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Research Article

FIELD STUDY ON KNOWLEDGE, ATTITUDES AND BEHAVIORS REGARDING VIOLENCE IN TRAFFIC AND ROAD RAGE

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ABSTRACT

Context and Aim: The road rage can be defined as the anger occurred while driving and its level can be associated with aggressive and risky driving, loss of concentration and vehicular control, and near accident misses on traffic. The aim of this study is to measure whether the attitudes and behaviors of people in the face of incidents in traffic are covered by road rage and also whether people are aware of their legal rights when they encounter violence in traffic.

Methodology: In this study, the factorability of the 14-item short form of Driver Anger Scale (DAS) was investigated among 421 drivers from Turkish population, and SPSS program has been used in the analyses.

Findings: Drivers had more difficulty in controlling their anger and showed aggressive behaviors when they felt they were at risk and could control their anger better in cases of impatience, such as waiting for a vehicle to park. The percentage of those who honk in traffic and of those who flash their lights when they get angry in traffic was 71% and 57%, respectively, which suggest that the acts of honking, flashing lights have become normal and are not considered as acts of violence. While 75% of the surveyed drivers, and 80% of the non-lawyers surveyed drivers stated that they did not know their legal rights when they encountered violence in traffic, 81% of the lawyers who participated in the research stated that they knew their legal rights.

Conclusion: Violence in traffic ranges from injury to killing, from insulting to sexual harassment, from endangering traffic safety to damage to property. Although there are some regulations proposed in the legal dimension to combat violence in traffic and suggestions to enable drivers to control their anger, the main solution is increasing the level of culture and education.

Keywords: Traffic Psychology, Driver, Anger, Empathy

1. INTRODUCTION

One of the most common forms of violence, which we have begun to encounter frequently, and has therefore become routine in our daily lives, and which may engulf even a normally peaceful person is the "Violence in Traffic". One of the most critical triggers of the violence in traffic may be indicated as the "road rage". Meaning of the term "rage" may vary depending on the people, situations, and cultures.

Violence in traffic appears in the form of physical, emotional and even sexual violence. A wide range of examples of violence in traffic from killing to injuring, threatening to insulting, violating traffic safety to driving up close to bumper of another driver of opposite sex in traffic. "Road rage" can be said to be the most important trigger of violence in traffic, which can have such important consequences.

The aim of this study is, upon putting forth an overall description of the components, causes, modes of expression of the road rage, to measure whether the attitudes and behaviors of people in the face of incidents in traffic are covered by road rage, and also whether people are aware of their legal rights in case they encounter violence in traffic, and in view of the outcomes attained therefrom, to develop suggestions regarding the control of the road rage.

2. LITERATURE REVIEW

2.1. General Concepts

Violence is a phenomenon that exists in daily life in the 21st century and threatens us in many dimensions (Polat, 2015). Road rage is defined as an incident where a driver or passenger attempts to kill, injure, intimidate another driver or passenger, or to damage their vehicle (Smart and Mann, 2003). Road rage is an important problem of daily life especially in big cities where traffic problems are experienced.

Causes of the road rage and violence: Research shows that people with high levels of anger get angry more easily and quickly in traffic (Deffenbacher *et al*, 1994). It is emphasized that people who have continuous anger as a personality trait also have a high tendency to get angry while driving (Deffenbacher, 2003). Research has found that high anger drivers are more aggressive than others, behave in a way that is risky and may cause a fight and use, to a lesser extent, constructive manners of expression like thinking of consequences before responding to the other driver (Deffenbacher *et al*, 2003).

A Turkish study conducted on professional drivers reported that there are positive significant correlations between risky driving behavior and anger (Durak Batıgün & Yasak, 2015). Another study conducted in Turkey suggested that being fined, presence of a traffic police, driver disrespect, rude behaviors, slow driving also cause road rage (Eşiyok *et al*, 2007).

Modes of Expression of the road rage and violence: Drivers are said to reveal their road rage in four different ways, being verbal expression, physical expression, use of the vehicle to express anger and adaptive and constructive expression (Deffenbacher *et al*, 2002). It is possible to exemplify these four basic modes of expression with the following table: (Table-1)

Table-1: Modes of Expressing Rage

Manner of Expression	Examples	The relationship between the manner of expression and anger
Verbal	<ul style="list-style-type: none"> ▪ Blasphemy, insult... ▪ "Who are you?" ▪ "Do you know who I am?" ▪ "Did you get your license from a grocery store?" 	<ul style="list-style-type: none"> ▪ Correlates positively with anger. This manner of expression increases with increasing anger.
Physical	<ul style="list-style-type: none"> ▪ Hand gestures, facial expressions, glaring... ▪ Fighting, knocking about, kicking, punching... ▪ Beating with a baseball bat ▪ Beating with a crowbar ▪ Stabbing, ▪ Injuring/killing with a firearm 	<ul style="list-style-type: none"> ▪ Correlates positively with anger. This manner of expression increases with increasing anger.
With vehicle	<ul style="list-style-type: none"> ▪ Flashing the headlights, persistent horn honking... ▪ Driving up close to other driver's bumper ▪ Not giving way ▪ Blocking ▪ Tailgating ▪ Driving in such a way to decrease driving safety of the other driver 	<ul style="list-style-type: none"> ▪ Correlates positively with anger. This manner of expression increases with increasing anger.
Adaptive and constructive	<ul style="list-style-type: none"> ▪ Driving more carefully ▪ Think about the consequences before responding to the other driver ▪ Ignoring the behavior of the other driver 	<ul style="list-style-type: none"> ▪ Correlates negatively with anger. This manner of expression increases with decreasing anger.

These behaviors, which are the cause of road rage, are interestingly consequences of road rage. For example, a driver who got angry with another driver who has driven up close to his/her bumper and overtaken him/her may tailgate the latter or impede the latter's progress. In other words, the manner of expression that has caused road rage may also be expressed as a result of road rage and thus the cycle of violence in traffic is almost realized.

2.2. Traffic Anger and Social Dimension

While the relationship between road rage and risky behavior has been extensively investigated in many studies, little is known about how drivers express and control anger when driving (Biaassoni et al., 2016). It is known that anger is behind aggression (Averill 1983). From this point of view, it is possible to say that road rage lies behind traffic violence.

Expression of anger varies from person to person, from situation to situation and from culture to culture (Ramirez et al., 2002). In other words, during an incident in traffic, some people will get angry and some won't, and a person gets angry in certain cases and doesn't in others. For example, if a person is sleepless and has been driving for a very long time, it'll be easier for him/her to get angry. In addition, one's traffic culture will have a positive or negative effect on road rage. This variation from person to person can be explained by the fact that people in whom anger is present as a personality trait get angry more easily and quickly in traffic. Getting angry depending on the situation can be exemplified by the fact that if a person feels that s/he and his/her relatives in the same vehicle are at risk, s/he gets angry more easily. The variation by culture can be explained by the fact that a society gives a variety of reactions to incidents in traffic according to its general culture and educational structure, including traffic culture. Honking and flashing lights can be included in the context of anger in advanced societies, whereas they can be seen as a normal everyday phenomenon which is not considered violence at all in developing or underdeveloped societies. In societies where there is gender

inequality, it may be possible to observe different behaviors depending on whether the driver is female or male. From this perspective, in societies where gender equality cannot be fully experienced, the sex of the driver to whose bumper the other driver drives up close, who the other driver wants to intimidate by tailgating, in other words, who suffers from sexual and psychological violence, can be said to be female and the gender who suffers from physical violence more can be said to be male.

In some societies, men are considered to be short-tempered and it is normal for a man to rough up, which in turn may trigger incidents of violence in traffic. Studies show that driving fast is associated with age and gender, and that women act less aggressively than men while driving (Shinar,1998; Günindi Ersöz,2018).

Sociologists state that violence is inevitable where there are injustices and inequalities, considering the fact that violence occurs in a social environment. With their cosmopolitan structures, cities are home to millions of people whose language, religion, beliefs, views, lifestyles, world views, education and income levels, gender, age and ethnicity are different from each other. It is normal for such a heterogeneous structure to have inequalities and injustices. This diversity, combined with the lack of traffic rules and supervision, sets the stage for violence.

Lack of inspection and not punishing violations such as unsafe lane changing, improper overtaking, endangering other vehicles while driving, generating excessive amounts of noise and not obeying signaling rules lead to raise anger and eventually violence. Therefore, the lack of both self-control and public control are the causes of violent behaviors in traffic (Günindi Ersöz,2018). Drivers easily engage in acts in traffic or say those words in the car which they would normally avoid when they are face to face with people. The vehicle provides a protective barrier, gives a sense of power and anonymity to the driver and this power is misused and turned into violence, which should also be discussed from a sociological perspective.

2.3. *Legal dimension of the road rage and violence:*

Although traffic rage has not been defined as a specific type of crime within the scope of Turkish Penal Law (TPL), Art. 179 thereof regulates the crime of “jeopardizing the traffic safety”. Paragraph 2 of Article 179 of TPL says "Any person who directs and controls a land, sea, air or railway transportation vehicle in such a way to risk the life, health or property of others shall be sentenced to a penalty of imprisonment for a term of up to two years". The offense of endangering traffic safety is one of the crimes that can be committed intentionally and is not within the scope of reconciliation. It is not one of the offenses subjects to complaint so it is investigated ex officio. The term of limitation of action of this offense is 8 years. In addition to article 179 of TPL, according to the resulting consequences, violence behaviors in traffic are also covered by offenses including killing (article 81, TPL), injury (article 86, TPL), sexual harassment (article 105, TPL), threat (article 106, TPL), and insult (Article 125, TPL).

Furthermore, there are several administrative fines and sanctions applicable under the Highway Traffic Law No.2918 in order to increase the highway traffic safety. These fines and sanctions are not only intended to maintain the highway traffic safety, but also applicable to the manners of expression of the traffic violence and rage. There is no official or statistical data on traffic violence or road rage in Turkey. However, there are some data and statistics that can be indirectly associated with traffic violence and road rage. Road rage results in risky behaviors that cause accidents so statistics of accidents involving death or personal injury will give a general idea on the subject. According to 2017 statistics (Police Department Directorate-General, Traffic, 2018), there were 1,202,716 accidents in Turkey in 2017, in which a total of 7,427 people were killed and 300,383 people were injured.

In view of the cases reflected in our press and submitted to our jurisdiction, alongside the allegations of the crimes of insult, threat, curse, one may come across cases of injuring/killing by means of numerous weapons, such as knife, pistol, rifle, crowbar, baseball bat (HaberTürk, 19.05.2018), even a case of biting and tearing one's ear in the traffic fights (Hürriyet Newspaper, 07.11.2017). It is not only thought-provoking, but also a matter of concern that, Turkey is the fourth country worldwide where baseball bats, belonging to a sport rules of which are not known therein, let alone being played, are sold (Vatan Newspaper, 29.06.2016).

While traffic violence is experienced in our country, just like anywhere around the globe, in worldwide practice, there are certain legal arrangements either proposed, or enacted for combating violence in traffic (Walters et al, 2000). For instance, such arrangements, including regulation of the penal liability, imposition of imprisonment against the cases of traffic rage, enacting such regulations, causing drop of points from the driving license scoring, or even seizure of driving license for a certain period according to the graveness of the case, imposition of aggravated penalties against the repetition of the traffic violence offences, or against those having resulted serious injuries or death, imposition of respective penalties from the top limit, inserting trainings intended for anger control and management within the trainings intended for obtaining driving license may be conducted in this respect.

3. METHODOLOGY

An abridged form of 14 questions extracted from the Driver Anger Scale (Deffenbacher et al, 1994), as being one of the most common international scales on road rage, has been translated into Turkish, and thereupon tested for validity and reliability, and finally applied to a total of 421 randomly selected drivers in order to measure whether the attitudes and behaviors being displayed by the drivers in the traffic incidents fall within the scope of the traffic rage. Having been created as an outcome of the analysis applied by Deffenbacher et al to 1500 university students in USA in 1994, DAS has thereupon expanded its field of application worldwide.

This questionnaire study consists of a total of 3 sections and 28 questions, namely the first section containing 9 demographical and definitive questions, the second section containing 5 questions intended for measuring how traffic rage behavior is displayed, and whether one knows his/her legal rights when he/she encounters with traffic rage, and the final third section containing the 14 questions included in the abridged form of Driver Anger Scale (DAS) (Deffenbacher et al, 1994) developed by Deffenbacher et al. The questionnaire was performed with 421 people, having filled it in via electronic environment as volunteers. While % 52,3 of the participants (n=220) consisted of females, and % 47,7 thereof (n=202) consisted of males, % 75,8 of these people were residing in İstanbul. While a great majority of the participants were within the age range of 26-50 (% 44,4 thereof were within the age range of 26-40, and %33 thereof were within the age range of 41-50), % 94,5 of the same were university graduates. Nearly half (% 51,1) of the responders had driving experience from the age 16 and above. While % 47,7 of the participants declared that they used to drive in between their works and homes on the weekdays, the percentage of those having declared that they drove at any and all hours of the day was % 32,5. Demographical characteristics of the participants are given in details in the table below. (*Table-2*)

Table 2. Participants demographics and descriptive

Participants	Frequency	Percentage (%)	Cumulative Percent (%)
<i>Gender</i>			
Female	220	52.3	52.3
Male	201	47.7	100.0
Total	421	100.0	
<i>Age</i>			
18-25 years	12	2.9	2.9
26-40 years	187	44.4	47.3
41-50 years	139	33.0	80.3
51-60 years	61	14.5	94.8
61+ years	22	5.2	100.0
Total	421	100.0	
<i>Education</i>			
<University	23	5.5	5.5
University	398	94.5	100.0
Total	421	100.0	
<i>Profession</i>			
Lawyer	31	7.4	7.4
Other	136	92.6	100.0
Total	421	100.0	
<i>City Lived</i>			
Istanbul	319	75.8	24.2
Other	102	24.2	100.0
Total	421	100.0	
<i>Driving Experience</i>			
0-5 years	78	18.5	18.5
6-15 years	128	30.4	48.9
16+ years	215	51.1	100.0
Total	421	100.0	
<i>Car Type</i>			
Basic Personal Car	382	90.7	90.7
Other	39	9.3	100.0
Total	421	100.0	
<i>Age of Car</i>			
0-3 year	170	40.4	52.0
3-10 years	212	50.4	90.7
10+ years	39	9.3	100.0
Total	421	100.0	
<i>Car Usage Period</i>			
Every hours of the day	137	32.5	32.5
Weekdays btw home and work	201	47.7	80.3
Weekends only	83	19.7	100.0
Total	421	100.0	

4. FINDINGS

Out of the participants, %94,5 (n=398) of whom were university graduates, %2,6 (n=11) thereof declared that they were exposed to physical violence in the traffic. Out of these 11 people, %18,2 (n=2) were female, and %81,8 (n=9) thereof were males. Among those having declared that their vehicles were cornered, %58,5 thereof (n=158) were females, as a fact that may be interpreted as women keep on being harassed also in the traffic. This percentage is even higher among the females (n=45, %68) out of the participants having declared that cornering was the type of violence that they used to encounter the most (n=66). Chi-squared statistics is significant at $p < 0,001$ level. (Tablo-3)

Table-3: Table on the frequency comparison of the manners of expression of anger according to gender

	Gender									
	Female				Male				Total	
	n	% Within the Option	% Within the Gender	% Within the Total	N	% Within the Option	% Within the Gender	% Within the Total	n	% Within the Grand Total
Flashing Headlights	163	52,9%	74,1%	38,7%	145	47,1%	72,1%	34,4%	308	73,2%
Flashing the brights	77	45,0%	35,0%	18,3%	94	55,0%	46,8%	22,3%	171	40,6%
Horn honking	172	51,0%	78,2%	40,9%	165	49,0%	82,1%	39,2%	337	80,0%
Cornering the vehicle	158	58,5%	71,8%	37,5%	112	41,5%	55,7%	26,6%	270	64,1%
Cursing	54	45,4%	24,5%	12,8%	65	54,6%	32,3%	15,4%	119	28,3%
Blocking the road of the vehicle	40	51,9%	18,2%	9,5%	37	48,1%	18,4%	8,8%	77	18,3%
Causing terror by tailgating	98	51,6%	44,5%	23,3%	92	48,4%	45,8%	21,9%	190	45,1%
Physical violence	2	18,2%	,9%	,5%	9	81,8%	4,5%	2,1%	11	2,6%

$$\chi^2(8, n=421) = 27,54, p < .001$$

In view of chi-square test, the relationship between the drivers' anger expressions and gender has been found to be meaningful; $\chi^2(3, n=420) = 16.50, p < .001$ Cramer's V = ,20. As a result of the post-hoc test performed, it has been determined that, the males' probability to display their anger by their "vehicles" is nearly two times higher than that of the females (OR=1/0,47=2,11). On the other hand, it has been determined that, the female drivers' probability to display their anger in the traffic "adaptively/constructively" is also two times higher than that of the males (OR=1,79). These two outcomes are meaningful at Bonneferoni adjusted $p < 0,00625$ level.

The percentage of those who honk in traffic and of those who flash their lights when they get angry in traffic was 71% and 57%, respectively, which suggest that the acts of honking,

flashing lights have become normal and are not considered as acts of violence. While 75% of the surveyed drivers stated that they did not know their legal rights when they encountered violence in traffic, 81% of the lawyers who participated in the research stated that they knew their legal rights.

Factor analysis was performed in order to determine the validity of 14-article abridged DAS form also for the drivers in Turkey. 5 factors have been found out from the grouping of articles with eigenvalues above 0.7, and with charging values above .30 that describe %71 of the total variance. Having the outcomes grouped under 5 subgroups, namely “impatience” (3 articles), “disrespect” (4 articles), “aggressive behavior” (3 articles), “presence of traffic police” (2 articles), and “disruption of the traffic” (2 articles), average values, standard deviations, as well as the Cronbach’s Alfa inner and total DAS reliability coefficients of the factors are given in Table-4. (Table-4). While the study has put forth outcomes like those of the original DAS, the Cronbach’s Alfa inner reliability coefficients range in between 0.70 and 0.78, and the total reliability coefficient, as being 0.88, reveals conformity with the original study.

Table-4: Mean scores, SDs of total and each DAS items and reliability of subscales (Cronbach’s α).

Item No.	Item causing driving anger	Mean	SD
<i>Impatience ($\alpha = .74$)</i>		2.30	0.91
7	Someone is slow in parking and is holding up traffic	2.14	1.10
8	You are stuck in a traffic jam	2.46	1.16
11	A cyclist is riding in the middle of the lane and is slowing traffic	2.30	1.11
<i>Discourtesy ($\alpha = .73$)</i>		3.07	0.85
1	Someone is weaving in and out of traffic	3.00	1.20
2	A slow vehicle on a mountain road will not pull over and let people by	2.88	1.10
3	Someone backs right out in front of you without looking	3.52	1.09
6	Someone speeds up when your try to pass him/her	2.86	1.19
<i>Hostile Gesture ($\alpha = .78$)</i>		3.02	0.99
4	Someone flashes the brights about your driving (*)	2.75	1.13
9	Someone makes an obscene gesture toward you about your driving	3.45	1.28
10	Someone honks at you about your driving	2.85	1.15
<i>Police Presence ($\alpha = .75$)</i>		1.88	0.94
5	You pass a radar speed trap	2.14	1.13
12	A police officer pulls you over	1.62	0.96
<i>Traffic Obstruction ($\alpha = .70$)</i>		2.58	1.07
13	A truck kicks up sand or gravel on the car you are driving	2.88	1.26
14	You are driving behind a large truck and you cannot see around it	2.29	1.17
<i>DAS Total ($\alpha = .88$)</i>		2.65	0.73

(*) This question is included under the category of violation of rule, as going against the red light or stop sign. However, it is used as the option of flashing the headlights, as being practiced more commonly in Turkey.

While the study has brought along outcomes similar to the original DAS, Cronbach's Alfa inner consistency coefficients thereof, ranging in between 0.70 and 0.78, also reveals conformity with the original study.

The study has also been compared with those of various countries, which apply DAS questionnaire. (Table-5)

Table-5: Comparison of the outcomes of DAS questionnaire

DAS subscales	USA Deffenbacher (1994)		UK Lajunen (1998)		New Zealand Sullman (2006&2013)		Malaysia Kamarudin (2017)		Turkey Yasak (2009)		Turkey The present study (2019)	
	Number of questions	<i>x</i>	Number of questions	<i>x</i>	Number of questions	<i>x</i>	Number of questions	<i>x</i>	Number of questions	<i>x</i>	Number of questions	<i>x</i> (SS)
Disrespect	9	3,9	9	2,7	9	3,5	4	3,8	9	3,6	3	2,9 (0,86)
Disrupting the traffic	7	3,3	7	2,0	7	2,7	4	3,2	7	3,1	3	2,5 (0,96)
Aggressive behavior	3	3,2	3	2,3	3	2,7	4	3,5	3	3,4	3	3,0 (0,99)
Driving slowly	6	3,2	6	2,0	6	2,8	4	3,3	6	2,9	2	2,5 (0,90)
Presence of the traffic police	4	3,0	4	1,4	4	1,9	4	2,1	4	2,2	2	1,9 (0,94)
Breach of rule	4	2,7	4	2,3	4	3,3	4	3,3	4	3,5	1	3,0 (1,20)
DAS Total	33	3,2	33	2,1	33	2,8	-	-	33	3,1		
DAS Total abridged form	14	3,4	21	2,4	14	2,7	24	3,2	-	-	14	2,65 (0,73)

x= Average, SS=Standard deviation

Accordingly; while the highest three sub-tools of this study's sample are "Aggressive Behaviors (*x*=3.0, SD = 0.99)", "Violation of Rule" (*x*=3.0, SD = 1.20)" and "Disrespect" (*x*=2.9, SS = 0.86), the lowest thereof is the "Presence of Traffic Police" (*x*=1.9, SS = 0.94), these outcomes conform with those attained from the questionnaires performed by Yasak et al (Yasak et al, 2009) for Turkey, by Lajunen et al (Lajunen et al, 1998) for UK, by U. Sullman et al (U. Sullman et al, 2006) for New Zealand, and with those attained from the questionnaire performed by Kamarudin et al (Kamarudin et al, 2017) for Malaysia. In this study, the average DAS score for the whole abridged form was *x*=2.65, SS = 0.73. This finding is at a level comparable to those of UK and New Zealand. As having already been reported by Yasak et al, there is a difference (*x*=1.9, *x*=3.0) between the Turkish and American drivers in terms of average "Presence of Traffic Police" scores. There is also a difference (*x*=2.9, *x*=3.9) between the Turkish and American drivers in terms of "Disrespect" averages.

It has been examined how the scores attained from DAS subscales vary according to the variables of gender, age, and driving experience (for how many years has the driver been driving). Multivariate Analysis of Variance (MANOVA) was applied in order to ascertain the impacts of the age (divided into five groups) and driving experience (divided into three groups) variables on the DAS subscales.

As a result of the analysis, age has been found to have basic impact on the DAS sub-dimensions of "Disrespect", "Aggressive Behavior" and "Traffic Disruption" ($F(20, 1660) = 2.99, p < .001$; Pillai's Trace = .14; $\eta^2 = .035$). According to the outcomes of the Post Hoc test

performed, it has been found out that, the age group of 18-25 attained meaningfully higher scores than those of any and all other age groups in the DAS subscale of “Traffic Disruption”, and that there is negative correlation between age and driver’s rage.

As a result of the analysis, age has been found to have basic impact on the DAS sub-dimensions of “Disrespect”, “Aggressive Behavior” and “Traffic Disruption” ($F(10, 830) = 4.41, p < .001$; Pillai's Trace = .10; $\eta^2 = .05$). According to the outcomes of the Post Hoc test performed, it has been found out that, those with driving experience of 0-5 years attained meaningfully higher scores than those with driving experience of 6-15 years, those with driving experience of 6-15 years attained higher scores than those with driving experience of 16 years and longer in the DAS subscales of “Disrespect” and “Aggressive Behavior”, and that those with driving experience of 0-5 years attained meaningfully higher scores than those with driving experience of 16 years and longer in the DAS subscale of “Traffic Disruption”, and that there is negative correlation between driving experience and driver’s rage.

As a result of the analysis, no meaningful basic impact of gender has been found on the subscales and overall scores of DAS.

While low DAS score was deemed as the level lower than the first quarter of the overall DAS score attained from the questionnaire, and the gender, educational level, and whether one knows his/her legal rights when he/she encounters violence in the traffic were measured by means of logistic regression analysis, and it has thereby been found out that, those who know their rights when they encounter violence in the traffic are ranked in a lower DAS level group with an approximately 3 times higher probability in comparison to those without the same knowledge ($p < 0.001$). Such an outcome points to the fact that, those with knowledge regarding their legal rights and responsibilities are prone to keep their anger under control in cases when they may get angry.

5. CONCLUSION

It has been concluded that, DAS driver's rage scale may be adapted reliably with the five-factor structure having been adapted to Turkey. It has been ascertained that, age, driving experience, and knowing of one's legal rights are in negative relation with the driver's rage. In view of the fact that the participants that are aware of their legal rights tend to get angry less in the traffic, and to be able to control their anger, this suggests the importance of undergoing training on this matter, and of focusing on the youth and those with less driving experience. In order to lower the violence in the traffic, it has been suggested to multiply the trainings, in which it is reminded that even a moment of traffic rage may cause irreversible consequences, and which are intended to popularize adaptive/constructive manners of expression, to instill traffic trainings and traffic culture to the children at elementary school level, to create changes in the conception of traffic culture, to develop both joyful and instructive plays/applications that are in line with the advancing technology, to conduct effective audits, to enact legal regulations that impose deterrent penalties, to multiply the hotlines that may easily be accessible to those having encountered traffic violence, and to insert trainings intended to control traffic rage within the trainings for obtaining driving license. Violence in traffic ranges from injury to killing, from insulting to sexual harassment, from endangering traffic safety to damage to property. Although there are some regulations proposed in the legal dimension to combat violence in traffic and suggestions to enable drivers to control their anger, the solution to the problem is increasing the level of culture and education. It is observed that tools including knives, firearms, crowbar and even baseball bats are used during traffic arguments and fights where traffic violence takes place. The use of firearms in traffic fights both in Turkey and worldwide makes us feel the importance of individual disarmament.

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