86 (1.96)	8.32 (2.14)	-6.33***	8.12 (2.22)	3	12
Enforcement	11.87 (3.43)	13.22 (3.47)	-2.64**	12.06 (3.53)	13.44 (3.40)	-3.39***	10.86 (3.80)	13.21 (3.41)	-3.16**	13.02 (3.49)	4	16

  

	At High Speed and in Bad Weather			While with My Supervisor			While Using Private Vehicle			Mean	Min	Max
	Not Used	Used	t	Not Used	Used	T	Not Used	Used	t			
Sensation Seeking	8.26 (3.30)	5.87 (2.27)	5.81***	7.19 (3.03)	5.88 (2.30)	3.94***	7.98 (3.00)	5.79 (2.24)	6.29***	13.87 (2.50)	4	16
Aggressiveness	3.29 (1.39)	2.97 (1.27)	1.33	3.57 (1.55)	2.88 (1.18)	4.04***	3.65 (1.67)	2.89 (1.16)	4.15***	3.01 (1.29)	2	8
Risk Perception	.39 (.50)	.42 (.50)	-.35	.40 (.49)	.43 (.50)	-.34	.45 (.50)	.42 (.49)	.54	.42 (.49)	0	1
Media	5.97 (2.11)	8.39 (2.10)	-6.65***	7.16 (2.36)	8.35 (2.14)	-3.77***	6.73 (2.47)	8.38 (2.08)	-4.68***	8.12 (2.22)	3	12
Enforcement	10.63 (3.80)	13.31 (3.34)	-4.15***	12.24 (3.44)	13.20 (3.48)	-2.05*	11.87 (3.51)	13.23 (3.45)	-2.64**	13.02 (3.49)	4	16

\* = p < .05, \*\* = p < .01, \*\*\* = p < .001. Standard Deviations appear in parentheses below means

Table 4. Logistic Regression Analyses Predicting Seat Belt Use (N=349)

Variables	Always Wear						During Short Distances						On Intercity Routes					
	Model 1		Model 2		Model 1		Model 2		Model 1		Model 2		Model 1		Model 2			
	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE		
Constant	1.84	.82	6.30	1.20	1.40	3.33	1.49*	.65	4.42	.95	1.08	2.59	1.48*	1.11	4.40	.67	1.93	1.95
Age	.00	.02	1.00	-.01	.02	.99	-.02	.01	.98	-.03 <sup>a</sup>	.01	.97	.01	.02	1.01	-.01	.03	.99
Education	-.26*	.33	.77	-.32	.36	.72	.08	.27	1.09	.17	.28	1.18	1.30	.63	3.66	1.49*	.71	4.43
Daily Distance	.00	.00	1.00	-.00	.00	1.00	.00	.00	1.00	.00	.00	1.00	.00	.00	1.00	.00	.00	1.00
Sensation Seeking			-.22***	.06	.80				-.14**	.05	.87				-.35***	.08	.70	
Aggressiveness			-.10	.12	.90				-.11	.10	.89				-.21	.16	.81	
Risk Perception			.20	.34	1.22				.01	.25	1.01				-.32	.49	.73	
Media			.35***	.09	1.43				.14*	.06	1.15				.52***	.14	1.68	
Enforcement			.03	.05	1.03				.08*	.04	1.09				.11	.07	1.12	
Chi-Squared	.69				52.13***			1.86			33.95***			5.93			70.31***	
Cox & Snell	.00				.14			.01			.09			.02			.18	
Nagalkerke	.00				.24			.01			.13			.04			.43	

  

Variables	At High Speed and in Bad Weather						While with My Supervisor						While Using Private Vehicle					
	Model 1		Model 2		Model 1		Model 2		Model 1		Model 2		Model 1		Model 2			
	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE		
Constant	1.77 <sup>a</sup>	.95	5.89	-1.56	1.64	.21	1.93**	.74	6.86	1.82	1.26	6.17	1.18	.80	3.25	.00	.02	1.00
Age	.00	.02	1.00	-.01	.02	.99	.00	.02	1.00	-.01	.02	.99	.01	.02	1.01	.33	.38	1.40
Education	.41	.43	1.51	.55	.49	1.74	-.27	.30	.77	-.26	.32	.77	.29	.35	1.33	.00	.00	1.00
Daily Distance	.00	.00	1.00	.00	.00	1.00	.00	.00	1.00	.00	.00	1.00	.00	.00	1.00	-.20	.06	.82
Sensation Seeking			-.24***	.07	.79				-.10 <sup>a</sup>	.06	.91				-.26***	.12	.77	
Aggressiveness			.07	.16	1.07				-.29**	.11	.75				-.22*	.33	.80	
Risk Perception			-.01	.41	.99				.07	.29	1.07				.30	.08	1.34	
Media			.49***	.11	1.64				.20**	.07	1.22				.05***	.05	1.05	
Enforcement			.14**	.05	1.15				.04	.04	1.04				1.22	1.38	3.40	
Chi-Squared	1.04				64.60***			1.64			33.04***			1.27			53.15***	
Cox & Snell	.00				.17			.01			.09			.01			.14	
Nagalkerke	.01				.34			.01			.15			.01			.24	

<sup>a</sup>=p < .10, \* = p < .05, \*\* = p < .01, \*\*\* = p < .001.  
 education= 0= high school or less, 1= college or above; risk perception = 0=no, 1=yes



Aside from “while with my supervisor” model, sensation seeking is found negative and statistically significant in other models. Based on the results it could be argued that participants indicating higher levels of sensation seeking scores less likely to use seat belt. Further, the results suggest that participating traffic related seminars and programs on media was related to seat belt use in all models. In other words, those who follow those programs and seminars are more likely to use seat belt than those who do not follow seminars and programs on media.

Other factors being related to participants seat belt use were enforcement, aggressiveness, and education. The results indicated that participants scored high on enforcement scale were more likely to use seat belt in “during short distances” and “at high speed and bad weather” models; participants indicating higher scores on aggressiveness scale were less likely to use seat belt in “while with my supervisor” and “while using private vehicle” models; and participants having college or higher degree were more likely to use seat belt in “on intercity routes” model.

## Discussion

According to Jonah (1986), people who don't wear seatbelts are the drivers who tend to be greater risk takers and more likely to involve more traffic crashes and other traffic violations. Thus, it could be argued that drivers' risky driving behaviors could be reduced in general by enhancing the prevalence of seat belt use among them. Most of the previous research on seat belt use did not control the various situations we have studied in this study.

One of the most important result of this study is that when these conditions are examined, drivers' attitudes toward seat belt use and factors affecting those attitudes vary. Our findings are partly consistent with the model. The results revealed that sensation seeking is an important factor related to drivers' seat belt use. As expected, participants showing higher scores on sensation seeking scale were less likely to use seat belt. Another predictor of seat belt use having been found in this study is participants' attitudes toward traffic related seminars and programs on media. Drivers following or attaining traffic related programs are more likely to use seat belt than those who do not follow or attain programs on traffic.

However, we find a partial support for predictors including aggressiveness and enforcement. We found

also no significant relationship between seat belt use behaviors and drivers' risk perception. Further, in general none of the demographic variables contributed the models significantly. This is not to say that the variables aggressiveness and enforcement and other demographic characteristics have no effect on participants' seat belt use behaviors. We did not measure indirect effect of these variables on the seat belt use through other measures. Therefore, one of the point that future research need to examine is such relationship among study variables.

The primary implication of the research is that organizations can arrange seminars or in-service training for all staff especially drivers to cope with the root causes of their risky driving behaviors. Second, since the drivers' attitudes toward seat belt use and factors affecting those attitudes differ in various conditions, policy makers and researchers should consider different intervention programs and regulations to increase the prevalence of seat belt use for different situations. Further, those interventions may include media programs and seminars on traffic safety. Organizations may encourage their staff to follow and take part in those programs. By doing so, drivers and staff may change their attitudes towards risky driving behaviors. Ajzen (2005) noted that the more people engage in intentions toward their respective behavior, the more likely their behaviors become routine or habitual. Thus, the ultimate aim of those interventions should be drivers to use seatbelt as their routine. Finally, considering the increasing number of cars and vehicles on the road, more research must be conducted on drivers' risky driving behaviors.

This study has a couple of limitations. First, it should be noted that the existing literature on validity of self-reported seatbelt use suggest that drivers traditionally tend to over report their seatbelt use (Block, 2002; Ozkan et al., 2012). In other words the actual seatbelt use of the drivers are lower than their self-reported seatbelt use. We acknowledged that participants of the study might have over reported their seat-belt use. Further research could include drivers' actual seat belt use behaviors to examine predictors affecting drivers' risky driving behaviors including seat belt use. Another limitation of this study is that although this study included a wide variety of public organizations, researchers could include other departments to make more diverse population.

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**Appendix**

Variables	A-SA / %	M / SD	Factor Loading
<b>Sensation Seeking</b>			
I do avoid the competition in traffic (R)	61 / 18	1.62 / .98	.70
I keep sufficient following distance (R)	34 / 10	1.44 / .74	.80
I do avoid unnecessary risks (R)	35 / 10	1.41 / .75	.86
I conform to the speed limits (R)	55 / 16	1.65 / .83	.70
<b>Cronbach's Alpha</b>			.75
<b>Aggressiveness</b>			
I horn to indicate my annoyance	39 / 11	1.70 / .80	.83
When I get angry at a driver, I give a chase	24 / 7	1.31 / .76	.83
<b>Cronbach's Alpha</b>			.54
<b>Risk Perceptions</b>			
It is very likely that I involve traffic accident in the future	146 / 42	2.38 / .91	
<b>Media</b>			
As a driver I always interested in traffic related media campaigns	215 / 62	2.79 / .94	.81
As a driver I try to follow seminars on drivers	147 / 42	2.47 / .93	.85
As a driver I watch tv programs on safe driving	212 / 61	2.87 / .90	.75
<b>Cronbach's Alpha</b>			.73
<b>Enforcement</b>			
I obey traffic rules if I see a police car watching traffic from a hidden position	265 / 76	3.10 / 1.08	.88
I obey traffic rules when I see a radar speed trap	259 / 74	3.07 / 1.07	.86
I obey traffic rules when a police car is driving in traffic close to me	301 / 86	3.43 / .93	.89
I obey the traffic rules when I notice cameras	301 / 86	3.42 / .94	.86
<b>Cronbach's Alpha</b>			.89

R= Reverse; A/SA= Agree/Strongly Agree