WP-3.1
Survey of citizens’ and public sector awareness in WB

Report on survey in WBC
CROSS-CULTURAL STUDY


"This project has been funded with support from the European Commission. This publication reflects the views only of the author, and the Commission cannot be held responsible for any use which may be made of the information contained therein"
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1) Introduction

According to World Health Organization, about 1.3 million people die annually in road accidents, with 20–50 million sustaining non-fatal injuries. Road traffic injuries are the leading cause of death among young people aged 15–29 years. Over 90% of road traffic fatalities occurred in low- and middle-income countries, although the number of vehicles in these countries is less than half of the total number of vehicles in the world. Almost half of these fatalities involve vulnerable road users (pedestrians, cyclists and motorcyclists) (WHO, 2018).

The interest in studying the relationship between people's attitudes and behaviour in different social contexts started in the 1970s. The most important examples are The Theory of Reasoned Actions and The Theory of Planned Behaviour, proposed by Fishbein & Ajzen, (1975), as well as the attitude-behaviour model (Triandis et al., 1980). These studies have announced a period, still of current interest, where a large number of studies has been devoted to different participants in traffic.

The most prominent study on attitudes to road traffic risk is the research SARTRE (Social Attitudes to Road Traffic Risk in Europe). SARTRE is a research project focused on exploring the attitudes and reported behaviours of road users across Europe. During the period from 1991 to 2012 four SARTRE surveys were conducted. By its idea and subject matter, it can be said that the "successor" of SARTRE research, is ESRA project (European Survey of Road Users' Safety Attitudes), launched by the European Commission in 2015 (ESRA, 2016).

Research on attitudes of road users are still of current interest and should be periodically conducted to analyze the development of attitudes and changes of absolute indicators of traffic safety in the given area.

1.1 Scope and purpose of the research

Almost all countries in the world apply similar measures to improve the road traffic safety. When it comes to drivers’ behaviour, all countries have regulations concerning speeding, driving under the influence of alcohol, use of safety belt, use of mobile phones, etc. It is a significant fact that, in addition to the common aspects, different countries clearly have different achievements of their policies in reducing the risks in road traffic. It is one of the reasons for conducting the comparative study in order to exchange best practices.

The main purpose of the research is to describe the attitudes and reported behaviour of road users regarding road traffic risks, assessing the range of attitudes - from supporting to opposing regulations and protective measures, examining the personal and social acceptability of certain
traffic behaviours, perceiving traffic enforcement, and opinions on activities that should be taken into account in attempts to improve road safety policies.

The conceptual framework of the survey covers the key areas envisaged by the survey: (1) socio-demographic characteristics; (2) respondents' opinion on the state of traffic safety at national level; (3) the acceptability of unsafe traffic behaviour; (4) support for traffic safety measures; (5) self-reported behaviour; (6) attitudes towards traffic safety; (7) traffic enforcement. The results of the analysis by key areas with accompanying comments are given in the Results section.

1.2 Research methodology

The research for the TRAFSAF project needs was carried out in accordance with the methodology used in the ESRA and SARTRE 4 research, and the research area covered the territory of the Republic of Serbia, the Republic of Montenegro, the Republic of Bosnia and Herzegovina and Kosovo *. The survey was conducted with the aim of respondents to describe their attitudes towards behavioural risks as well as behaviours in different traffic situations. The online questionnaire, consisting of 16 questions, 11 of which related to attitudes about traffic risks, and 5 questions related to the socio-demographic characteristics of the respondents, was forwarded to groups within social networks.

The total sample is 1,747 respondents, approximately 25% for each region. (Table 1).

<table>
<thead>
<tr>
<th>Region</th>
<th>Frequency</th>
<th>%</th>
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<tr>
<td>The Republic of Serbia</td>
<td>444</td>
<td>25,4</td>
</tr>
<tr>
<td>The Republic of Montenegro</td>
<td>481</td>
<td>27,5</td>
</tr>
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<td>The Republic of Bosnia and Herzegovina</td>
<td>421</td>
<td>24,1</td>
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<tr>
<td>Kosovo*</td>
<td>401</td>
<td>23,0</td>
</tr>
<tr>
<td>Total</td>
<td>1,747</td>
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The research utilized the following methods:

- analysis (research procedure based on explaining the problem by splitting complex units into simpler components) and synthesis (research method based on merging simple units into more complex forms),
- classification (observing sets with similar properties),

* Kosovo: Name that acquired international recognition as an independent State in 2008
• comparison (comparing the same or similar facts, phenomena or processes, or observing their similarity and differences in behaviour),
• statistical method (the indicators reveal the structures and regularities of occurrence at certain intervals).

Research results were processed and analyzed by software packages MS Office Excel and SPSS Statistics 22.
2) Literature review

Attitudes present important dynamic personality traits. Attitudes can be defined as a tendency to have positive or negative reaction on a person, object, situation or institution. More complex and more complete definition of attitudes is Allport’s definition: attitude is a mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon an individual's response to all objects and situations with which it is related (Pot, 1994). There are three sources of attitudes:

1) Social and group norms, which an individual accepts from the society he/she lives in and from the groups to which he/she belongs.

2) Personal experience and knowledge of the phenomena to which attitude exists, and

3) Motives and permanent personality traits.

Within the social cognitive approach, models such as the Theory of Reasoned Actions / Planned Behavior (Ajzen & Fishbein, 1980; Ajzen, 1988) and Health Belief Model (Rosenstock, 1974) have often been used to investigate the determinants of risky driving behaviour (Parker et al., 1992; Parker et al., 1995; Ruter et al., 1995; Parker et al., 1998). Based on these models, variables such as attitude, understanding of risk, social norms, and understanding of behavioural control represent central determinants of behaviour. Evidence of the possible values of these variables has been found in many studies. Attitudes regarding traffic safety have been found to correlate with aggressive driving behaviour, high-speed driving and self-reported involvement in a road accident. The perception of risk also seems to be of great importance, since young drivers, compared to other age groups, are more likely to underestimate the possibility of some risk caused by the traffic situation (Brown & Groeger, 1988; Deery, 1999). They also consider traffic risks less dangerous (Milech et al., 1989; Deery, 1999) and overestimate their own driving skills (Moe, 1986).

Based on these findings, one of the most popular strategies for promoting the road safety is aimed in changing attitudes of adolescents regarding the perception of driving risks. However, several reviews of the literature has led to the conclusion that majority of road safety campaigns aimed at influencing attitudes and risk perception, have failed to exert any influence on the number of traffic accidents (Elvik et al., 1989; OECD, 1994). There are several reasons for the
failure of these campaigns. One of the reasons may be that such campaigns didn’t take into account the personality traits. Also, the impact of motivation on drivers’ behaviour has not been sufficiently investigated.

Although some studies show a link between attitudes of road users and the behaviour they express, it should be borne in mind that between attitudes and behaviour there are many other factors such as subjective norms, observed behavioural control, unplanned behaviours, errors and omissions, etc.

The society must strive to develop in traffic participants a belief in the justification of humane relationship to other traffic participants, social norms, their obligations and other social values in traffic.

Below we will look at the most important views of road users related to traffic safety.

2.1 Attitudes towards hazards and risk

It is a known fact that driver error is a major contributing factor to most road accidents. However, there are opinions of individuals that other drivers and other pedestrians, but not themselves, are exposed to risk. Attitudes toward risk participation are not equally prevalent in the population. For example, there are gender differences in attitudes towards risky driving. Women, compared to men, have significantly less risky attitudes towards driving and show much more concern about the possibility of injuring someone while driving. In the context broader than driving, women exhibit less risky attitudes towards the behaviour of road users and are much more concerned with the traffic safety in general than man. For example, women were more prone to show concern about speeding and risky overtaking and were better informed about possible road hazards and more likely to assess the risky behaviour of road users as more dangerous than men did (Dahlstedt, 1994; Department of Transport, 2004).

Further, road users' safe behaviour skills grew with measured femininity (Ozkan & Lajunen, 2006). Gender differences are noticeable from an early age and are present even before young people become drivers. For example, boys (11-16 years) more than girls consider driving violations to be acceptable (Waylen & McKenna, 2008), and girls aged 15-19 showed much safer attitudes than boys of the same age (O'Brien et al., 2002 ).

It has also been shown that older driver have less risky attitudes towards the road users. Drivers age 50 and older are committing fewer violations, especially less aggressive violations, indicating that willing risk-taking behaviour is the least present in this age group (Parker et al., 2000).
Research in the UK has shown that the behaviour of road users is considered the least acceptable: driving under the influence of drugs, not using a seat belt in the front seat, driving without insurance and using a mobile phone while driving (RAC, 2007). Also, it was found that drivers generally consider themselves to be safe drivers (over 80%). Only 3% said they did not consider themselves to be safe drivers. On the other hand, only 41% of drivers feel very safe on the roads today, so the logical assumption is that such feelings are perceived by other drivers as dangerous. This sense of road safety varies in different groups: younger drivers (17-24 years old) feel safest; older drivers (65+) feel the least safe; men feel safer than women; safer are also those who drive for work and those who have driven more miles; city drivers feel safer on the road than suburban drivers; those who are accustomed to driving fast as well as those who are punished for speeding feel safer. However, those who have experienced an accident or a "near accident" feel less safe on the road.

2.2 Attitudes towards other traffic participants

Most research has shown that there is a significant difference in the perception of oneself and other road users. For example, one survey found that 60% of drivers thought other drivers were more dangerous than safe, 33% thought others were more safe than dangerous, and 6% found it difficult to find any safe driver on the roads, with only 1% that it is difficult to find any dangerous driver on the roads at all (Brake, 2006). Usually, younger drivers are rated as particularly dangerous and in one survey 66% of participants thought that road safety programs should focus on younger drivers (Higginson, 2005). Younger drivers accept that in overall, they are the most dangerous group on the roads, and older drivers also find that young drivers are less careful and do not drive at a prescribed distance (Higginson, 2005; Musselwhite & Haddad, 2007).

2.3 Attitudes towards speeding

Since speeding is considered to be a key form of risky behaviours of drivers, considerable attention must be given to attitudes towards speeding. Although 39% of drivers surveyed consider it dangerous to drive above the speed limit (Department of Transport, 2008), it is clear that most drivers continue to drive fast. Speeding seems to be understood differently by different individuals. For example, in one study, 33% of respondents thought that speeding was 1 mile above the speed limit, 33% thought it was 5 miles above the limit, and 33% thought it was 6 miles or more above the limit (Higginson, 2005). Further, people have a "normative"
view of speeding and decide what illegal and dangerous speeding personally means to them. 76% of respondents were in complete agreement that driving too fast in relation to the road conditions was dangerous (Angle et al., 2007). Attitudes towards speeding are often accompanied by the belief that speed limits are arbitrarily established and that it is acceptable not to obey the laws if the conditions of the road, experience and competence allow us so (Flamingo Research, 2008).

Drivers find that there is a lot of ambiguity about setting speed limits because sometimes similar roads get very different limits and such inconsistency leads to disrespect of the existing system (Silcock et al., 1999). Further, modern technology has led drivers to consider speed limits to be outdated and dubious; vehicles are much better designed today than ever before and therefore can put up with greater challenges. In his study, Corbett (Corbett, 2001) showed that drivers tend to set speeding at more than 10 miles per hour and to drive within their definition. Also, drivers believe that most people drive an average of 10 miles per hour above the speed limit (Stradling & Campbell, 2003). Fuller et al. (2008) found that drivers considered that in the 30 mph zone it was acceptable to exceed the speed by about 35 mph.

Attitude towards a speed limit depends on the type of road. In Stradling & Campbell study (Stradling & Campbell, 2003), most drivers found it normal to exceed the legal speed by 30 to 35% on motor vehicle roads; on two-lane roads in the suburbs, on main roads in cities and wide roads in settlements up to 18%, and on rural roads up to 10%. Furthermore, on roads with higher speed limits, these restrictions are more often violated by men than by women, but not on slower roads. Drivers aged 21-29 are the group with the highest proportion of speeders.

Most studies have obtained similar results: speeding on motor vehicle roads is considered to be significantly more acceptable than on other roads. Speeding is at least considered acceptable on roads in populated areas.

2.4 Attitudes towards safety belt use

The results obtained in SARTRE 3 study (SARTRE, 2004) show that most of the drivers agree that safety belt reduces the risk of serious injury in most traffic accidents. However, there were major differences between countries when it comes to assessing the need for a safety belt in the case of careful driving. About 20% of drivers believe that the belt is not really necessary in the case of careful driving. In addition to underestimating the usefulness of using a safety belt, a large number of drivers emphasize the danger of being "trapped" in vehicles in
emergency situations because of a seat belt. In some countries (Portugal, the Netherlands, France and Poland) this number is over 60%.

In general, attitudes towards the use of the safety belt are positive for almost all drivers. However, the results show that frequency of use does not depend only on attitude. Traffic enforcement has proven to be a good mechanism to get drivers to use their seatbelt.

In addition, too many drivers underestimate the necessity of safety belt usage in the case of careful driving, and overestimate the danger of being “trapped” in the vehicle in emergencies. These results show the need to initiate better educational and informative campaigns, which would contribute to better understand the significant benefit of safety belt usage.

2.5 Attitudes towards driving under the influence of alcohol

Laws that prohibit the driving under the influence of alcohol have great support. For example, 72% of public thinks that every person caught to drive under the influence of alcohol should be banned from driving for 5 years (Department for Transport, 2008). Over 90% of drivers would support more strict penalties for driving under the influence of alcohol (Cauzard, 2003), and 80% of the public feel that even if one drinks only one drink then should not drive (Department of Transport, 2008). Women, who are not drivers and members of lower socioeconomic groups, tend to be more inclined towards penalties for driving under the influence of alcohol than average (Department of Transport, 2008). Thus, driving under the influence of alcohol is still considered unacceptable, even with younger drivers (Thomas, et al., 2007).

2.6 Attitudes towards use of mobile phones

SARTRE (SARTRE, 2004) study has shown that drivers do not consider the use of a telephone while driving to be dangerous if they use it hands-free, that is, only 21% of drivers claimed that the use of a mobile phone while driving was often, very often or always the cause of traffic accidents (the percentage in the case of ordinary mobile phones is 54%). In any case, a phone call, even when hands-free, can reduce the driver's concentration on driving tasks, and this problem affects a significant percentage of the driving population.
2.7 Attitudes toward law and regulations

The most of the drivers claim to obey the law. For example, in Britain 94% of drivers stated that they obey traffic laws. There are good reasons for complying with the law, as 54% of those surveyed believe they would be caught violating traffic rules and believe that the benefit of violating traffic laws is outweighed by the risk of being caught in the act (64%) (RAC, 2007).

However, Moller (2004) in his study showed that driver's observance of law enforcement does not cover speeding. Drivers will consider themselves a law-abiding person even though they drive 10 miles per hour more than the speed limit. Young drivers feel that the rules need not be obeyed simply because they exist, but only if they consider them to be truly important for driving safety and only if they comply with their driving norms as a social activity and to avoid penalties (Christmas, 2007). People who are sensitive to penalty are unlikely to be speeding. Women have a stronger moral obligation to obey the law and evaluate those traffic laws more positively than men (Yagil, 1998). Furthermore, women think that penalties for speeding are too mild (Stradling & Campbell, 2003).

2.8 Attitudes towards technology and security

There is great public trust in modern technology in vehicles. In Britain, 82% of drivers believe that cars are safer than ever and that airbags, safety belts and ABS have the strongest impact on road users' safety (RAC, 2007). SARTRE data indicate that a large number of drivers support the implementation of new technologies, however further studies have shown that individuals prefer systems that provide information to the driver rather than those that restrict driving. For example, drivers are more for devices that advise on a certain speed and warn of a speed limit than for those systems that limit the speed of the vehicle (SARTRE, 2004).

However, it seems that there is another side of the coin; in one study, 50% of drivers showed concern that new technology might make driving less safe (in the sense that the car is almost self-driving so there is not enough stimulus for the driver and drivers rely too heavily on their own vehicle and do not rely on their own abilities).

It is also important that technology that enhances vehicle safety is supported mainly by those drivers who are already driving safely. It is also known that experience with modern technology can change attitudes towards it, and this could be one of the strategies when introducing new technology into vehicles.
2.9 Attitudes towards speed cameras

Numerous studies have found the benefits of automatic enforcement. A meta-analysis conducted by Elvik et al (Elvik et al., 1997) shows that the impact of automatic law enforcement, in relation to driving speed, on the number of traffic accidents indicates a 19% reduction. When considering only the number of injured, the reduction is 17%. Speed cameras have more effect in urban areas (28% reduction) than in rural areas (4% reduction).

In general, there is great support in the public for setting up speed cameras. SARTRE data shows that about 66% of drivers support this type of technology. Although there are significant differences between countries, speed cameras for speeding have the support of a large part of the driving population (SARTRE, 2004). Qualitative research has shown that support for setting up speed cameras exists primarily because they capture everyone or anyone, without discrimination (Silcock et al., 1999).

However, negative attitudes arise because cameras do not have a human element to evaluate the context of speeding, which sometimes leads to the claim that the cameras are not fair. On the other hand, most drivers find that speed cameras cause drivers to slow down and then accelerate again, which reduces their efficiency (Silcock et al., 1999). More support for camera placement is provided by women and non-drivers (Department of Transport, 2008). Some drivers believe that speed cameras have a tolerance of 5 miles per hour (Corbett, 2001) or 10 miles per hour (Stradling & Campbell, 2003), and that it is acceptable to exceed speed to that limit. What is evident is that more support exists for mobile rather than fixed cameras, and this difference is thought to be due to the human factor.

2.10 Parents’ and children's attitudes towards pedestrian safety

Parents consider road safety as one of the three key risky areas for children (along with drugs and violence; Corbett, 2001). The same study shows that parents have a good understanding of the needs of children in the field of road safety. They find that their children have good road safety skills. However, children who participate in road safety campaigns may be at greater risk because of the greater confidence that parents have in their road safety skills, which can lead to reduced supervision (Dragutinovic & Twisk, 2006). Over 60% of parents believe that it is their responsibility to teach their children road safe behaviour, and 32% think it is a mutual responsibility, shared by them, teachers and the police (Corbett, 2001).

Older children and adolescents think that they have good attitudes toward road safety (Tolmie, 2006), but believe that others do not have them, especially their peers. Adults and
parents find that children's road safe behaviour deteriorates as children grow, attributing this to peer pressure (Corbett, 2001). And they are mostly right, as it has been shown that younger adolescents can actively seek risk on the road due to peer pressure, identity, and the need to develop a sense of control or to challenge authority (WHO, 2007). Without peer influence, there is evidence that adolescents seek excitement on the road (WHO, 2007; Dragutinovic & Twisk, 2006), and are more common in boys than in girls (Waylen & McKenna, 2008).
3) Research results-Serbia

3.1 Socio-demographic characteristics

This chapter presents basic results relating to demographic information (age, gender, and level of education), as well as involvement in a car accident with injuries and material damage in the past three years as the driver of a car.

In the overall sample structure, women make up 51.8% and men 48.2% of the sample (Figure 3.1). Education has been key to the social and economic development of countries, development of a traffic culture and a safe environment for all road users. Therefore, it is important to evaluate the structure of respondents according to their level of education. Respondents with a secondary education level make up 11.3% of the sample, while those with a further education level make up 88.7% of the respondents (Figure 3.2).

Respondents' age is often linked with driving style and behavior and thus to traffic safety. Within the research, the driver were grouped into six age groups. In the overall structure of the respondents, the age groups 25 to 34 and 45 to 54 years are the most frequent with 23% of the respondents (accounting for close to half of the sample). In traffic safety analyzes that take into account the age structure, experts tend to point out the two most important age groups, the young and the old people. These two age groups are considered to be the most risky age groups
in traffic due to different circumstance. The participation of young respondents aged 18 to 24 in the overall age structure is 16.9%, while the old respondents account for 4.7% (Figure 3.3).

**Figure 3.3.** Age structure

**Figure 3.4.** In the past three years, how many accidents have you been involved in, as the driver of a car, in which someone, including yourself, was injured and received medical attention

**Figure 3.5.** In the past three years, how many damage only accidents have you been involved in, as the driver of a car?
In terms of involvement in road traffic accident as the driver of a car in the past three years, 2.7% of the respondents were involved in one traffic accident in which someone (including driver) was injured and get medical attention, while 0.2% of the respondents were involved in 2 and 3 traffic accidents with injuries, while the highest percentage of respondents (96.8%) were not involved in the accident with the mentioned consequences (Figure 3.4). Regarding the involvement of respondents in a road accident with material damage only in the previous three years, 82.2% said they were not involved in such a road accident, while 14.2% were involved in a single road accident and 3.6% were involved in more than one traffic accident with only material damage (Figure 3.5).

3.2 Opinion of respondents on the state of traffic safety

Respondents were asked to indicate how much they agreed with the following statements. The first statement addressed the question of whether roads in the Republic of Serbia have become safer for their users over the past 10 year, where the majority of respondents agreed (44.6%) that it were not much, while only 3.4% said the roads become very safe (Figure 3.6). When asked about how the Government's concerned about road safety, more than half of respondents (54.7%) said that the Government was not much concerned about road safety and 22.7% think that the Government was not at all interested in improving road safety. When they asked for their opinion on the risk of road accidents, i.e. what they think how the roads in the Republic of Serbia are safe for travel on, the majority of respondents (65.1%) think that roads are not very safe, while 17.1% think that they are not at all safe.

**Figure 3.6.** How much would you agree or disagree with the following statements?
3.3 Acceptability of unsafe traffic behaviour

When expressing their views on the acceptability of unsafe traffic behaviour, respondents were able to indicate on a five-point scale (from 1 “unacceptable” to 5 “acceptable”) as to how acceptable certain traffic behaviour will be for most other people, as well as personal acceptability. In Figure 3.7, the darker color contrast reflects less acceptability, and the lighter color contrast the greater acceptability of certain risky behaviour.

The results illustrate that driving after drinking is the least acceptable unsafe traffic behavior in traffic for other people (63.3%), followed by typing messages or e-mails while driving (61.7%), and the third least acceptable behavior is the non-wear of seat belts of drivers while driving (52%). On the other hand, the wear of seat belts by passengers is the most acceptable unsafe behavior (about 28%), as well as pedestrian-related behaviors such as using a mobile phone while crossing the street and pedestrians cross the pedestrian crossing in area where it is not allowed (more of 24%) (Figure 3.7).

**Figure 3.7.** In the area where you live, how much would be acceptable to most of the other people when
3.4 Support to road safety measures

Road safety measures are decisions, rules, regulations, initiatives, etc. which aim is to improve traffic safety, i.e. to reduce the number of road accidents and their consequences. Road safety measures can be implemented at local, regional, national or even international level. People accept different measures differently, and part of the population often opposes their application because it may require them to change their behaviour or because it may conflict with other needs (e.g. travel time, etc.).

<table>
<thead>
<tr>
<th>Measure</th>
<th>Support (%)</th>
<th>Oppose (%)</th>
<th>No opinion (%)</th>
</tr>
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<tbody>
<tr>
<td>Zero tolerance for using any type of mobile phone while driving</td>
<td>54.5</td>
<td>36.0</td>
<td>9.5</td>
</tr>
<tr>
<td>Zero tolerance for alcohol (0.0‰) for all drivers.</td>
<td>67.1</td>
<td>25.5</td>
<td>7.4</td>
</tr>
<tr>
<td>Having a law requiring all cyclists to wear a helmet.</td>
<td>52.5</td>
<td>28.2</td>
<td>19.4</td>
</tr>
<tr>
<td>Obligation for pedestrians and cyclists to wear high-visibility vests</td>
<td>68.5</td>
<td>19.1</td>
<td>12.4</td>
</tr>
<tr>
<td>A licence system with penalty points for traffic violations that results in the revocation of the licence when a certain number of points are...</td>
<td>83.3</td>
<td>9.5</td>
<td>7.2</td>
</tr>
<tr>
<td>Automated camera for surveillance of traffic offences.</td>
<td>75.7</td>
<td>12.6</td>
<td>11.7</td>
</tr>
<tr>
<td>Zero tolerance for alcohol (0.0‰) for novice drivers (licence obtained less than 2 years).</td>
<td>91.2</td>
<td>5.6</td>
<td>2.2</td>
</tr>
<tr>
<td>Mobile radars in the moving car who recorded offenses of exceeding speed without stopping by the police officers.</td>
<td>58.8</td>
<td>25.2</td>
<td>16.0</td>
</tr>
<tr>
<td>Obligatory winter tyres for cars, trucks &amp; buses.</td>
<td>94.8</td>
<td>2.7</td>
<td></td>
</tr>
<tr>
<td>Having a law requiring all motorcyclists to wear a helmet.</td>
<td>95.7</td>
<td>2.5</td>
<td></td>
</tr>
</tbody>
</table>

**Figure 3.8.** Support for road safety measures
Support for different road safety measures is presented in Figure 3.8. Respondents expressed opinions for individual measures in the form of answers “support” (dark shade), “oppose” (medium light shade) or “have no opinion” (light shade). Respondents gave the greatest support to measures for the obligatory wear of motorcycle helmets and obligatory winter tyres for cars, zero tolerance for alcohol (0.0 ‰) for novices drivers (licence obtained less than 2 years) (more than 90%), and at least support zero tolerance for using any type of mobile phone while driving (hand-held or hands-free) for all drivers and having a law requiring all motorcyclist to wear a helmet (Figure 3.8).

- Penalties are too severe for using mobile phone while driving.
- Traffic rules should be much more severe for driving under the influence of drugs.
- Penalties for drink-driving offences are too severe.
- Traffic rules are not controlled sufficiently in terms of drinking and driving.
- Penalties for speeding offences are too severe.
- Traffic rules are not controlled sufficiently in terms of speeding.
- Traffic rules are not controlled sufficiently in terms of not using seat belt while driving.
- Penalties are too severe for not using seat belt while driving.
- Traffic rules are not controlled sufficiently in terms of not using child seat while driving.
- Penalties are too severe for not using child seat while driving.
- Traffic rules are not controlled sufficiently in terms of not using child seat while driving.
- Penalties are too severe for driving under the influence of drugs.

Figure 3.9. Opinions about current traffic rules and penalties in Serbia
The opinions of road users about current traffic rules and penalties is presented in Figure 3.9. Within the Figure, the answers “slightly agree” and “agree” are summarized. Most of them think that traffic rules are not being checked sufficiently in terms of drinking and driving and driving under the influence of drugs (more than 82%), and therefore the largest percentage of respondents said that traffic rules should be more strict for drinking and driving and for driving under the influence of drugs (more than 80%). A slightly smaller percentage of them think that traffic rules are not controlled sufficiently in terms of using mobile phone while driving or in terms of not using child seat while driving (around 60%), while 32% of respondents think that penalties are too severe for not using seat belts while driving (Figure 3.9).

3.5 Self-reported behaviour in traffic

Below are the results of self-reported behaviours. The respondents’ were asked how often, they have set certain behaviours in traffic during the past 12 months. The answers are based on a five-point scale (from 1 "never" to 5 "always"). Self-reported behaviour was divided according to the road user’s category (car drivers, passengers, cyclists, motorcyclists and pedestrians) (Figures 3.10-3.14).

The results of self-reported behaviour of car drivers show that more than 97% of respondents stated that they always or often use a seat belt, while 81.9% of surveyed drivers stated that they often or always use child seats. Above 97% of drivers surveyed said that they never drove under the influence of drugs and 92% never or rarely drove under the influence of alcohol. When asked about fatigue and driving, over 83% of respondents said they never or rarely drove while tired (Figure 3.10).

More than 96% of passengers stated that they always or often use a seat belt in the front seat of the car, while 45.5% said they use a seat belt in rear seat of the car (Figure 3.11).

With regard to cyclists, it is alarming that more than 85% of respondents do not use bicycle helmets while cycling, and more than 36% always or often cycling without a retro reflecting safety vest during the night and in low-visibility conditions. More than 83% of cyclists never or rarely crossed the roadway through a traffic light that was on red (Figure 3.12).

About 26% of motorcyclists stated that they often or always wore safety boots, back protector, a special jacket, while about 70% wore a safety helmet (Figure 3.13).

More than 22% of pedestrians walk along the road without a retro reflecting safety vest during the night and in low-visibility conditions, and about 17% cross the road at places outside the pedestrian crossing. About 5% of pedestrians stated that they were listening to music
through earphones while crossing of the road, and the same number said that they were crossing the road when it was a red light for pedestrian (Figure 3.14).

**Figure 3.10.** Self-reported behaviour as a car driver in the past 12 months

**Figure 3.11.** Self-reported behaviour as a passenger in the past 12 months
Figure 3.12. Self-reported behaviour as a cyclists in the past 12 months

Figure 3.13. Self-reported behaviour as a motorcyclists in the past 12 months

Figure 3.14. Self-reported behaviour as a pedestrian in the past 12 months
3.6 Attitudes towards traffic safety

One of the key mechanisms to predict one's behavior as a road user is to identify the attitudes towards that behavior. On a five-point scale (from 1 „disagree“ to 5 „agree“), the respondents could indicate views on different statements. The Figure 3.15 gives the values of attitudes regarding different areas.

![Figure 3.15. Attitudes toward traffic safety](image-url)
About 96% of respondents in Serbia agree that driving under the influence of alcohol seriously increases the risk of an accident, while also saying that driving faster than the speed limit makes it harder to react appropriately in a dangerous situation. Regarding the group of issues related to distractions, about 95% of respondents in Serbia stated that if a driver feels tired he/she should not drive a car. They are of the same opinion (about 93%) that the use of a mobile phone while driving increases the risk of involvement in a traffic accident. In terms of the use of safety systems, 91% of respondents consider that it is dangerous if children traveling without use of the child seat or seat belt (Figure 3.15).

### 3.7 Traffic law enforcement

The study covered aspects of subjective risk of the likelihood to be checked by the police on a typical journey. Subjective risk of being checked by police for different violations on a typical journey was assessed by rating on a five-point scale (from 1 “often” to 5 “always”). The highest percentage of respondents in Serbia think that on a typical journey, the police will often or always control their speed limit (53,5%) and seat belt use (46,6%), and least likely to be checked for driving under the influence of alcohol (20,3%) or mobile phone use while driving (29%) (Figure 3.16).

![Figure 3.16. Perceived likelihood of being checked by the police on a typical journey](image)

<table>
<thead>
<tr>
<th>Violation</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Driving under the influence of alcohol</td>
<td>20.3%</td>
</tr>
<tr>
<td>A mobile phone use while driving</td>
<td>29.0%</td>
</tr>
<tr>
<td>Using seat belt</td>
<td>46.6%</td>
</tr>
<tr>
<td>Obeying the speed limit</td>
<td>53.5%</td>
</tr>
</tbody>
</table>
3.8 Conclusion and recommendations

The survey examined attitudes to traffic risks in the Republic of Serbia. The results from the survey presented in this report showed that in the overall structure of the respondents, the age groups 25 to 34 and 45 to 54 years make up close to half of the sample, the gender distribution is more uniform, women make up 51.8% and men 48.2% of the sample.

More than 83% of respondents said that they did not been involved in a car accident in which someone (including driver) was injured or involved in accident with material. Of all respondents, as many as 44.6% said that roads in Serbia did not become much safer over the past 10 year, while more than half stated that the Government was not much concerned about road safety issues, and 22.7% think that the Government was not at all interested in improving road safety. When asked for their opinion on the risk of road accidents on roads in Republic of Serbia, the majority of respondents (65.1%) think that roads are not very safe, while 17.1% think that they are not at all safe.

When stating the acceptability of unsafe behaviour, the results illustrate that driving after drinking is the least acceptable unsafe traffic behavior in traffic for other people, followed by typing messages or e-mails while driving, and the third least acceptable behavior is the non-wear of seat belts of drivers while driving. On the other hand, the wear of seat belts by passengers is the most acceptable unsafe behavior (about 28%), as well as pedestrian-related behaviors such as using a mobile phone or listening to music while crossing the street and pedestrians cross the pedestrian crossing in area where it is not allowed (more of 24%)

The results of self-reported behaviour are relate to passenger car drivers, cyclists, motorcyclists, passengers and pedestrians. Regarding passenger car drivers results illustrate that more than 97% of respondents stated that they always or often use a seat belt, while 81.9% of surveyed drivers stated that they often or always use child seats. Above 90% of drivers surveyed said that they never drove under the influence of drugs and under the influence of alcohol. When asked about fatigue and driving, over 83% of respondents said they never or rarely drove while tired. The use of a safety protection system is significant. More than 96% of passengers stated that they always or often use a seat belt in the front seat of the car, while 45.5% said they use a seat belt in rear seat of the car. Regarding cyclists, it is alarming that more than 85% of respondents do not use bicycle helmets while cycling, and more than 36% always or often cycling without a retro reflecting safety vest during the night and in low-visibility conditions. A cyclists never or rarely crossed the roadway through a traffic light that was on red. About 26% of motorcyclists stated that they often or always wore safety boots, back protector, a
special jacket, while about 70% wore a safety helmet. More than 22% of pedestrians walk along the road without a retro reflecting safety vest during the night and in low-visibility conditions, and about 17% cross the road at places outside the pedestrian crossing. About 80% of pedestrians stated that they never or rarely were listening to music through earphones while crossing of the road, as well as were not crossing the road when it was a red light for pedestrian.

Attitudes towards traffic safety show that almost all respondents in Serbia agree that driving under the influence of alcohol seriously increases the risk of an accident, while also saying that driving faster than the speed limit makes it harder to react appropriately in a dangerous situation. Regarding the group of issues related to distractions, about 95% of respondents in Serbia stated that if a driver feels tired he/she should not drive a car. They are of the same opinion that the use of a mobile phone while driving increases the risk of involvement in a traffic accident. In terms of the use of safety systems, almost all consider that it is dangerous if children traveling without use of the child seat or seat belt

Analysis of subjective risk of being checked by police for different violations on a typical journey shows that the highest percentage of respondents in Serbia think that on a typical journey, the police will often or always control their speed limit and seat belt use, and least likely is to be checked for driving under the influence of alcohol or mobile phone use while driving.

Based on the results obtained in the research the recommendations are: (1) improve the performance of the traffic safety system, (2) develop an action plan for the implementation of measures and actions, (3) improve the visibility of the subjects' work on changing attitudes and behaviour of road users, (4) establish a system of informing the public about the effects of measures and actions in changing traffic participants’ attitudes and behavior (5) improve the system of collecting and processing traffic accident data, (6) maintain an adequate level of traffic safety control in order to ensure compliance with traffic safety rules.
4) Research results - Kosovo*

4.1 Socio-demographic characteristics

As part of this Chapter, the basic results referring to demographic variables (age, gender, and the variables related to education) are presented, as well as the participation in road accidents with injuries and material damages in the past three years in the role of driver of the passenger car.

In total structure of the respondents, 30.4% are women and 69.6% are men (Figure 4.1). Education can be a key element in the social and economic development of countries, and consequently the development of transport culture and a safer environment for road users. Therefore, it is important within research to assess the structure of respondents according to their level of education. Respondents with secondary level of education comprise 37.4% of the sample, while those with higher and high education levels constitute a total of 61.8% of respondents (Figure 4.2).

The age of respondents to a significant extent can be linked to their behaviour in traffic, and thus with road safety. Grouping in six age groups has been performed with survey. In the total structure of the respondents, the age groups of 18 to 24 and 25 to 35 are the most frequent and
make 37.4% of the respondents (which is about 4/5 of the sample). In the analyses of the traffic safety that take into account the age structure, experts tend to emphasise two the most significant age groups, young and old. These two age groups, due to different circumstances are considered the most risky age groups in traffic (ETSC, 2011; Loughran, 2007). The proportion of older respondents over 65 years of age is 2.0% (Figure 4.3).

In terms of participation in the road accident as a driver, the results revealed that in the previous three years 6.0% of the respondents took part in a road accident in which one of the participants was injured and was given medical assistance, while 7.7% participated in more than two traffic accidents with injured, and the highest percentage of the respondents (86.3%) did not participated in the road accident with the specified consequences (Figure 4.4). When it comes to participation of respondents in road accident with material damage over the past three years, 79.6% claimed that did not participate in such a road accident, while 11.2% of the respondents participated only in one road accident, and about 9.2% of the respondents participated in more than one road accident in which the material damage as a consequence (Figure 4.5).
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**Figure 4.4.** In the past three years, how many accidents have you been involved in, as the driver of a car, in which someone, including yourself, was injured and received medical attention?

**Figure 4.5.** In the past three years, how many damage only accidents have you been involved in, as the driver of a car?

### 4.2 Opinions of respondents on the state of traffic safety

Respondents were asked to specify to what extent they agree with the following statements. The first statement referred to the question of whether roads in Kosovo* have become safer for their users during the period of last 10 years, where most respondents agreed (38.2%) that they haven’t become much safer, while only 11.0% of respondents believe that roads have become safer (Figure 4.6). When asked about Government’s concerns for traffic safety issues, nearly half of the respondents (40.6%) asserts that Government is not much concerned with traffic safety and 15.2% that Government is not at all interested in improving traffic safety. When asked to express their opinion regarding the risk of traffic accidents on roads, that is, how are the roads safe for travelling, the majority of the respondents (about 62.0%) think that roads are not safe. When asked about the risk of traffic accidents on roads, the majority of respondents (about 62.0%) thinks that roads are not safe for travel (Figure 4.6).
To what extent do you agree or disagree with the following statements?

4.3 Acceptance of unsafe behaviour in traffic

In the statement of opinions on the acceptance of unsafe behaviour, respondents could select the answer on a five-degree scale (from 1-unacceptable- to 5-acceptable), how acceptable the behaviour would be for the most of other people as well as personal acceptance. Darker colour contrast on the Figure 4.7 reflects less acceptance and brighter contrast reflects the greater acceptance of certain risky behaviour.

Results show that the drunk-driving is the least acceptable risk behaviour in traffic for other people (71.1%), followed by the texting or writing emails while driving (66.8%), and the third least acceptable behaviour is failure of motorcyclists to wear helmets (62.3%). On the other hand, failure of passengers to use safety belts is the most acceptable risk behaviour (about 38%), as well as the behaviour of pedestrians in using mobile phones or listening to music while crossing the pedestrian crossing and crossing of pedestrians at places other than pedestrian crossing in areas where it is not allowed (over 46%) (Figure 4.7).

![Figure 4.6](image-url)
Support to road safety measures is represented on Figure 4.8. Respondents expressed their opinions for certain measures in the form of response: I support (dark shade); I object (medium tones) or have no opinion (light shade). Respondents strongly supported the measures for

**Figure 4.7.** In the area where you live, how much would be acceptable to most of the other people when...?

4.4 Support to road safety measures

Road safety measures are decisions, rules, regulations, initiatives and other, aimed at improving road safety, that is, reducing the number of road accidents and their consequences. Measures to increase road safety can be carried out on local, regional, national or even international level. People accept certain measures differently, and a part of the population often opposes their implementation because they can make a change of behaviour or conflict with other needs (e.g. travel time, etc.).

<table>
<thead>
<tr>
<th>Measure</th>
<th>Support (%)</th>
<th>Object (%)</th>
<th>No Opinion (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A pedestrian is crossing the road when it is a red light for pedestrian</td>
<td>64.1</td>
<td>13.5</td>
<td>6.75</td>
</tr>
<tr>
<td>A pedestrian listens to music through earphones while crossing the street</td>
<td>54.1</td>
<td>20.7</td>
<td>6.5</td>
</tr>
<tr>
<td>A pedestrian uses mobile phone while crossing the street</td>
<td>52.4</td>
<td>19.7</td>
<td>8.7</td>
</tr>
<tr>
<td>A pedestrian crosses street at places other than pedestrian crossing in areas where it is not allowed</td>
<td>46.6</td>
<td>27.4</td>
<td>9.2</td>
</tr>
<tr>
<td>A motorcyclist does not wear helmet</td>
<td>62.3</td>
<td>15.7</td>
<td>5.5</td>
</tr>
<tr>
<td>A driver carries a child in a car without using child seat</td>
<td>59.9</td>
<td>19.5</td>
<td>6.2</td>
</tr>
<tr>
<td>A driver does not wear a seat belt in the car</td>
<td>56.4</td>
<td>20.7</td>
<td>9.2</td>
</tr>
<tr>
<td>A driver parks their car where it is not allowed</td>
<td>57.6</td>
<td>20.9</td>
<td>7.5</td>
</tr>
<tr>
<td>A driver drives 20 km per hour over the speed limit on a road</td>
<td>47.4</td>
<td>25.7</td>
<td>3.7</td>
</tr>
<tr>
<td>A driver drives when they think they may have had too much to drink</td>
<td>71.1</td>
<td></td>
<td>12.0</td>
</tr>
<tr>
<td>A driver types text messages or e-mails while driving</td>
<td>66.8</td>
<td></td>
<td>5.5</td>
</tr>
<tr>
<td>A driver uses a mobile phone while driving</td>
<td>59.9</td>
<td></td>
<td>18.2</td>
</tr>
<tr>
<td>A passenger does not wear a seat belt in the back of the car</td>
<td>37.7</td>
<td></td>
<td>14.7</td>
</tr>
</tbody>
</table>

**Figure 4.8.** Support to road safety measures.
mandatory utilization of winter tyres (93.5%), mandatory usage of protective helmets for motorcyclists (87.5%) and zero tolerance of alcohol for novice drivers (the licence obtained for at least 2 years) (over 90%). The least support is given to application of mobile radars for recording of speed and use of any type of phones in driving (hand-held or hands-free) (Figure 4.8).

The opinion of the respondents about the current traffic fines and regulations is shown on the Figure 4.9. The Figures summarized the answers I agree to some extent and I agree. Most of them think that driving under the influence of alcohol and drugs (over 60%) has been insufficiently controlled, and therefore the highest percentage of the respondents stated that penalties for driving under the influence of alcohol and drugs should be more rigorous (over 70%) (Figure 4.9). Slightly lower percentage of respondents (about 50%) thinks that use of mobile phones while driving and utilisation of child protection systems haven’t been sufficiently controlled, while 40% think that penalties are too severe for not using seat belt while driving (Figure 4.9).

<table>
<thead>
<tr>
<th>Support</th>
<th>Oppose</th>
<th>No opinion</th>
</tr>
</thead>
<tbody>
<tr>
<td>64.6</td>
<td>24.7</td>
<td>10.7</td>
</tr>
<tr>
<td>72.3</td>
<td>19.7</td>
<td>8.0</td>
</tr>
<tr>
<td>72.8</td>
<td>15.7</td>
<td>11.5</td>
</tr>
<tr>
<td>75.1</td>
<td>13.0</td>
<td>12.0</td>
</tr>
<tr>
<td>76.6</td>
<td>14.0</td>
<td>9.5</td>
</tr>
<tr>
<td>75.1</td>
<td>14.5</td>
<td>10.5</td>
</tr>
<tr>
<td>78.6</td>
<td>10.5</td>
<td>11.0</td>
</tr>
<tr>
<td>61.8</td>
<td>22.2</td>
<td>16.0</td>
</tr>
<tr>
<td>93.5</td>
<td>4.0</td>
<td>3.0</td>
</tr>
<tr>
<td>87.5</td>
<td>5.0</td>
<td>7.5</td>
</tr>
</tbody>
</table>

**Figure 4.8.** Support to road safety measures
4.5 Self-reported behaviour

Following are the results of the self-reported behaviour, how often in the past 12 months the respondents conducted certain road safety behaviour. The responses are based on a five-degree scale (from 1 "Never" to 5 "always"). Self-reported behaviour is divided according to the category of road users (passenger car drivers, passengers in vehicles, cyclists, motorcycles, pedestrians), (Figure 4.10-4.14).
The results of the self-reported behaviour of the passenger car driver show that 74.0% of respondents stated that they always or often use the seat belt, while 69.3% of the surveyed drivers stated that they always or often use child protection system. Over 93% of surveyed drivers stated that they have never been driving under the influence of drugs, and 87% that they have never or rarely been driving under the influence of alcohol. When asked about tiredness while driving, over 89% of respondents stated that they have never or rarely been driving while tired (Figure 4.10).

**Figure 4.10.** Self-reported behaviour of passenger car drivers over the past 12 months.

Over 73% of passengers stated that they have been always or often using safety belts when driven like front passengers, while 30.5% stated to use safety belt at the rear seat (Figure 4.11).

When it comes to bicyclists, about 40% of respondents do not use safety helmets while riding a bicycle, and over 24% always or often drive without retro reflecting safety vest during the night or in the poor visibility conditions. Over 82% of cyclist newer or rarely crossed the road when red signal was displayed on the traffic light (Figure 4.12).

About 28% of motorcyclists stated that they have often, or always, been wearing special boots, back protectors, special jacket; while 32% have been wearing safety helmets (Figure 4.13).
More than 21% of pedestrians have been walking along the road without retro-reflecting safety vests during the night or in poor visibility conditions, and about 22% have crossed the road at places outside the pedestrian crossing. Over 90% of pedestrians stated that they have never or rarely been listening to music on earphones while crossing the road, that is, to cross the road when red signal for pedestrians was displayed on the traffic light (Figure 4.14).

Figure 4.12. Self-reported cyclist behavior over the past 12 months
One of the key mechanisms for predicting the behaviour of road users is to determine the attitudes that cause such behaviour. Respondents reported their attitudes on a five-degree scale (from 1-I do not agree to 5-I agree). The values of attitudes towards different areas are presented on Figure 4.15. About 80% of respondent agree that driving under the influence of alcohol increases the risk of accidents, while the same percentage of respondents ascertains that driving above the speed limit obscures appropriate reaction in the risky situation. When it comes to the group of questions referring to distraction, about 75% of respondents stated that if driver feels tired, he/she should not drive. Similar opinion share about 74% of respondents, who think that use of mobile phones while driving increases the risk of being involved in traffic accident. In regard to the use of protection systems, about 73% of respondents stated that it is extremely dangerous if children are not secured with protection systems while driving (Figure 4.15).
Protection systems
Distraction
Driving under the influence
Speeding

Figure 4.15. Attitudes towards traffic safety

4.7 Traffic law enforcement

Aspects of subjective assessment of possible control by traffic police on typical travel have been included in the survey. Subjective assessment of possible control by the traffic police on typical travel for different traffic offences was assessed on a five-degree scale (from 1 – very small chance to 5 – very big chance). The highest percentage of the respondents share the opinion that when on typical travel traffic police will often or always control the speed (51.5%) and the use of safety belt (43.2%); the smallest chance is that they will be tested for alcohol consumption (27.4%) or for the use of mobile phone (32%) (Figure 4.16).
Figure 4.16. Probability of control by the police on a typical travel

- Driving under the influence of alcohol: 27.4%
- Using seat belt: 43.2%
- Obeying the speed limit: 51.5%
5) Research results-Montenegro

5.1 Socio-demographic characteristics

This chapter presents the basic results related to demographic variables (age, sex, and the variables related to education), as well as the participation in traffic accidents with injured persons and material damages during last three years, as a vehicles’ driver.

Within the total sample structure, women make 39.7%, and men make 60.3% of the sample of interviewees (Figure 5.1). The education may be a key element for social and economic development of countries, as well as the development of traffic culture and safe environment for participants in traffic. Therefore, for the purposes of this research it was important to estimate the structure of the examinees according to the level of their education. The interviewees having medium level of education make 23.5% of the sample, while those having secondary or further education levels make 76.5% of the interviewees in total (Figure 5.2).

The age of the interviewees can be related with their behavior in traffic, as well as with traffic safety to the significant extent, and the grouping into six age classes was performed within the research.
In the total structure, age groups from 25 to 34 years and from 45 to 54 years were most frequent with 29.1%, namely 27.7% of the interviewees respectively, (making thus 3/5 of the sample). Within the analyses of the traffic safety that take into account the age structure, the experts tended to highlight two most important age groups; the young and the old. These two age groups, due to different conditions, are considered to be two most risky groups in traffic (ETSC, 2011; Loughran, 2007). The share of the young interviewees aged between 18 and 24 years in the total structure is 17.7%, while the old interviewees make 2.3% (Figure 5.3).

![Figure 5.3. The age structure of the interviewees](image)

Regarding the participation in traffic accidents as drivers for the last three years, 6.7% of the interviewees participated in one traffic accident in which some of participants was injured and was medically treated, more than 6.0% of the interviewees participated in 2 or more traffic accidents with injured persons, while the biggest percent of the examined (85.7%) had not participated in any traffic accident with the mentioned aftermaths. (Figure 5.4). As for the participation of the interviewees in traffic accidents with material damages in three previous years, 76.3% of them told that they had not participated in such traffic accidents, 17.3% of the examined people had participated in only one traffic accident, while more than 6% of the examined people had participated in more than one traffic accident with material damages as consequences (Figure 5.5).
In the past three years, how many accidents have you been involved in, as a driver of a car, in which someone, including yourself, was injured and received medical attention?

In the past three years, how many damage only accidents have you been involved in, as a driver of a car?

5.2 Opinion of respondents on the state of traffic safety

The interviewees were asked to say how much they agree with the following arguments. The first statement was related to the question whether the roads in Montenegro have become safe for their users for the last ten years, where the majority of the interviewees (37.4%) agreed that the roads have not become much safer, while only 10.8% of the interviewees considered that the roads had become very safe (Figure 5.6). Regarding the question about the government’s concern for the issues of the traffic safety, more than the half of the interviewees, (55.3%), argued that the government had not much considered the questions of traffic safety, and 19.1% argued that the government is not interested for the improvement of traffic safety at all. Regarding their opinions about the risks of accidents on our roads, namely what they think how much our roads are safe to travel, the majority of the interviewees (57.8%) argued that these roads are not much safe, while 14.6% of them considers that our roads are not safe at all (Figure 5.6).
5.3 Acceptance of unsafe behaviour in traffic

In giving their attitudes about the acceptability of unsafe behavior, the interviewees could chose an answer on a five-degree scale (from 1-unacceptable, to 5-acceptable) how much a certain behavior would be acceptable for the majority of other people, as well as to give their personal level of acceptability. Figure 5.7, darker color contrast reflects a smaller acceptability, while a lighter color contrast shows a bigger acceptability of certain types of risk behaviors.

The results show that a drive after consumption of alcohol is the least acceptable risky behavior in traffic for other people (70.3%), followed by typing messages or e-mails during drive (65.7%), while the third least acceptable behavior is when pedestrians cross roadways while red light is on for them (61.3%). On the other side, nonuse of safety belts by passengers is the most acceptable risk behavior in traffic (about 20%), as well as a drive for 20 km/h higher than the allowed speed on roads (about 30%) (Figure 5.7).
In the area where you live, how much it would be acceptable to the majority of other people when

<table>
<thead>
<tr>
<th>Scenario</th>
<th>Acceptance (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>A pedestrian is crossing the road when it is a red light for pedestrian</td>
<td>61.3 13.9 3.5 14.6 6.7</td>
</tr>
<tr>
<td>A pedestrian listens to music through earphones while crossing the street</td>
<td>50.5 15.6 4.8 12.9 16.2</td>
</tr>
<tr>
<td>A pedestrian uses mobile phone while crossing the street</td>
<td>43.5 20.4 4.4 13.5 18.3</td>
</tr>
<tr>
<td>A pedestrian crosses street at places other than pedestrian crossing in areas where it is not allowed</td>
<td>43.9 21.4 5.0 14.1 15.6</td>
</tr>
<tr>
<td>A motorcyclist does not wear a helmet</td>
<td>58.2 15.4 4.8 15.8 5.8</td>
</tr>
<tr>
<td>A driver carries a child in a car without using child seat</td>
<td>49.5 20.6 5.2 17.0 7.7</td>
</tr>
<tr>
<td>A driver does not wear a seat belt in the car</td>
<td>43.5 22.0 5.0 20.2 9.4</td>
</tr>
<tr>
<td>A driver parks their car where it is not allowed</td>
<td>45.7 23.3 2.7 13.3 15.0</td>
</tr>
<tr>
<td>A driver drives 20 km per hour over the speed limit on a road</td>
<td>29.3 23.9 2.5 22.7 21.6</td>
</tr>
<tr>
<td>A driver drives when they think they may have had too much to drink</td>
<td>70.3 10.4 5.1 11.6 6.2</td>
</tr>
<tr>
<td>A driver types text messages or e-mails while driving</td>
<td>65.7 9.6 2.5 14.1 8.1</td>
</tr>
<tr>
<td>A driver uses a mobile phone while driving</td>
<td>50.9 16.2 2.3 16.6 13.9</td>
</tr>
<tr>
<td>A passenger does not wear a seat belt in the back of the car</td>
<td>19.5 28.5 7.3 17.5 27.2</td>
</tr>
</tbody>
</table>

**Figure 5.7.** In the area where you live, how much it would be acceptable to the majority of other people when

### 5.4 Support to traffic safety measures

The traffic safety measures are the decisions, rules, provisions, initiatives etc. with the goal to improve traffic safety, namely to reduce the number of traffic accidents, incidents and their consequences. The measures for the improvement of traffic safety on roads can be executed on a local, regional, national or even on international level. People differently accept certain measures, and the part of the population often opposes their application because these changes could enforce the changes in their own behaviour, or may be in conflict with other needs (for example, time of travel etc.).
The support to the traffic safety measures is presented in Figure 5.8. The interviewees have given their opinions for individual measures in form of answers: I agree (dark color), I disagree (middle light colour) or I have no opinion about that (light colour). The biggest support of the interviewees was given to using protective helmet by motorcyclists (over 90%), as well as to compulsory winter tyres for vehicles, zero tolerance on alcohol (0,0‰) for new drivers (drive licence possessed for less than two years) and the usage of a video surveillance (about 85%), while the smallest support was given to any way of telephoning while driving (manual/hands-free) for all drivers (about 50%) as well as the zero tolerance for alcohol for all drivers (about 57%) (Figure 5.8).

![Figure 5.8. The support for traffic safety measures](image)

The interviewees’ opinions about the existing traffic penalties and provisions are presented in Figure 5.9. This Figure gives all the answers in form: I partly agree and I agree. The majority of the interviewees considers that drive under the influence of drugs is not sufficiently controlled (about 80%) and alcohol (about 67%), thence the biggest percent of
the interviewees told that the rules concerning the drive under the influence of drugs and alcohol should be stricter (about 80%) (Figure 5.9). A little bit smaller percent of them considered that both the use of mobile phones while driving and child protective system are not controlled enough (about 65%), while about 32% of them said that the penalties are too strict for not using a seat belt while driving. (Figure 5.9).

Figure 5.9. The interviewees’ opinion about current traffic penalties and provisions in Montenegro
5.5 Self-reported behaviour

The results of the self-reported behaviour, namely how often the interviewees had shown a certain behaviour in traffic during last 12 months are given next. Their answers have been based on a five-degree scale (from 1 „never“ to 5 „always“). The self-reported behaviour is classified according to the category of the participant in traffic (drivers of passenger cars, passengers in vehicles, cyclists, motorcyclists and pedestrians) (Figure 5.10-5.14).

The results of the self-reported passenger car drivers’ behavior show that more than 84% of the interviewees said that often or always make child travelling with him wearing seat belt. Over 99% of interviewed drivers reported not driving under the influence of drugs, while over 97% of them never or rarely drove under the impact of alcohol. Regarding the question about tiredness and drive, more than 94% of the interviewees said that they never or rarely drove while tired (Figure 5.10).

![Figure 5.10. Self-reported behaviour of drivers of passenger car during last 12 months](image-url)

More than 78% interviewees said that they always or often used safety belt while driving as passengers, while 16.1% of them said that they use a safety belt on back seats. (Figure 5.11).

As far as cyclists are concerned, it is a quite alarming fact that more than 70% of the interviewees do not use helmets while riding a bicycle, while more than 58% of them always
or often drive without a retro reflecting safety vest during the night and in low-visibility conditions. More than 92% of cyclists never or rarely crossed a roadway while red light is on. (Figure 5.12).

**Figure 5.11.** The self-reported passengers’ behaviour during last 12 months

About 46% of motorcyclists said that they often or always wear a special protective boots, backpack equipment, special jacket, while about 67% of them wears a protective helmet (Figure 5.13).

**Figure 5.12.** The self-reported cyclists’ behaviour for the last 12 months

More than 35% of pedestrians walk along the road without a retro reflecting safety vest during the night and in low-visibility conditions, while 5% crossed a traffic lane outside a zebra crossing. More than 95% of pedestrians said that never or rarely listen to music through earphones while crossing the road (Figure 5.14).
5.6 Attitudes towards the traffic safety

One of the key mechanisms for the prediction of behaviour of traffic participants is to determine the attitudes causing such behaviour. The interviewees on a five-degree scale (from 1- I disagree to 5- I agree) given their attitudes for individual statements. Figure 5.15 presents the obtained values of attitudes towards different areas. About 92% participants agree that drive under the influence of alcohol increases risks for accidents, while the same percent of them considers that the drive with speed higher than the allowed one restrains any adequate response in dangerous situations. As for the group of questions related to distracting attention, about 90% interviewees said that if a driver is tired he should not drive. Similar opinions (about 90%) are expressed for the cases of use of a mobile phone while driving, saying that it increases risks of traffic accidents. Regarding the use of protective systems, about 87% participants considered that it is dangerous if children traveling with a driver do not use the child seat or seat belt (Figure 5.15).
Figure 5.15. The attitudes towards a traffic safety

- By increasing the speed of 10 km/h you increase the risk of being involved in an accident: 51.6% (slightly agree) + 60.1% (agree)
- Speed limits are usually set at the acceptable level: 76.5%
- Driving faster than the speed limit makes it harder to react appropriately in a dangerous situation: 82.7%
- It is dangerous if children traveling with you do not use the child seat or seat belt: 86.9%
- Most of my friends thinks that drinking and driving is unacceptable: 84.2%
- My driving attention decreases while using mobile phone: 84.6%
- Drivers who use mobile phones while driving are more likely to be involved in an accident: 89.6%
- Speeding is risky for my life and the lives of others: 92.7%
- When a driver feels tired he/she should not drive a car: 90.4%
- If a driver feels tired while driving, the risk of being involved in an accident increases: 90.9%
- Drinking and driving seriously increases the risk of an accident: 92.7%
- If you drive under the influence of alcohol, it is very difficult to respond appropriately in a dangerous situation: 91.5%
- Almost all car drivers occasionally use a mobile phones while driving: 87.3%
- It is not necessary to use seat belt on the rear seat of a car: 43.7%
- For short journeys it is not necessary to use child seat: 24.1%
- I must drive fast, otherwise I have the impression of losing time: 13.9%
5.7 Traffic law enforcement

This research has comprised the aspects of a subjective estimation of probability for control by traffic police on a typical travel. The subjective estimation of the probability of control by the police on a typical travel for various faults was assessed on a five-degree scale (from 1 – very small chances to 5 – very big chances). The biggest percent of the interviewees thinks that the police will often or always control both their speed during a typical travel (60.6%) and the use of safety belt (47.6%), while the smallest chances is that they will be tested on alcohol (18.9%) or a mobile phone use (32%) (Figure 5.16).

![Figure 5.16](image-url)
6) Research results-Bosnia and Herzegovina

6.1 Socio-demographic characteristics

As part of this heading, the basic results relating to demographic variables (age, gender, and the variables related to education) are presented, as is the participation in road accidents with injuries and material damages in the past three years in the role of driver of the passenger car.

In total structure, the share of women is 37.3%, and men 62.3% of the sample respondents (Figure 6.1). Education can be a key element in the social and economic development of countries, and consequently the development of transport culture and a safer environment for traffic participants. Therefore, it is important within research to assess the structure of respondents according to their level of education. Respondents with medium educational level comprise 32.5% of the sample, while those with higher and high education levels constitute a total of 67.5% of respondents (Figure 6.2).

![Figure 6.1. The sex structure of respondents](image)

![Figure 6.2. The education structure of respondents](image)

The age of respondents in a significant extent can be linked to their behavior in traffic, and therefore with road safety. As part of the survey, grouping in six age groups has been performed. In the total structure of the respondents, the age group of 18 to 24 makes 34.9%, and age group 35-44 years 24.5% (which makes about 3/5 samples), (Figure 6.3).
In terms of participation in the road accident with driver in the previous three years 7,6% of respondents took part in a road accident in which one of the participants was injured and was given medical assistance, while 7,6% participated in one, and about 4% of respondents in two and more traffic and with injuries, and the highest percentage respondents (88,6%) has not participated in the road accident with the specified consequences (Figure 6.4). When it comes to participation of respondents in a road accident with material damage over the past three years, 73,4% pleaded not to participate in such a road accident, while 17,8% of respondents participated only in a single road accident, and about 9% of respondents participated in more than one road accident in which the material damage (Figure 6.5) took effect.

**Figure 6.3.** The age structure of respondents

**Figure 6.4.** In the past three years, how many accidents have you been involved in, as the driver of a car, in which someone, including yourself, was injured and received medical attention

**Figure 6.5.** In the past three years, how many damage only accidents have you been involved in, as the driver of a car?
6.2 Opinion of respondents on the state of traffic safety

Respondents were asked to specify how much they agree with the following claims. The first assertion was the question of whether roads in Bosnia and Herzegovina became safer for their users during the previous period of 10 years, where most respondents agreed (61,0%) that they are not much, while only 1,0% of respondents believe that roads have become very safe (Figure 6.6). The question of the Government's concern for road safety issues, almost half-and respondents (45,8%). It took the claim that the Government is not much concerned with road safety issues, and 45,4% that it is not interested in improving road safety. When asked about the risk of road accidents on the roads, i.e. How safe the roads are for travel, most respondents (51,1%)? It considers that the roads are not very safe, while 41,3% believe they are not a bit safe (Figure 6.6).

![Figure 6.6](image)

**Figure 6.6.** How much would you agree or disagree with the following statements?

6.3 Acceptance of unsafe behavior in traffic

In the statement of opinions on the acceptance of unsafe behavior, respondents could select the answer to a five-degree scale (from 1-unacceptable, up to 5-acceptable), how acceptable the behavior would be for most other people, and personal acceptance. On Figure 6.7. darker color contrast reflects less acceptance, and the brighter contrast of the color greater acceptance of certain risky behavior.
In the area where you live, how much would be acceptable to most of the other people when drunk-driving is the least acceptable risk behavior in traffic for other people (70.1%), followed by the texting of messages or emails during the drive (67.9%), and the third least acceptable behavior is the crossing of pedestal during the red light on the intersections (55.3%). On the other hand, not using the safety belts of the passenger is the most acceptable risk behavior (about 18%) and the ride over 20 km/h above the limits on the road (about 29%), (Figure 6.7).

6.4 Support to road safety measures

Road safety measures are decisions, rules, regulations, initiatives and secondly, aimed at improving road safety, i.e. reducing the number of road accidents and their consequences.
Measures to increase road safety can be carried out on local, regional, national or even international level. People accept certain measures differently, and part of the population often opposes their implementation because they can make a change of behavior or conflict with other needs (e.g. travel time, etc.).

Support for road safety measures is displayed on Figure 6.8. Respondents expressed their opinions for certain measures in the form of response: I support (dark shade); I object (medium tones) or have no opinion (light shade). The highest support of respondents gave the measures for the mandatory use of the protective helmets for motorcycles and mandatory winter tires for cars (about 93%), as in tolerance for alcohol (0.0‰) for new drivers (the license received less than 2 years), (about 88%), and at least they support zero tolerance for use of any way of making phone calls during the driving (manual/hands-free) for all drivers and having a law requiring all cyclists to wear a helmet (below 55%), (Figure 6.8).

![Figure 6.8. Support for road safety measures](image)
The opinion of the respondents about the current traffic fines and regulations is shown on the Figure 6.9. In the diagram, there are some response: I partially agree, and I agree. Most of them consider it not to be controlled enough by drugs (about 76%) and alcohol (about 67%), and therefore the highest percentage of respondents said that the rules for driving under the influence of alcohol and drugs should be stringent (more than 77%), (Figure 6.9). A small percentage of them considers that insufficient use of mobile phones is not controlled during the drive and the use of child protection systems in the car (about 55%), while about 25% believe that penalties are too severe for not using seat belt while driving. (Figure 6.9).

Figure 6.9. Opinion on current traffic fines and regulations in B&H
6.5 Self-reported behavior

The following are the results of the self-reported behavior, how often in the past 12 months the respondents conducted certain road safety behavior. The responses are based on a five-degree scale (from 1 "Never" to 5 "always"). Self-reported behavior is divided according to the category of traffic participants (passenger car drivers, passengers in vehicles, cyclists, motorcycles, pedestrians), (Figure 6.10-14).

The results of the self-reported behaviour of the passenger car driver show that more than 86% of respondents have said that they always or often use the seat belt, while 72.3% of the driver's respondents said that often or always make child travelling with you wear seat belt. Above 98% of the driver's examination, it has stated that it is never a vehicle under the influence of drugs and alcohol. The question of tired and driving over 74% of respondents stated that they had never or rarely driven when they were tired (Figure 6.10).

![Figure 6.10. Self-reported behavior of the passenger car driver over the past 12 months](image-url)
More than 84% of passengers have stated that they always or often use the safety belt when driving as passengers, while 24.5% said they are using the safety belt in the back seat (Figure 6.11).

![Figure 6.11. Passenger self-reported behavior over the past 12 months](image)

As regards bicyclists, more than 65% of respondents do not use helmets while riding bicycles, and more than 3% always or often drive without retro-reflecting safety vest during the night and in low-visibility conditions. More than 93% of cyclists never or rarely crossed the road during the red signal at the traffic light (Figure 6.12).

![Figure 6.12. Self-reported cyclist behavior over the past 12 months](image)

About 17% of the motorcyclist said they often or always wore special boots, back equipment, a special jacket, while about 33% wore the protective helmet (Figure 6.13).

More than of 40% pedestrians walk along the road without a retro-reflecting safety vest during the night and in low-visibility conditions, and 14% passed the carriageway outside the pedestrian crossing. Above 93% of the pedestrians has declared that never or rarely listen to
music through earphones while crossing the road, as well as cross the road when it was a red light for pedestrians (Figure 6.14).

Figure 6.13. Motorcyclist’s self-reported behavior over the past 12 months

Figure 6.14. Self-reported pedestrian behavior over the past 12 months

6.6 Attitudes towards road safety

One of the key mechanisms to predict the behavior of road users is to determine the attitudes that cause such behavior. Respondents are on a five-degree scale (from 1-I do not agree to 5-I agree) the positions for certain claims. The figure has given values of attitudes towards different areas. About 50% of respondents agreed that the driving under the influence of alcohol increases the risk of a road accident, while it also believes that the drive above the speed limit makes adequate response in a risk situation. As regards the group of issues related to distraction, about 50% of respondents said that if the driver feels tired, it should not drive. Similar opinions (about 50%) and the use of mobile phones during driving increases the risk of participating in a road accident. In terms of use of protective systems around 46% of respondents consider it is yes if children traveling with you do not use the child seat or seat belt (Figure 6.15).
6.7 Traffic law enforcement

As part of the survey, the aspects of the subjective probability of control are covered by traffic police on a typical travel. The subjective assessment of the likelihood of control by the police on a typical travel for different offense was assessed on a five-degree scale (from 1 – very small chance up to 5 – very big chance). The highest percentage of respondents shares the view that the police will often or always control the speed (53,0%) on their typical travel and...
use the safety belt (45.1%), and the smallest chance is to test them on alcohol (20.7%) or use a mobile phone (31.2%), (Figure 6.16).

Figure 6.16. Probability of control by the police on a typical travel
7) Conclusion and recommendations

7.1 Evidence from Serbia

The survey examined attitudes to traffic risks in the Republic of Serbia. The results from the survey presented in this report showed that in the overall structure of the respondents, the age groups 25 to 34 and 45 to 54 years make up close to half of the sample, the gender distribution is more uniform, women make up 51,8% and men 48,2% of the sample.

More than 83% of respondents said that they did not been involved in a car accident in which someone (including driver) was injured or involved in accident with material.

Of all respondents, as many as 44,6% said that roads in Serbia did not become much safer over the past 10 year, while more than half stated that the Government was not much concerned about road safety issues, and 22,7% think that the Government was not at all interested in improving road safety. When asked for their opinion on the risk of road accidents on roads in Republic of Serbia, the majority of respondents (65,1%) think that roads are not very safe, while 17,1% think that they are not at all safe.

When stating the acceptability of unsafe behaviour, the results illustrate that driving after drinking is the least acceptable unsafe traffic behavior in traffic for other people, followed by typing messages or e-mails while driving, and the third least acceptable behavior is the non-wear of seat belts of drivers while driving. On the other hand, the wear of seat belts by passengers is the most acceptable unsafe behavior (about 28%), as well as pedestrian-related behaviors such as using a mobile phone or listening to music while crossing the street and pedestrians cross the pedestrian crossing in area where it is not allowed (more of 24%)

The results of self-reported behaviour are relate to passenger car drivers, cyclists, motorcyclists, passengers and pedestrians. Regarding passenger car drivers results illustrate that more than 97% of respondents stated that they always or often use a seat belt, while 81,9% of surveyed drivers stated that they often or always use child seats. Above 90% of drivers surveyed said that they never drove under the influence of drugs and under the influence of alcohol. When asked about fatigue and driving, over 83% of respondents said they never or rarely drove while tired. The use of a safety protection system is significant. More than 96% of passengers stated that they always or often use a seat belt in the front seat of the car, while 45,5% said they use a seat belt in rear seat of the car. Regarding cyclists, it is alarming that more than 85% of
respondents do not use bicycle helmets while cycling, and more than 36% always or often cycling without a retro reflecting safety vest during the night and in low-visibility conditions. A cyclists never or rarely crossed the roadway through a traffic light that was on red. About 26% of motorcyclists stated that they often or always wore safety boots, back protector, a special jacket, while about 70% wore a safety helmet. More than 22% of pedestrians walk along the road without a retro reflecting safety vest during the night and in low-visibility conditions, and about 17% cross the road at places outside the pedestrian crossing. About 80% of pedestrians stated that they never or rarely were listening to music through earphones while crossing of the road, as well as were not crossing the road when it was a red light for pedestrian.

Attitudes towards traffic safety show that almost all respondents in Serbia agree that driving under the influence of alcohol seriously increases the risk of an accident, while also saying that driving faster than the speed limit makes it harder to react appropriately in a dangerous situation. Regarding the group of issues related to distractions, about 95% of respondents in Serbia stated that if a driver feels tired he/she should not drive a car. They are of the same opinion that the use of a mobile phone while driving increases the risk of involvement in a traffic accident. In terms of the use of safety systems, almost all consider that it is dangerous if children traveling without use of the child seat or seat belt

Analysis of subjective risk of being checked by police for different violations on a typical journey shows that the highest percentage of respondents in Serbia think that on a typical journey, the police will often or always control their speed limit and seat belt use, and least likely is to be checked for driving under the influence of alcohol or mobile phone use while driving.

Based on the results obtained in the research the recommendations are: (1) improve the performance of the traffic safety system, (2) develop an action plan for the implementation of measures and actions, (3) improve the visibility of the subjects' work on changing attitudes and behaviour of road users, (4) establish a system of informing the public about the effects of measures and actions in changing traffic participants’ attitudes and behavior (5) improve the system of collecting and processing traffic accident data, (6) maintain an adequate level of traffic safety control in order to ensure compliance with traffic safety rules.
7.2 Evidence from Kosovo*

Attitudes due to their variable nature and influence on the road users’ behaviour require constant monitoring and improvement. This is one of the main reasons for developing theoretical models and the conducting the numerous surveys in Europe and the world with the aim of explaining people's behaviour in a complex system as road traffic is. In addition to attitudes being determinants of behaviour, attitudes are important in the process of creating the basis for knowledge and final outcome of behaviour of road users. Forming of attitudes is affected by social conditions and social norms. Important roles also have family, education institution, driving training centres and many other social institutions.

The research results show that in the overall structure of the respondents, the age groups from 25 to 24 and 35 to 44 belong to over 50% of the sample; when it comes to sex, 70% are males and 30% are females.

Regarding the question related to involvement in traffic accidents with injured or material damage as the consequences, over 85% of the respondents stated that they haven’t been involved in the traffic accident.

Significant number of the respondents (about 50%) is of the opinion that roads haven’t become safer during the period of last 10 years, while more than half of the respondents assert that Government is not much concerned with traffic safety. When asked about the risk of traffic accidents, 60% of respondents thinks that roads are not very safe.

Results of the assessment of attitudes towards the acceptance of unsafe behaviour reveal that driving after the consumption of alcohol is the least acceptable risky behaviour in the traffic for other people, followed by texting and sending emails while driving, not using safety helmets by motorcyclists and pedestrians crossing the road while red signal is on. On the other hand, not using the safety belts by the passengers is the most acceptable risky behaviour, as well as the behaviour referring to pedestrians using mobile phones or listening to music on earphones while crossing the pedestrian crossing.

The results of self-reported behaviour are related to passenger car drivers, cyclists, motorcyclist, passengers and pedestrians. In regard to passenger car drivers, the research shows that over 70% of the respondents stated that always or often uses safety belts, while over 60% of the respondents stated that often or always uses children protection systems. Over 90% of the surveyed drivers stated that has never been driving under the influence of drugs; 87% that never or rarely have been driving under the influence of alcohol. Results on question referring to tiredness and driving revealed that 90% of the respondents never or rarely has been driving
while tired. When it comes to bicyclists, alarming is the result that over 40% of the respondents does not use safety helmets while riding a bicycle, and over 20% always or often rides without retro-reflecting equipment. Over 80% of the bicyclists never or rarely have crossed the road when red signal was displayed on the traffic light.

The results of attitudes towards the traffic safety show that about 80% of respondents agrees that driving under the influence of alcohol increases the risk of accident, and the same percentage thinks that driving above the speed limit complicates the appropriate reaction in the risky situation. When it comes to the group of questions referring to the distractions, about 75% of the respondents stated that if driver feels tired then he/she should not drive. The similar opinion has 74% of the respondents who stated that the use of mobile phone while driving increases the risk of being involved in the traffic accident. In terms of the use of protection systems, 73% of the respondents think that it is very dangerous if children are not provided with protection systems while driving.

Subjective assessment of possible control by the traffic police on typical travel shows that the highest percentage of the respondents shares the opinion that on a typical travel police will often or always control speed (about 51%) and the use of safety belts (about 43%), the less likely is that they going to be tested on alcohol (about 27%) or the use of mobile phones (about 32%).

Based on the obtained results of the research, the recommendations are as follows: (1) to improve traffic safety system performances, (2) to design action plan for the implementation of measures and actions, (3) to improve the visibility of the work of road safety stakeholders to change the attitudes and behaviour of the road users, (4) to establish a public information system on effects of measures and actions referring to changing of attitudes and behaviours of road users, (5) to upgrade the system of acquisition and processing of data on traffic accidents, (6) to maintain the appropriate level of traffic control in order to ensure compliance with traffic regulations.

7.3 Evidence from Montenegro

Based on the research, the attitudes about the risks in traffic in Montenegro were examined. The results of the research indicate that, regarding the entire structure of the interviewees, age groups from 25 to 34 and from 35 to 44 make near a half of the sample, distribution by sex is more equal, while men have more important share in relation to female sex.
Having regard to the questions related to participation in traffic accidents yielding injuries or material damages as the consequences, about 85.7% of interviewees said that they had not took part in any accidents.

Of all the interviewees, a significant part shares an opinion that our roads have not much become more safer during last ten years, while more than the half of the sample considered that the government was not much concerned about the traffic safety issues (55.3%). When asked for their opinion on the risks of accidents on roads, about 57.8% of them considered that our roads are not too much safe.

For the giving opinions about the acceptability of unsafe behaviour, the results show that the driving after consumption of alcohol is the least acceptable behaviour in traffic for other people, followed by the typing messages or e-mails while driving, pedestrians’ crossing streets while red light is on, and a nonuse of safety belts by drivers while driving. On the other side, nonuse of safety belts by passengers on back seats is the most acceptable risky behaviour, as well as behaviours related to pedestrians such as the use mobile phones or listening to music while going across a zebra crossing.

The results of the self-reported behaviour are related to drivers of passenger cars, cyclists, motorcyclists, passengers and pedestrians. As for the drivers of passenger cars, the research shows that more than 84% interviewees said that they always or often use safety belt, while about 74.3% of the interviewed drivers said that they often or always protective systems for children. More than 99% interviewees said that they had never drove under the influence of drugs, and 97% never or rarely drove under the influence of alcohol. As for the question about tiredness and driving, more than 94% interviewees reported that they had never or rarely drove while tired. As for cyclists, it is alarming fact that more than 70% of interviewees did not use helmets while driving a bicycle, and more than 58% of them always or often drive without a retro-reflecting equipment. More than 92% of cyclists never or rarely crossed a roadway while red light is on. About 46% of motorcyclists reported that they often or always wear protective boots, backpack equipment, special jacket, while 67% of them reported wearing of a protective helmet.

The results of attitudes towards the traffic safety show that about 99% of interviewees agreed that the driving under influence of alcohol increases risks for occurrence of accidents, while the same percent of them thinks that the driving with a speed above the allowed limit hinders adequate response in dangerous situations. As for the group of questions related to the distracting attention, about 90% of them thinks that when a driver is tired he should not drive. They also think (about 90% of them) that the use of mobile phones while driving increases
risks of participation in traffic accidents. In sense of the use of protective system, 87% of them thinks that it is very dangerous if children are not secured by adequate protective systems during a drive.

A subjective estimation of the probability of control by the police during a typical travel shows that the biggest percent of the interviewees shares an opinion that the police will often or always control their speed during a typical travel (about 47.6%), while the smallest odds is that they will be tested on alcohol (about 18.95), or the use of mobile phones (about 32.5).

Due to their changeable nature and the impact on behaviour of road users, the attitudes demand permanent tracing and improvement. This is just one of the main reasons for the development of theoretic models, as well as the execution of numerous researches in Europe and the world, with the goal to explain the people’s behaviour in a complex system like road traffic. Besides the fact that the attitudes are determinant of behaviour, the attitudes are important in the process of creation of the basis for knowledge and final output of the behaviour of participants in traffic. Social conditions and norms influence the formation of attitudes. Family, educational institutions, centres for driver’s training and numerous other institutions have an important role.

With the goal to create a favourable ambient for: (1) understanding of the impact of attitudes and behaviours on traffic safety; (2) efficient control over the attitudes and behaviour of participants in traffic from the aspect of traffic safety; (3) development and the improvement of measures and actions for the change of attitudes and behaviours, the following recommendations have been made;

The challenges and obstacles in the realization of an action plan for implementation of the strategy for the improvement safety in road traffic represented the following:

- Improvement of a legal framework in the traffic safety system through the adjustment and improvement the existing legal and subordinate regulations;
- Improvement of performances of the traffic safety system through the organizing the network of institutions which will be included in the activities related to the tasks of traffic safety, especially in the part of the changes of attitudes and behaviours. It is necessary to enable information flow, communication, coordination and harmonization of works within such an organized institutional network regardless on the type of activities;
• Develop an action plan for application of measures and activities. This plan should comprise: (1) responsibility of activities; (2) type and content of activities; (3) dynamics of the realization of activities; (4) financial plan for the realization of activities.

• Improve a visibility of the work of subjects on the changes of attitudes and behaviours. Various media means should inform the public about the activities of individual subjects for the purposes of the changes of attitudes and behaviours of traffic participants;

• Establish a system for informing the public about the effects of measures and activities of the changes of attitudes and behaviours of traffic participants. All the effects of activities and measures for the changes of attitudes and behaviours of traffic participants should be monitored, determined and inform the public about this:

• Improve thy system for collecting and processing data about accidents. Execute more detailed studies, examinations and researches so as to have more confident basis for estimations both on what scope and in what way human factors are connected with traffic accidents. On that basis, develop adequate preventive measures, measures for discouragement and penalties, as well as the ways of impacts on traffic participants’ behaviours;

• Improve an education system for traffic safety. This is aimed to the entire process to prepare people for participation in traffic.

• Highlight the importance of key factors of traffic safety from the aspect of human factor impacts such as speed exceeding, driving under the influence of alcohol, nonuse of safety belt and other protective systems;

• Maintain an adequate level of control of traffic with the goal to provide obeying the traffic rules. Create conditions for the application of automated enforcing system, especially the systems registering a speed exceeding and crossing roadway while red light is on;

• Provide the application of adequate penalties as soon as a breach occurs and introduce flexible procedures for punishing involved persons;

• Give a wide publicity to actions imagined to trace and punish dangerous behaviour, and to serve as a discouraging aspect;

• Simplify and shorten tender procedures for the selection of a contracting authority for road infrastructure;

• Enable sufficient budget assets for financing activities within the improvement of the state of traffic safety, namely to increase investments within the traffic safety system;
The fact that the increase of the degree of the public awareness about the traffic safety to a higher level through the use of attitudes is one of the basic aspects of efficient policy in traffic safety.

7.4 Evidence from Bosnia and Herzegovina

Attitudes due to their variable nature and influence on the road user's behavior require constant monitoring and improvement. This is exactly one of the main reasons for developing theoretical models, as is the implementation of numerous surveys in Europe and the world with the aim of explaining people's behavior in a complex system of road traffic. In addition to the attitude determinant of behavior, attitudes are important in the process of creating a basis for knowledge and the final outcome of the traffic participant's behavior. The forming of attitudes affects social conditions and social norms. An important role is family, educational institutions, drivers training centers and many other social institutions.

Within the conducted research, the positions on traffic risks in the territory of Bosnia and Herzegovina were examined. The results of the survey show that in the total structure of the respondents, the age group from 25 to 34 and 3 to 44 years make close to half of the sample, the distribution per gender is more evenly, although men in all areas except have significant participation in relation to the female gender.

Questions related to participation in road accidents in which the consequences of injured persons or material damage, about 80% of respondents said that he did not participate in the road accident.

Of all respondents, the important part is that the roads have not made much safer during the previous period of 10 years, while more than half of the respondents believe the government is not much concerned about road safety issues. When asked for an opinion about the risk of road accidents on the road also, about 50% of respondents believe the roads are not very safe.

In the statement of opinions on the acceptance of unsafe behavior, the results show that the driving after use of alcohol is the least acceptable risky behavior in traffic for other people, followed by writing messages or emails during the drive, crossing the pedestal during the red light at the traffic light and not using safety belts from the old driver during the drive. On the other hand, the lack of seat belt use by passengers in the backseat is the most acceptable risk behavior, as is the behavior related to pedestrians and use of a mobile phone or listening to music during the pedestrian crossing.
The results of self-reported behavior are related on passenger car drivers, cycles, motorcycles, passengers and pedestrians. As regards the driver, the research shows that more than 90% of respondents have said that they always or often seat belt use, while about 80% of the drivers have stated that they often or always use protective systems for children. Above 97% of the drivers have declared that never driving under the influence of drugs, and about 96% that it is never or rarely driving under the influence of alcohol. The question of the fatigue and driving over 87% of respondents said they had never or rarely driven while they were tired. As far as cyclists are concerned, it is alarming that more than 60% of respondents do not use helmets as they ride bicycles, and more than 30% always or often drive without retro-reflecting equipment. More than 8% of cyclists never or rarely crossed the road during a red signal at the traffic light. About 30% of the motorcyclist said they often or always wore special boots, back equipment, a special jacket, while about 75% wore the protective helmet.

The results of attitudes towards road safety show that around 96% of respondents agree that the driving under the influence of alcohol increases the risk of a road accident, while it also believes that driving above the speed limit makes appropriate response in a risk situation. As regards the group of issues related to distraction, about 95% of respondents said that if the driver feels tired, he should not drive. Similar opinions (about 93%) and the use of mobile phones during driving increases the risk of participating in a road accident. In terms of use of protective systems 91% of respondents are considered very dangerous if children are not provided with the children protection systems.

The subjective estimate of the control likelihood by the police on a typical travel shows that the highest percentage of respondents shares the view that the police will often or always control speed (about 50%) on their typical travel and use the seat belt (about 42%), and the smallest chance is to test them on alcohol (about 20%) or use a mobile phone (about 29%).

There are following recommendations:

- Provide the preconditions for measurement and monitoring road users attitudes in accordance with international methodology (E- survey of road attitudes), esp. on the level of the Bosnia and Herzegovina;
- Improve the performance of the road safety system through cooperation and coordination with all road safety stakeholders, especially in the part of the change of attitudes and behaviors.
- Improve the visibility of the work of road safety stakeholders to change the attitudes and behavior of the road users. Across channels of communications inform the public
about the activities of individual subjects in the aim of changing the attitudes and behaviors of road users.

- Establish a public information system about the effects of measures and actions changing attitudes and behaviors of traffic participants. All effects of measures and actions on changing attitudes and behaviors are necessary to monitor, establish and inform the public.

- Emphasize the importance of the frequent road safety factors in the aspect of the influence of the human factor, such as over speeding, drunk-driving, failure to use the seat belt and other protection systems, etc.

- Maintain an adequate level of traffic control in the aim of ensuring compliance with traffic regulations. Create the conditions for the application of automatic systems of enforcement, especially the systems that register over speeding and passing through the red light.

- Enforce appropriate traffic fines as soon as the offence is made and the introduction of flexible fines procedures for offenders.
8) References


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