ATTITUDES OF ROAD USERS on Hazards and Risks in Traffic in Serbia in 2017
INTRODUCTION

Road Traffic Safety Agency implemented the project “Investigating the Attitudes of Road Users on Hazards and Risks in Traffic in Serbia” in 2017. The purpose of the research is to determine the attitudes and self-reported behavior of road users in relation to road transport risks, assess the spectrum of attitudes - from support to conflict with regulations and safeguards, examining the personal and social acceptability of certain traffic behaviors, the perception of traffic coercion, and the opinion on activities that should be taken into consideration in improving the level of traffic safety.

The results of the research should provide important information to decision-makers, both at national and local level, to identify negative attitudes of participants in traffic and to plan activities for their change and improvement. A comprehensive work that is required on improving the knowledge, attitudes and behavior of the participants in traffic, should result in efficient and lasting traffic safety improvements.

The project included a survey of attitudes and reported behaviors for:
- Passenger vehicles drivers,
- Motorcyclists and
- Non-motorized traffic participants
at national level (Republic of Serbia), and at the police department level (PD) of the Republic of Serbia.

The research was conducted according to the ESRA methodology that provides an opportunity for comparison with other European countries which carried out research according to the same methodology.
THE SAMPLE

The sample consists of 12,150 respondents, i.e., 450 respondents per one police department unit (PD) and includes:

- 300 passenger vehicle drivers,
- 50 motorcyclists and
- 100 non-motorized traffic participants (pedestrians, cyclists and public transport users).

The sample was stratified by age and included three age groups: 18-34; 35-54 and 55+. For the determination of attitudes in the territory of the Republic of Serbia, a weighting factor of the population size was used. The weighting factor appreciates the fact that police departments have different populations size and thus adjusts the size of the sample to ensure that each police department is represented in proportion to the size of the population in general. The sample was obtained in the period between 01.08.2017. and 31.08.2017.
RESEARCH RESULTS

The results of the research were calculated and shown for all police departments individually, as well as for the territory of the Republic of Serbia, in total. The attitudes of traffic participants have been explored through issues that have been systematized in several topics:

- Concerns about traffic safety
- Acceptability of unsafe behavior in traffic
- Support to traffic safety measures
- Self-reported behavior
- Attitudes towards traffic safety
- Perception of risks and contributing factors to the occurrence of traffic accidents
- Behavior of other traffic participants
- Participation in traffic accidents
- Traffic compulsion

In addition, unique grades have been identified for a group of questions regarding driving under the influence of alcohol, for a group of questions regarding attitudes on speed, for a group of questions regarding attitudes on the use of seat belts, child car seats and helmets, as well as a group of questions regarding attitudes on distractions while driving.

In addition, the attitudes of participants in the traffic are presented separately, for different categories of traffic participants, as follows:

- Attitude of passenger car drivers
- Attitude of motorcyclists
- Attitudes of non-motorized traffic participants
Concerns about Traffic Safety

Participants in traffic have answered the question on how concerned they were about specific social issues, including the traffic safety. Respondents expressed the level of their concern using the 4-fold Likert scale on traffic accidents, unemployment, traffic jams, health care standards, environmental pollution and crime rates.

The results show that 48.6% of the respondents are very concerned about the problem of traffic accidents. Compared to other problems, the concern for traffic safety is similar to the unemployment problem (47.8% very worried) and the health care standard (49.5% very worried), while the least concern was for traffic congestions (26.8% is very worried).
Acceptability of unsafe behavior in traffic

The research that was conducted included the expressed views of traffic participants and their opinion on how much some certain unsafe behavior in traffic is acceptable in society. The results show that driving a vehicle after the consumption of illegal drugs or alcohol is the least acceptable risky behavior in traffic. On the other hand, overspeeding of 20 km/h over the speed limit on the highway is the most acceptable one (57.6%), as well as the transportation of passengers who do not use the rear seat belts in passenger vehicles (48.2%).

<table>
<thead>
<tr>
<th>Activity</th>
<th>Acceptable</th>
<th>Partly acceptable</th>
<th>None</th>
<th>Partly not acceptable</th>
<th>Not acceptable</th>
</tr>
</thead>
<tbody>
<tr>
<td>A pedestrian crosses the carriageway while a 'don’t walk' signal is on</td>
<td>49.1%</td>
<td>16.5%</td>
<td>13.7%</td>
<td>10.3%</td>
<td>10.4%</td>
</tr>
<tr>
<td>When crossing the carriageway, a pedestrian uses the headphones</td>
<td>35.4%</td>
<td>17.0%</td>
<td>14.2%</td>
<td>14.0%</td>
<td>19.3%</td>
</tr>
<tr>
<td>When crossing the carriageway, a pedestrian uses a mobile phone</td>
<td>32.5%</td>
<td>17.9%</td>
<td>15.6%</td>
<td>14.6%</td>
<td>19.4%</td>
</tr>
<tr>
<td>A pedestrian crosses the carriageway outside the pedestrian crossing</td>
<td>26.4%</td>
<td>18.2%</td>
<td>19.1%</td>
<td>14.8%</td>
<td>21.4%</td>
</tr>
<tr>
<td>Motorcyclists ride their motorbikes too fast for urban conditions</td>
<td>60.0%</td>
<td>16.4%</td>
<td>11.9%</td>
<td>6.6%</td>
<td>5.1%</td>
</tr>
<tr>
<td>A motorcyclist does not use the protection helmet</td>
<td>44.0%</td>
<td>17.6%</td>
<td>17.1%</td>
<td>9.9%</td>
<td>11.5%</td>
</tr>
<tr>
<td>Driver carries a child without using a child car seat</td>
<td>48.0%</td>
<td>18.2%</td>
<td>14.9%</td>
<td>9.7%</td>
<td>9.2%</td>
</tr>
<tr>
<td>Driver does not use the seat belt</td>
<td>37.8%</td>
<td>20.7%</td>
<td>18.2%</td>
<td>12.1%</td>
<td>11.2%</td>
</tr>
<tr>
<td>Driver carries passengers who are not buckled in the rear seat</td>
<td>15.3%</td>
<td>18.9%</td>
<td>17.7%</td>
<td>15.5%</td>
<td>32.7%</td>
</tr>
<tr>
<td>Driver parks the vehicle in no parking places</td>
<td>32.4%</td>
<td>22.2%</td>
<td>18.3%</td>
<td>14.8%</td>
<td>12.3%</td>
</tr>
<tr>
<td>Driver rides a vehicle without insurance policy</td>
<td>36.5%</td>
<td>20.5%</td>
<td>20.2%</td>
<td>12.3%</td>
<td>10.5%</td>
</tr>
<tr>
<td>Driver rides a vehicle with inadequate tyre pressure</td>
<td>25.2%</td>
<td>28.7%</td>
<td>23.1%</td>
<td>13.2%</td>
<td>9.8%</td>
</tr>
<tr>
<td>Driver rides a vehicle after consuming both illegal drugs and alcohol</td>
<td>81.3%</td>
<td>12.1%</td>
<td>8.8%</td>
<td>5.2%</td>
<td>4.4%</td>
</tr>
<tr>
<td>Driver rides a vehicle 1 hour after consuming illegal drugs</td>
<td>79.4%</td>
<td>12.9%</td>
<td>10.2%</td>
<td>5.6%</td>
<td>3.7%</td>
</tr>
<tr>
<td>Driver rides a vehicle even when he thinks he had too much alcohol</td>
<td>64.0%</td>
<td>15.7%</td>
<td>11.6%</td>
<td>5.3%</td>
<td>3.4%</td>
</tr>
<tr>
<td>Driver passes through the traffic light during switch from yellow to...</td>
<td>36.1%</td>
<td>25.5%</td>
<td>18.1%</td>
<td>11.1%</td>
<td>9.1%</td>
</tr>
<tr>
<td>Driver drives when so sleepy to encounter problems with…</td>
<td>70.8%</td>
<td>15.6%</td>
<td>7.7%</td>
<td>4.0%</td>
<td>0.9%</td>
</tr>
<tr>
<td>Driver checks on or updates social networks while driving</td>
<td>68.6%</td>
<td>12.1%</td>
<td>9.6%</td>
<td>6.2%</td>
<td>3.5%</td>
</tr>
<tr>
<td>Driver types text messages or emails while driving</td>
<td>61.5%</td>
<td>15.4%</td>
<td>11.1%</td>
<td>7.5%</td>
<td>4.5%</td>
</tr>
<tr>
<td>Driver uses the mobile phone while driving</td>
<td>43.8%</td>
<td>20.0%</td>
<td>16.3%</td>
<td>10.2%</td>
<td>9.7%</td>
</tr>
<tr>
<td>Driver is speeding 20 km/h over the limit within the school zone</td>
<td>72.4%</td>
<td>26.6%</td>
<td>14.6%</td>
<td>6.8%</td>
<td>4.0%</td>
</tr>
<tr>
<td>Driver is speeding 20 km/h over the speed limit in urban area</td>
<td>40.4%</td>
<td>26.6%</td>
<td>18.0%</td>
<td>8.7%</td>
<td>6.3%</td>
</tr>
<tr>
<td>Driver is speeding 20 km/h over the limit in residential street/area</td>
<td>54.2%</td>
<td>20.9%</td>
<td>13.5%</td>
<td>7.0%</td>
<td>4.5%</td>
</tr>
<tr>
<td>Driver is speeding 20 km/h over the highway speed limit</td>
<td>16.7%</td>
<td>10.4%</td>
<td>15.3%</td>
<td>17.8%</td>
<td>39.8%</td>
</tr>
</tbody>
</table>
Support to Traffic Safety Measures

In this part of the research, the respondents expressed their views on how much they support certain safety measures in terms of traffic safety. Greatest support, given by the respondents, was on the measures for mandatory use of protective helmet for motorcyclists and mandatory use of winter tyres for cars, trucks and buses (more than 90%), and the least support was given for measures: zero tolerance for using any type of telephony while driving (manual/hands-free) (43.2%) and allowing cyclists to pass through the red light when allowed by specific traffic signs (44.4%).

<table>
<thead>
<tr>
<th>Measure</th>
<th>Support for Traffic Safety Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mandatory use of protective helmet for motorcyclists</td>
<td>91,0%</td>
</tr>
<tr>
<td>Mandatory use of winter tyres for cars, trucks and buses (more than 90%)</td>
<td>90,2%</td>
</tr>
<tr>
<td>Zero tolerance for using any type of telephony while driving (manual/hands-free)</td>
<td>43,2%</td>
</tr>
<tr>
<td>Allowing cyclists to pass through the red light when allowed by specific traffic signs</td>
<td>44,4%</td>
</tr>
<tr>
<td>Mandatory use of protective helmet for cyclists</td>
<td>50,2%</td>
</tr>
<tr>
<td>Zero tolerance on alcohol (0.0 ‰) for all drivers</td>
<td>53,0%</td>
</tr>
<tr>
<td>Prohibition of selling alcohol at petrol stations along highways / roads outside settlements</td>
<td>54,0%</td>
</tr>
<tr>
<td>Mandatory use of reflective colored vests at night for pedestrians and cyclists during conditions of reduced visibility</td>
<td>65,9%</td>
</tr>
<tr>
<td>Penalty points system resulting in suspension of license when a certain number of points is achieved</td>
<td>78,6%</td>
</tr>
<tr>
<td>Automated camera surveillance system monitoring vehicles passing through red traffic light</td>
<td>83,4%</td>
</tr>
<tr>
<td>Zero tolerance on alcohol (0.0 ‰) for new drivers (licence obtained less than 2 years ago)</td>
<td>86,4%</td>
</tr>
<tr>
<td>Application of “alco-locks” for drivers caught on more than one occasion driving under influence</td>
<td>89,0%</td>
</tr>
<tr>
<td>Mandatory use of winter tyres for cars, trucks and buses</td>
<td>90,2%</td>
</tr>
<tr>
<td>Mandatory use of protective helmet for motorcyclists</td>
<td>91,0%</td>
</tr>
</tbody>
</table>

Legend: In favor, Against, Do not have an opinion
Self-reported Behavior in Traffic

In this part of the research, participants have “self-reported” their behavior in traffic over the past 12 months. The diagram shows the percentage of participants in traffic who, over the past year, have behaved at least once at most five times in a certain way.
Attitudes towards Traffic Safety

Respondents are on a five-step scale (from 1 - I do not agree, up to 5 - I agree) expressed views on certain claims. The diagram shows the percentage of respondents who agree with the above claims (4 - somewhat agree and 5 - I agree). Below the dotted line, the attitudes whose higher values reflect unfavorable attitudes are shown.
Perception of Risks and Factors Contributing to TA

Respondents were asked how much they felt (un)safe when using certain types of transport. The answers were given on a ten-step scale (1 - very unsafe, up to 10 - very safe), and the results are shown in the following diagram.

Apart from subjective assessment of traffic safety, risk perception is also assessed by asking respondents to estimate how many traffic accidents are caused by each of the individual traffic safety factors. Based on the results obtained, it is noted that driving under the influence of alcohol and illegal drugs, aggressive and negligent driving and speeding are considered as the main occurrence factors of traffic accidents.
Behavior of other Traffic Participants

In order to analyze the behavior of other participants in traffic, respondents’ answers were used to indicate how often they encounter such behavior of other participants in traffic, on the scale from 1 to 10 (1 - never, 10 – very often). Highest average value for observed behavior was related to speeding (7.8%), and disrespect of traffic rules (7.8%), while the lowest average value was given for slow driving (4.8%).

<table>
<thead>
<tr>
<th>Behavior Found</th>
<th>Average Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overspeeding</td>
<td>7.8</td>
</tr>
<tr>
<td>Participants in the traffic do not respect the rules</td>
<td>7.8</td>
</tr>
<tr>
<td>Distracted drivers (using phones, tuning radios, etc.)</td>
<td>7.6</td>
</tr>
<tr>
<td>Aggressive drivers</td>
<td>7.5</td>
</tr>
<tr>
<td>Careless drivers (for example, not indicating)</td>
<td>7.3</td>
</tr>
<tr>
<td>Failure to consider the needs of other road users</td>
<td>7.2</td>
</tr>
<tr>
<td>Pedestrians crossing the street &quot;through the red traffic light”</td>
<td>6.9</td>
</tr>
<tr>
<td>Drivers do not keep a safe distance from the vehicle in front</td>
<td>6.6</td>
</tr>
<tr>
<td>Drivers performing dangerous unlawful behavior</td>
<td>6.2</td>
</tr>
<tr>
<td>Motorcyclists do not wear the helmet</td>
<td>5.9</td>
</tr>
<tr>
<td>Drivers driving too slow</td>
<td>4.8</td>
</tr>
</tbody>
</table>

Participation in Traffic Accidents

Respondents were asked if they had participated in a traffic accident in the past three months. The issue was specific for the category of participation in accidents, as well as the consequences: 1 - material damage; 2 - light injuries to me or others; 3 - injuries requiring the hospitalization of the injured person. The overall percentage of respondents who participated in a traffic accident was about 8%, and most often it was about accidents with material damage only. The largest share in accidents was recorded by drivers of passenger vehicles (6.1%).
Traffic Coercion

The research also covered various aspects of coercion, in particular the experience of respondents with traffic coercion and the subjective risk of control by the traffic police. Respondents were asked how much they had been controlled by the police during the last 12 months on the road, whether they paid a fine for traffic violation and whether they were convicted in the court for violation of traffic regulations.

A subjective assessment of the probability of police control while on a typical trip for various misdemeanors was assessed on a five-stage scale (from 1 - very low chance, to 5 - very high chance). The highest percentage of respondents in Serbia share the opinion that the police will most likely control the speed (32%) on a typical journey, and the lowest chance is that they will test them on drugs (2.7%).

![Percentage of participants with different traffic behaviors](image)

About 54% of the respondents stated that they were controlled by the traffic police at least once, and 13.3% of them paid a fine for the traffic violation committed in the previous year.

The following maps show the views and attitudes of participants in traffic, according to certain topics, according to police departments in the Republic of Serbia, in 2017.
Assessment of Attitudes of Traffic Participants
Importance of Protection Systems in PV
In Serbia in 2017

Legend
- Very high grade [3.94 - 4.02]
- High grade [3.86 – 3.93]
- Average grade [3.78 – 3.85]
- Low grade [3.70 – 3.77]
- Very low grade [3.62 – 3.69]
- Unknown data

* Higher grade (on scale from 1 to 5) means that the respondents have a higher grade in terms of correct attitudes regarding the significance of the protective systems in passenger vehicles. Starred questions are inversely coded.

Attitudes assessed:
- * Use of a rear seat belt in the car is not necessary.
- I always ask my passengers to use a seat belt.
- * Instructions for use of children's seats are vague.
- It is dangerous if children who travel with you do not use a child seat or seat belt.
- * Child seat should not be used for short trips.

PV – Passenger vehicle
**Assessment of Attitudes of Motorcyclists**

**Importance of Protective Helmets**

**In Serbia in 2017**

* Higher grade (scale 1 to 5) means that the respondents do not agree, significantly, with the statement -
  If I drive carefully, helmet is not required.
Assessment of Attitudes of Traffic Participants

SPEEDING

In Serbia in 2017

Legend

- Very high grade [4,06 – 4,21]
- High grade [3,90 – 4,05]
- Average grade [3,75 – 3,89]
- Low grade [3,59 – 3,74]
- Very low grade [3,44 – 3,58]
- Unknown data

* Higher grade (scale 1 to 5) means that the respondents significantly support driving according to speed limit.

Attitudes evaluated:
- Speeding is risky and endangers lives
- I have to drive fast, otherwise I waste time
- Fast driving makes it difficult to react in a dangerous situation
- Friends believe that speed limits should be respected
- Speed limits are acceptable
- An increase in speed of 10 km / h increases the risk of an accident
Assessment of Attitudes of Traffic Participants
Driving under influence (alcohol, illegal drugs, drugs)
In Serbia in 2017

Legend
- Very high grade [4.53 – 4.60]
- High grade [4.45 – 4.52]
- Average grade [4.38 – 4.44]
- Low grade [4.30 – 4.37]
- Very low grade [4.23 – 4.29]
- Unknown data

* Higher grade (scale 1 to 5) means that the respondents significantly do not approve driving under influence of alcohol, illegal drugs and/or drugs affecting safe driving.

Attitudes evaluated:
- Alcohol increases the risk of an accident
- Friends consider driving under the influence of alcohol unacceptable
- Alcohol makes it difficult to react in a dangerous situation
- Drugs increase the risk of an accident
- Friends consider driving under the influence of drugs unacceptable
- I know about the negative effect of drugs on driving
Assessment of Attitudes of Traffic Participants

DISTRACTIONS and FATIGUE while driving

In Serbia in 2017

Legend
- Very high grade [3.89 – 3.99]
- High grade [3.79 – 3.88]
- Average grade [3.68 – 3.78]
- Low grade [3.58 – 3.67]
- Very low grade [3.48 – 3.57]
- Unknown data

* Higher grade (scale 1 to 5) means that the respondents significantly consider distractions and fatigue while driving as negative in terms of safety.

Attitudes evaluated:
- Attention has been reduced when using mobile.
- Attention is reduced when using hands-free devices.
- Almost all drivers sometimes use mobile phones.
- Using mobile in driving increases the risk of an accident.
- When I feel sleepy I do not need to drive a car.
- Even if I'm asleep, I'm still driving a car.
- If I feel sleepy, the risk of an accident increases.
Conclusion

The research of the factors causing accidents has shown that the individual behavior largely affects the possibility of traffic accidents occurrence, compared with the factors - vehicle, road and the environment. The individual factor is characterized by a great complexity, and for a safe traffic participation it is necessary that the traffic participant possesses adequate knowledge, has the correct attitudes, possesses the appropriate skills, and finally behaves according to knowledge, attitudes and skills he/she posseses.

If the traffic participant does not have the correct attitudes, although he/she has the necessary knowledge and skills, it is a great chance that he/she will neglect what he/she knows and that he/she will act in accordance with his/her negative attitudes. Namely, if the participant in the traffic knows that it is mandatory to use the seatbelt, has the information that the seatbelt can protect him/her, knows how to use the belt correctly - but has a personal attitude that “it is not so important to obey it” or that “people only buckle because of the police”, it is very likely that he/she will not behave safely, i.e. that he/she will not use the seatbelt.

To know these attitudes gives us important information about people's thoughts and perceptions, i.e., about the level of awareness of the population regarding the traffic safety. Attitudes are very much related to people's behavior, so the negative attitudes noted must be systematically addressed. The obtained results of the conducted research should enable better planning of future measures and directing preventive activities towards different categories of traffic participants (campaigns, trainings, forums and other preventive activities) in order to change attitudes and improve the knowledge and behavior of the population about the dangers and safe participation in traffic.