



Speeding

ESRA thematic report no. 1

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List of Abbreviations

Country codes

AT	Austria
BE	Belgium
CH	Switzerland
DE	Germany
DK	Denmark
EL	Greece
ES	Spain
FI	Finland
FR	France
IE	Ireland
IT	Italy
NL	the Netherlands
PL	Poland
PT	Portugal
SE	Sweden
SI	Slovenia
UK	United Kingdom
USA	United States of America

Other abbreviations

AAAFTS	AAA Foundation for Traffic Safety
ESRA	European Survey of Road Users' Safety Attitudes
ETSC	European Transport Safety Council
EU	European Union – but, in figures and tables of the present report 'EU' refers to the 17 countries participating in ESRA
SARTRE	Social Attitudes to Road Traffic Risk
NGOs	Non-Governmental Organizations
ICT	Information and Communications Technology
ISA	Intelligent Speed Adaptation

ESRA weights

European weight A	European weight based on all ESRA 2015 countries except Italy
European weight B	European weight based on all ESRA 2015 countries
European weight C	European weight based on all ESRA 2015 countries except Slovenia
Individual country weight	Individual country weight based on gender and age

Summary

Objective and methodology

The ESRA project (European Survey of Road users' safety Attitudes) is a joint initiative of research organisations and road safety institutes in 17 European countries aiming at collecting comparable (inter)national data on road users' opinions, attitudes and behaviour with respect to road traffic risks. The project was funded by the partners' own resources.

The first ESRA survey was conducted online using representative samples (at least N=1,000) of the national adult populations in 17 European countries. A common questionnaire was developed and translated into 20 different country-language versions. The survey covered a range of subjects, including the attitudes towards unsafe traffic behaviour, self-declared (unsafe) behaviour in traffic and support for road safety policy measures. Data collection took place simultaneously in all countries in June/July 2015. In total, data from more than 17,000 road users (of which 11,000 frequent car drivers) were collected. Hence, the ESRA survey produced a very rich dataset. An overview of the project and the results are available on: www.esranet.eu.

This thematic ESRA report aims at describing the attitudes and opinions on speeding of road users in European countries, and comparing it amongst countries as well as with regard to demographic characteristics. The speeding aspects analysed in this thematic report concern the acceptability of unsafe traffic behaviour related to speeding, the self-declared (unsafe) behaviour in traffic, attitudes towards unsafe traffic behaviour, support for road safety policy measures and the reported police checks and perceived likelihood of getting caught for speeding.

Key results

Acceptability of unsafe traffic behaviour: speeding

- Respondents consider that behaviours related to speeding are more acceptable by 'others', than by themselves indicating a self-declared safer personal attitude towards speeding.
- A particularly high difference between the perceived social acceptability and personal acceptability is reported in Italy and in Greece.
- The acceptability of speeding behaviours is lower for females and older people (55+) compared to respectively male and younger age categories.

Self-declared (unsafe) behaviour in traffic

- More than two-thirds of the respondents reported having driven faster than the speed limit at least once in the past 12 months, for all the examined cases.
- All the reported attitudes related to speeding depend on the gender with more males than females declaring that they have driven faster than the speed limit.
- Age increase is generally associated with a decrease in the tendency to violate the speed limit; an exception is observed in the case of motorways / freeways, where the greatest percentage of having driven faster than the speed limit at least once in the past 12 months is reported by those in the 35-54 years old group.

Attitudes towards unsafe traffic behaviour

- Most of the respondents (76%) agree that 'driving fast is risking your own life, and the lives of others' and 'driving faster than the speed limit makes it harder to react appropriately in a dangerous situation' which shows that the consequences of speeding are quite clear to them.
- However, only half of them agree that speed limits are usually set on acceptable levels indicating a low trust to the enforcement rules.
- Females are generally more aware of the influence of speeding on road safety.

- Older respondents (55+) are more aware of the influence of speeding on road safety than responders in the 35-54 year old age group, who in turn are more aware than those in the 18-34 year old age group.

Support for road safety policy measures

- About half of the respondents agree that in their country traffic rules should be stricter (52%) and that traffic rules are not being checked sufficiently (54%).
- Over one third believe that penalties for speeding in their country are too severe.
- Females and older people are generally more supportive of strict traffic rules, efficient enforcement and severe penalties for speeding.

Reported police checks and perceived likelihood of getting caught for traffic offences

- At European level, 36% of the respondents consider it likely to be checked by the police for respecting the speed limits on a typical journey.
- The percentage of respondents that believe that they will be checked at least once on a typical journey ranges from 11% in Denmark and 18% in Sweden to 53% in Poland and 55% in France.
- The rates of respondents indicating that they had to pay a fine for speeding at least once in the past 12 months range from 5% and 4% in Finland and Sweden respectively to 35% in Italy and 26% in Switzerland.
- Age increase is generally associated with a decrease in the percentage of having faced consequences for speeding at least once in the last 12 months, regarding both fines and court convictions.

Cross analysis of unsafe traffic behaviour and related road safety measures

- Less than one third of respondents who find driving over the speed limit acceptable, also think that the traffic rules for speeding should be stricter in the case of freeways/motorways (27%) and for an increase of 10 km/h over the speed limit (29%).
- Slightly higher percentage is observed in the case of residential streets and urban areas, reaching 50% in the case of school zones.
- The same trend is observed regarding the sufficient enforcement of traffic rules for speeding.
- In all examined cases, penalties for speeding are considered too severe by more than 50% of those who find driving over the speed limit acceptable.

Cross analysis of acceptability of unsafe traffic behaviour and self-declared behaviour

- There is significant inconsistency between theory (acceptability of unsafe behaviour) and practice (self-declared behaviour).
- In all examined cases, those who consider driving over the speed limit unacceptable, admitted having done so at least once during the last 12 months in a percentage that ranges from 60% to 72%.

Cross analysis of questions on acceptability of attitudes towards unsafe traffic behaviour

- One fourth to one third of the people who consider driving over the speed limit on motorways, on residential streets and in urban areas acceptable, also accept that this increases the risk of being involved in an accident, makes it harder to react appropriately in dangerous situations and corresponds to risking the life of others and their own.
- The majority of people who accept driving over the speed limit do not believe that the speed limits are set at acceptable levels.

Cross analysis of support for road safety policy measures and perceived likelihood of getting caught for traffic offences

- One third of the respondents who find that traffic rules should be stricter and that they are not being checked sufficiently, also agree that there is a (very) big chance to be checked by the police for respecting the speed limits on a typical journey.
- A bit less than half of those considering penalties for speeding too severe, also agree that there is a (very) big chance to be checked by the police for respecting the speed limits on a typical journey.

Cross-examination of self-declared traffic behaviour and reported police checks

- One fifth of the respondents who admitted having driven faster than the speed limit at least once in the last 12 months, have also had to pay a fine for a traffic violation during the same period.
- The respective percentage of those who have also been convicted at court for a traffic violation is much lower, only 2% in each examined case.

Key recommendations

Policy recommendations at European level

- Develop common principles and goals for speed management strategies in the Member States as part of European Union directives and other legislative procedures.
- Define speed related indicators and set targets at European Union level, such as the number of speed checks, the number of speeders and the number of traffic casualties attributable to speed.
- Make ISA systems compulsory for all new cars in the European Union.
- Facilitate and support the exchange of best practice in terms of speed management across Member States.
- Support more research on how speed management can be improved through developments in vehicle, road and ICT technology.

Specific policy recommendations at national and regional level

- Establish a speed management strategy that is based on integrated set of countermeasures, such as setting speed limits, providing information about the speed limit in force, implementing road engineering measures, enforcing speed limits, ensuring appropriate driver education and informing the public of the negative impact of speeding.
- Select the most appropriate combination of speeding measures based on an assessment of the local circumstances.
- Implement a road infrastructure that supports and encourages road users to drive at safe speeds develop and implement public education campaigns to provide information and influence road users to modify their behaviour.
- Develop an efficient speed enforcement system that includes a careful selection of location and duration of control activities, user awareness of speed enforcement activities, systematic recording of speed controls and infringements and public communication of the results of speed enforcement activities.
- Raise awareness of the impact of speeding on road safety and the need of speed enforcement.
- Ensure that there is sufficient political support and persistence during the implementation of a speed management strategy.

Specific recommendations to particular stakeholders

- *[To Non-Governmental Organizations (NGOs)]* Contribute to education and awareness raising campaigns and events against speeding.
- *[To Private Concessionaire Companies (if applicable)]* Improve road infrastructure, undertake campaigns and provide information about high risk sites and traffic conditions.
- *[To research organisations]* Contribute to the development, monitoring and evaluation of the implementation of speed management strategies.
- *[To vehicle manufacturers]* Develop low cost solutions to be incorporated in vehicles that will avoid speeding (e.g. ISA) or will reduce the impact of speeding (e.g. Automatic Breaking Systems).

Conclusion

The ESRA project has demonstrated the feasibility and the added value of joint data collection on road safety attitudes and performance by partner organizations in a large number of European countries. The intention is to repeat this initiative on a biennial or triennial basis, retaining a core set of questions in every wave, allowing the development of time series of road safety performance indicators. This will become a solid foundation for a joint European (or even global) monitoring system on road safety attitudes and behaviour.

1. Introduction

Speed is generally considered a central issue in road safety, and one of the basic risk factors in traffic (ETSC, 2010; OECD/ECMT, 2006; Wegman & Aarts, 2006). In 2010, the European Transport Safety Council (ETSC), in its PIN Flash publication, included speed among the three main risk factors on the roads, the others being alcohol and non-use of seat belts. Excessive and inappropriate speed was recognised as the number one road safety problem. Speeding was found to be a primary factor in about one third of fatal accidents and an aggravating factor in all accidents (ETSC, 2010).

In a large number of OECD/ECMT countries (OECD/ECMT, 2006), speeding is the number one road safety problem. This is also reflected in the current Road Safety Programme 2011-2020 of the European Commission, within which speed related issues are included in four out of the seven strategic objectives of the Programme (i.e. improved safety measures for vehicles, boost smart technology, better enforcement, a new focus on motorcyclists) (European Commission, 2010; Laiou et al., 2015).

The relation between speed and road safety rests on two pillars (SWOV, 2012). The first pillar is the relation between speed and the risk of a crash, and the second pillar is the relation between collision speed and the severity of a crash.

The exact relation between speed and the risk of a crash depends on many factors; however, in a general sense, if the driven speeds on a road become higher, the crash rate will also increase. The crash rate is also higher for an individual vehicle that drives at higher speed than the other traffic on that road. The reasons for this accident increase rest on both human factors and vehicle dynamics: on one hand, high speeds reduce the available time for drivers to process information, to decide whether or not to react and to execute a reaction; on the other hand, braking distance is increased at high speeds (proportionally to the square of speed), and it is more common to lose control of a vehicle (e.g. in a sharp curve) at higher speeds (SWOV, 2012; European Commission, 2015).

Several studies have attempted to quantify the relationship between speed and accident risk (Elvik, 2009; Elvik et al., 2004; Nilsson, 1982; 2004) and have generally suggested that it is a power function; on a particular road with increasing speed, the accident risk increases more (i.e. the rate of increase becomes steeper) as the absolute speed gets higher.

The second pillar relating speed and road safety (SWOV, 2012) is the impact of speed in the severity of a crash. The higher the collision speed, the more serious the consequences in terms of injury and material damage. This relates to the quantity of kinetic energy that during the collision is converted into e.g. heat and matter distortion. In addition, the human body is physically very vulnerable in comparison with the enormous forces released in a collision. In addition to collision speed, the mass difference between vehicles and the vulnerability of the vehicles/road users who are involved are also important factors for injury severity; thus, the effect of speed on the severity of accidents involving pedestrians, cyclists and powered two-wheelers is even more pronounced.

Within the above context, road authorities post speed limits in order to instruct drivers about the safe speed to travel in average conditions. However, speed limit violations are very common. Typically 40% to 60% of the drivers exceed the limit, and around 10 to 20% exceed the speed limit by more than 10 km/h (OECD/ECMT, 2006). Given the strong relationship between speed and accident risk and severity, a large number of fatalities and injuries could be prevented if all drivers would only obey the posted speed limits.

This thematic ESRA report aims at describing the attitudes and opinions on speeding of road users in 17 European countries, and comparing it amongst countries as well as with regards to demographic characteristics. Some of the ESRA questions have already been used in the SARTRE4 survey, allowing for an assessment of the development in the perspective of previous years. Some others are slightly different or new and can be considered as a first benchmark for future comparison and monitoring across Europe.

2. Methodology

The ESRA project (European Survey of Road users' safety Attitudes) is a joint initiative of research organisations and road safety institutes in 17 European countries aiming at collecting comparable (inter)national data on road users' opinions, attitudes and behaviour with respect to road traffic risks. The project was funded by the partners' own resources.

The first ESRA survey was conducted online using representative samples (at least N=1,000) of the national adult populations in 17 European countries (Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Poland, Portugal, Slovenia, Spain, Sweden, Switzerland, the Netherlands, United Kingdom). A common questionnaire (see Appendix - ESRA 2015 Questionnaire) was developed and translated into 20 different country-language versions. The subjects covered a range of subjects, including the attitudes towards unsafe traffic behaviour, self-declared (unsafe) behaviour in traffic, and support for road safety policy measures – overall over 222 variables. The ESRA questionnaire was inspired by the previous European project, SARTRE, and also includes some questions of the AAAFTS-survey (USA) 'Traffic Safety Culture Index', which enables tentative comparisons with these projects. Data collection took place simultaneously in all countries in June/July 2015. A Belgian polling agency coordinated the field work to guarantee a uniform sampling procedure and methodology. In total, data from more than 17,000 road users (of which 11,000 frequent car drivers) were collected. Hence, the ESRA survey produced a very rich dataset.

Seven institutes – BRSI (BE), KfV (AT), NTUA (EL), CTL (IT), ITS (PL), PRP (PT), BFU (CH) – combined their expertise to analyse the common data and to disseminate the results. The results of the 2015 survey are published in a [Main report](#) and six thematic reports:

- [Speeding](#)
- [Driving under the influence of alcohol and drugs](#)
- [Distraction and fatigue](#)
- [Seat belt and child restraint systems](#)
- [Subjective safety and risk perception](#)
- [Enforcement and support for road safety policy measures](#)

There are also 17 country fact sheets in which the main results per country are compared with an European average. An overview of the project and the results are available on www.esranet.eu.

The present report summarizes the ESRA-results with respect to speeding. An overview of the data collection method and the sample per country can be found in the [Main report](#).

The speeding aspects analysed in this thematic report concern:

a. Acceptability of unsafe traffic behaviour: speeding

This section examines the rate of acceptability of speeding related behaviours, comprising the following questions in the analysis:

Question: Where you live, how acceptable would most other people say it is for a driver to ...?

- drive 20 km per hour (km/h) over the speed limit on a freeway / motorway
- drive 20 km/h over the speed limit on a residential street
- drive 20 km/h over the speed limit in an urban area
- drive 20 km/h over the speed limit in a school zone
- drive up to 10 km/h above the legal speed limit

Question: How acceptable do you, personally, feel it is for a driver to ...?

- drive 20 km/h over the speed limit on a freeway / motorway

- drive 20 km/h over the speed limit on a residential street
- drive 20 km/h over the speed limit in an urban area
- drive 20 km/h over the speed limit in a school zone
- drive up to 10 km/h above the legal speed limit

In both of the above questions, the respondents were asked to rate the acceptability levels using a 5-point scale, from 1 (unacceptable) to 5 (acceptable). The results from both questions are presented side by side in order to compare the personal acceptability with the perceived social acceptability (i.e. acceptability by 'other people').

b. Self-declared (unsafe) behaviour in traffic

In this section, the self-declared behaviour of road users with regards to speeding is investigated by presenting the answers to the following question:

Question: In the past 12 months, as a road user, how often did you...?

- drive faster than the speed limit inside built-up areas
- drive faster than the speed limit outside built-up areas (except motorways/freeways)
- drive faster than the speed limit on motorways/ freeways

The respondents were asked to give an answer in a 5-point (Likert) scale, from 1 (never) to 5 (almost always).

c. Attitudes towards unsafe traffic behaviour

In this section, the road users' opinions on the influence of speeding on accident risk and road safety in general are investigated, through examination of the following question:

Question: To what extent do you agree with each of the following statements?

- Driving fast is risking your own life, and the lives of others
- I have to drive fast, otherwise I have the impression of losing time
- Driving faster than the speed limit makes it harder to react appropriately in a dangerous situation
- Most of my acquaintances / friends feel one should respect the speed limits
- Speed limits are usually set at acceptable levels
- By increasing speed by 10 km/h, you get a much higher chance of being involved in an accident

The respondents were asked to give an answer in a 5-point (Likert) scale, from 1 (disagree) to 5 (agree).

d. Support for road safety policy measures

In this section, the road users' opinions on speeding related enforcement, traffic rules and penalties is investigated. The following questions of the survey are examined:

Question: What do you think about the current traffic rules and penalties in your country for each of the following themes?

- The traffic rules (on speeding) should be stricter
- The traffic rules (on speeding) are not being checked sufficiently
- The penalties (for speeding) are too severe

The respondents were asked to provide a 'yes' or 'no' response, with an additional option of 'don't know / no response'.

e. Reported police checks and perceived likelihood of getting caught for traffic offences

In this section, police checks reported by road users and perceived likelihood of getting caught for traffic offences are investigated. The following questions of the survey are examined:

Question: On a typical journey, how likely is it that you (as a driver) will be checked by the police for respecting the speed limits (including checks by police car with a camera and/or flash cameras)?

The respondents were asked to give an answer in a 5-point (Likert) scale, from 1 (very small chance) to 5 (very big chance).

Question: In the past 12 months, how many times have you...?

- had to pay a fine for... violating the speed limit?
- been convicted at court for... violating the speed limit?

3. Results

3.1. Descriptive analysis

The following chapters comprise results of descriptive statistics on questions related to speeding.

3.1.1. Acceptability of unsafe traffic behaviour: speeding

Question¹: Where you live, how acceptable would most other people say it is for a driver to...?

- *drive 20 km per hour (km/h) over the speed limit on a freeway / motorway*
- *drive 20 km/h over the speed limit on a residential street*
- *drive 20 km/h over the speed limit in an urban area*
- *drive 20 km/h over the speed limit in a school zone*
- *drive up to 10 km/h above the legal speed limit*

Question: How acceptable do you, personally, feel it is for a driver to...?

- *drive 20 km/h over the speed limit on a freeway / motorway*
- *drive 20 km/h over the speed limit on a residential street*
- *drive 20 km/h over the speed limit in an urban area*
- *drive 20 km/h over the speed limit in a school zone*
- *drive up to 10 km/h above the legal speed limit*

The opinions expressed show that the respondents consider that unsafe traffic behaviour related to speeding is more acceptable by 'others', than themselves. This applies to all of the examined situations: driving 20 km/h over the speed limit on freeways, on residential streets, in urban areas, in school zones and driving up to 10 km/h above the legal speed limit, regardless of the road environment (Figure 1).

According to the responses provided in the survey, acceptability of unsafe traffic behaviour related to speeding can be divided into two groups: there is minor acceptability of driving 20 km/h over the speed limit in urban areas, on residential streets and in school zones (13%, 13% and 8% respectively for 'other people' and 8%, 7% and 4% respectively for themselves). On the other hand, acceptability of driving 20 km/h over the speed limit on a freeway / motorway and acceptability of driving up to 10 km/h over the speed limit, regardless of the road environment, is much higher: (33% and 40% respectively for 'other people' and 25% and 29% respectively for themselves).

¹ In this version of the ESRA survey, in the questionnaire used for the United Kingdom, miles/h were used instead of km/h, without recalculating the speed limit excess. In the questionnaire used for Ireland, in the "drive up to 10 km/h above the legal limit" option, miles/h were used instead of the correct km/h.

In the final data-file no conversion was made in order to adjust the above defects. This was selected because it was estimated that the responses were based on the proportional excess of the speed limit rather than the absolute numbers.

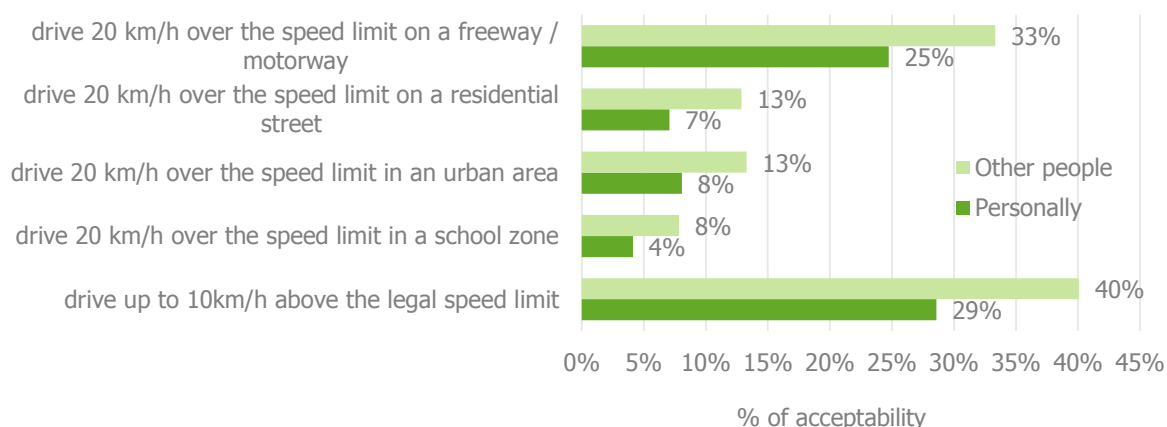


Figure 1: Acceptability of unsafe traffic behaviour related to speeding, in Europe.

Notes: (1) % of acceptability: scores 4 and 5 on a 5-point scale from 1 'unacceptable' to 5 'acceptable'. (2) European weight B.

Acceptability rates of driving 20 km/h over the speed limit on a freeway / motorway differ widely among countries: the perceived social acceptability ranges from 17% in the United Kingdom to 46% in Italy, and personal acceptability ranges from 15% or less in the United Kingdom, Spain, France and Ireland to over 36% in Austria and Portugal (Figure 2 - left).

Regarding the acceptability of driving 20 km/h over the speed limit on a residential street, much lower acceptability rates are observed. Perceived social acceptability ranges from 4% or less in Denmark, Finland and Switzerland to 19% in Greece and 35% in Italy; 'personal acceptability' ranges from 2% in Denmark, Finland and Switzerland to 13% in the Netherlands and 18% in Italy. The perceived social acceptability rates are higher than the personal acceptability in all countries, with the difference being particularly high in Italy and in Greece (Figure 2 - right).

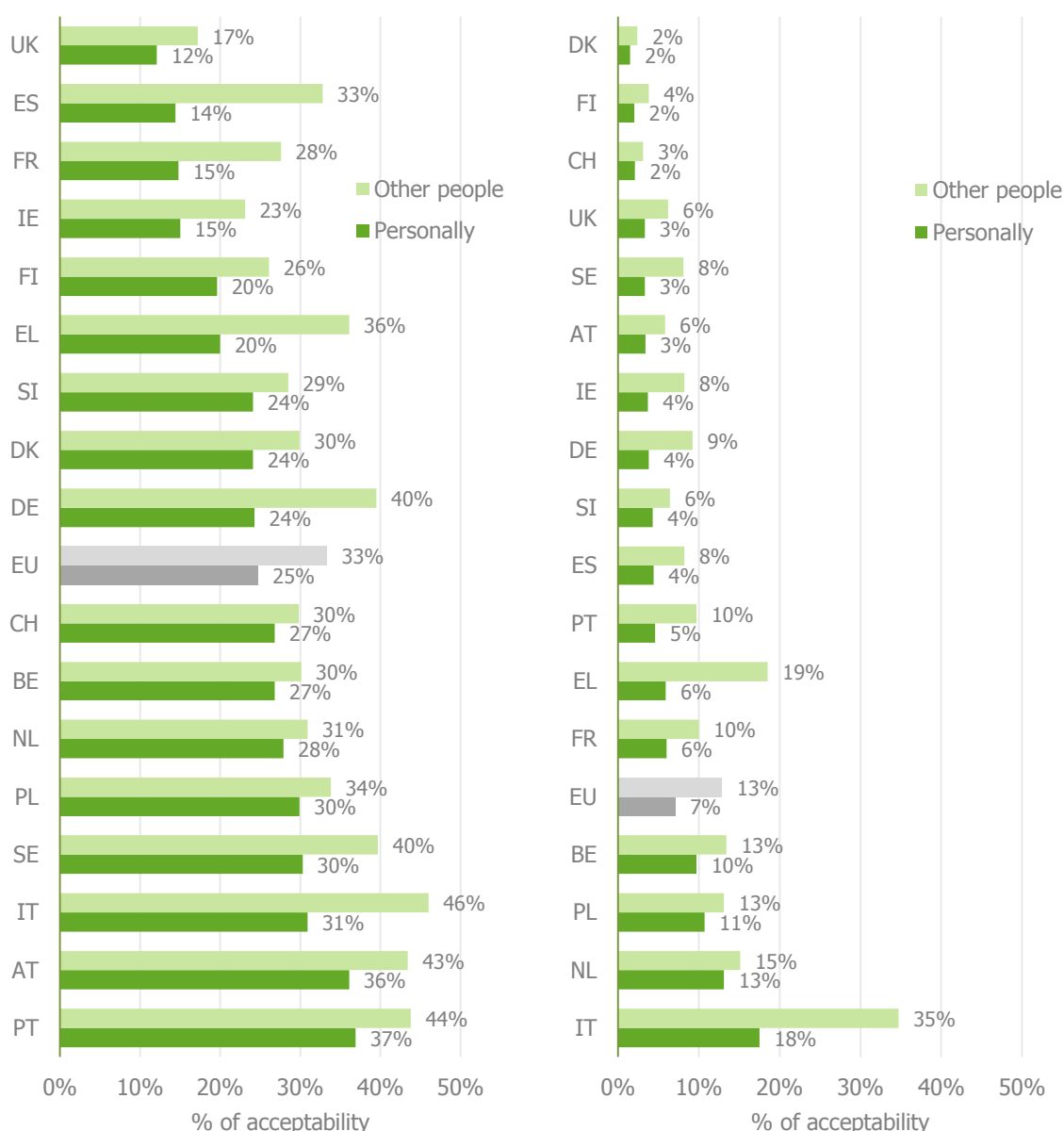


Figure 2: Acceptability of driving 20 km/h over the speed limit on a freeway / motorway (left) and on a residential street (right), by country.

Notes: (1) % of acceptability: scores 4 and 5 on a 5-point scale from 1 'unacceptable' to 5 'acceptable'. (2) Countries based on individual country weight, Europe based on European weight B.

The acceptability of driving 20 km/h over the speed limit in urban areas and in school zones, according to the responses in the questionnaire surveys, is presented in Figure 3. The opinion on the perceived social acceptability ranges from 2% in Denmark and 4% in Switzerland to 30% in Italy, 20% in Poland and 18% in Greece. The personal acceptability rate of driving 20 km/h over the speed limit in an urban area is 3% or less in Denmark, Finland and Switzerland, whereas the highest rates were observed in Italy (19%) and Poland (16%) (Figure 3 - left).

Driving 20 km/h over the speed limit in a school zone is considered much less acceptable, both from the 'other people' and from the personal point of view. The opinion on the perceived social acceptability is 3% or less in only three countries (Finland, Denmark and Switzerland), and the highest reported acceptability rates are as high as 14% in Italy, 13% in Poland and 12% in Greece. The personal acceptability rate is lower than 5% in all countries except Poland where it reaches 8% (Figure 3 - right).

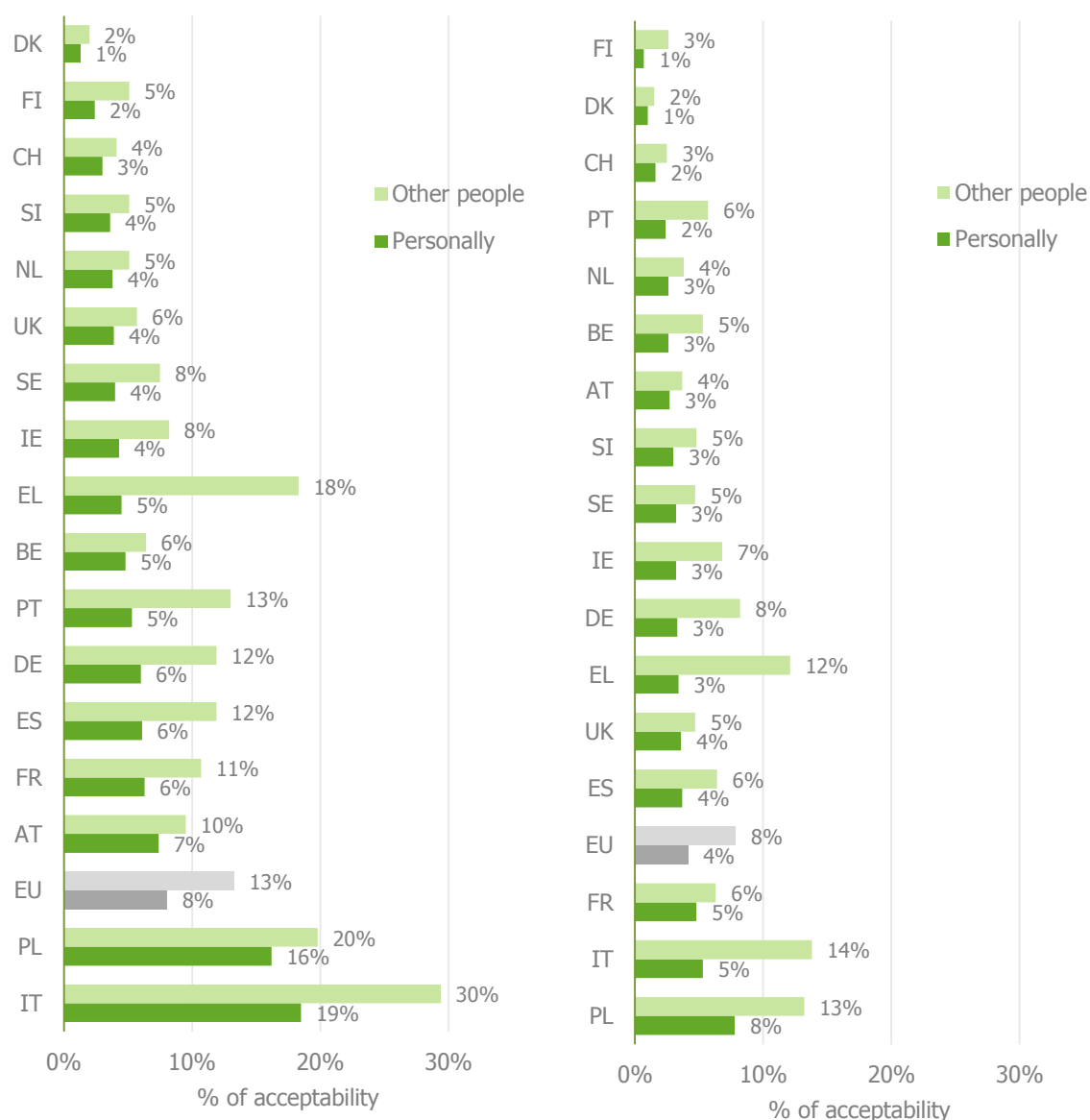


Figure 3: Acceptability of driving 20 km/h over the speed limit in an urban area (left) and in a school zone (right), by country.

Notes: (1) % of acceptability: scores 4 and 5 on a 5-point scale from 1 'unacceptable' to 5 'acceptable'. (2) Countries based on individual country weight, Europe based on European weight B.

Acceptability rates of driving 10 km/h over the legal speed limit, without specification of the road environment also differ widely among countries: perceived social acceptability ranges from 18% in the United Kingdom to 61% in Italy and 56% in Austria, and personal acceptability from 12%, also in the United Kingdom, to 46% in Austria (Figure 4).

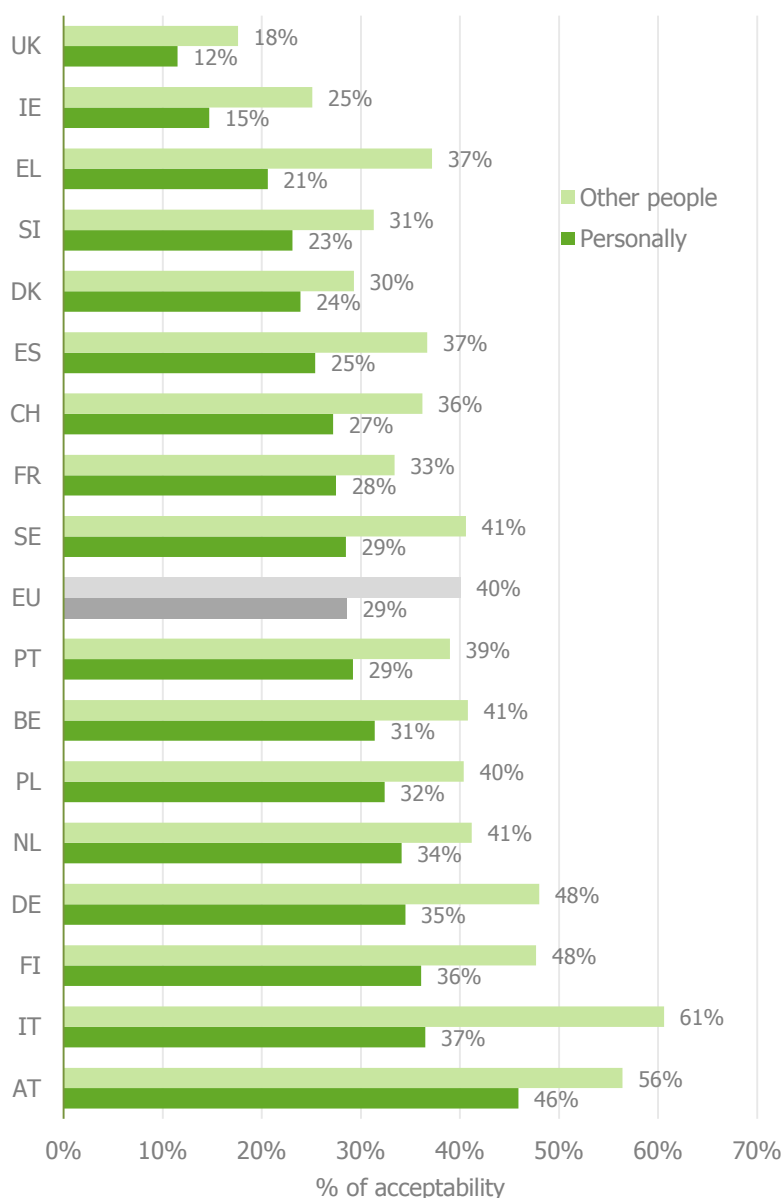


Figure 4: Acceptability of driving 10 km/h over the legal speed limit, by country.

Notes: (1) % of acceptability: scores 4 and 5 on a 5-point scale from 1 'unacceptable' to 5 'acceptable'. (2) Countries based on individual country weight, Europe based on European weight B.

Through in parallel examination of Figure 2, Figure 3 and Figure 4, the following interesting remarks can be made:

- It is a common belief in all countries and for all five examined speeding related unsafe traffic behaviours, that the acceptability of 'other people' is greater than of 'themselves'.
- A particularly high (more than 10%) difference between the perceived social acceptability and personal acceptability is mostly reported in Italy and in Greece, i.e. in four out of five examined speeding behaviours.
- The two countries that consistently - in all five examined speeding related unsafe traffic behaviours - show higher acceptability rates of behaviours related to speeding than the European average, both regarding perceived social acceptability and personal acceptability, are Italy and Poland.

The analysis of reported acceptability of speeding behaviours by gender reveals that acceptability rates are lower amongst females, for all five examined speeding related behaviours, both regarding the perceived social and personal acceptability (Figure 5). In all the cases, the differences in the acceptability rates between females and males are statistically significant (Chi-square test: $p < 0.001$).

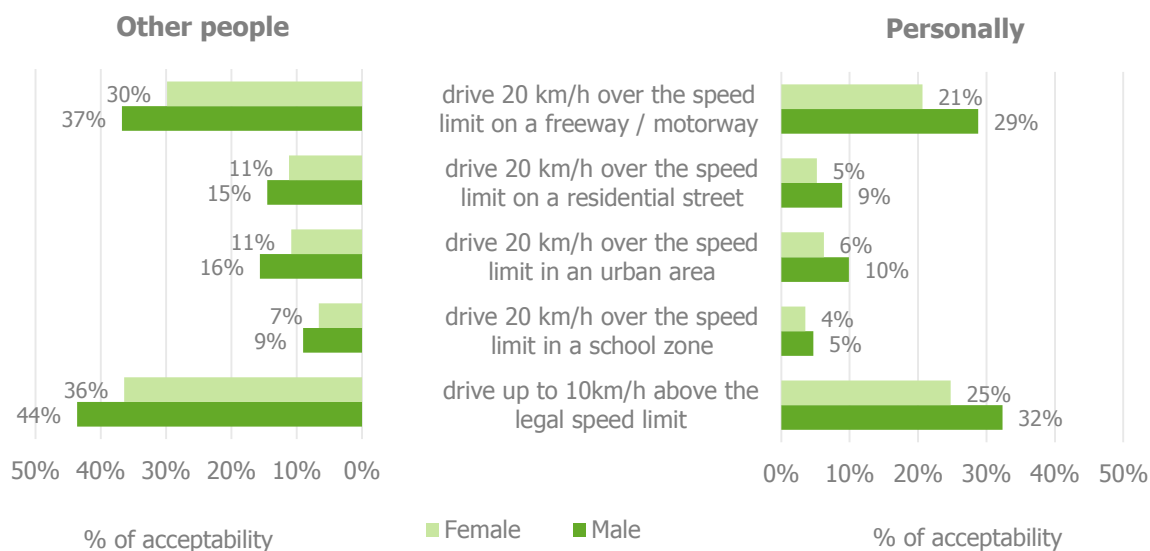


Figure 5: Acceptability of behaviours related to speeding, by gender.

Notes: (1) % of acceptability: scores 4 and 5 on a 5-point scale from 1 'unacceptable' to 5 'acceptable'. (2) European weight B.

Acceptability rates also vary according to the age of the respondents. Age increase is associated with a decrease in acceptability rates for all five examined speeding related behaviours: driving 20 km/h over the speed limit on freeways, on residential streets, in urban areas, in school zones as well as driving up to 10 km/h above the legal speed limit, regardless of the road environment. Furthermore, this decrease in acceptability rates is observed both at the personal level and the 'other people' level (Figure 6). In all cases, the differences in the acceptability rates among the three assumed age groups (18-34, 35-54 and 55+) are statistically significant (Chi-square test: $p < 0.001$).

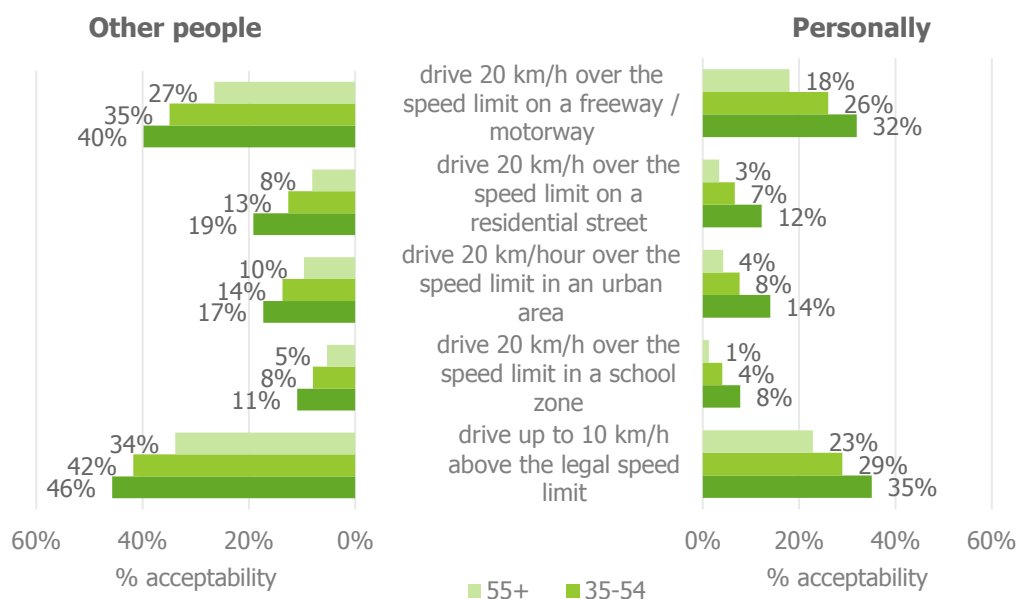


Figure 6: Acceptability of behaviours related to speeding, by age group.

Notes: (1) % of acceptability: scores 4 and 5 on a 5-point scale from 1 'unacceptable' to 5 'acceptable'. (2) European weight B.

3.1.2. Self-declared (unsafe) behaviour in traffic

Question: In the past 12 months, as a road user, how often did you...?

- drive faster than the speed limit inside built-up areas
- drive faster than the speed limit outside built-up areas (except motorways / freeways)
- drive faster than the speed limit on motorways / freeways

More than two-thirds of the respondents reported having driven faster than the speed limit at least once in the past 12 months, for all the examined cases (freeways, roads outside built-up areas and roads inside built-up areas). The percentage of respondents that drove faster than the speed limit at least once in the past 12 months on freeways and roads - except freeways - outside built-up areas is slightly larger (73%) than the percentage related to roads inside built-up areas (68%) (Figure 7).

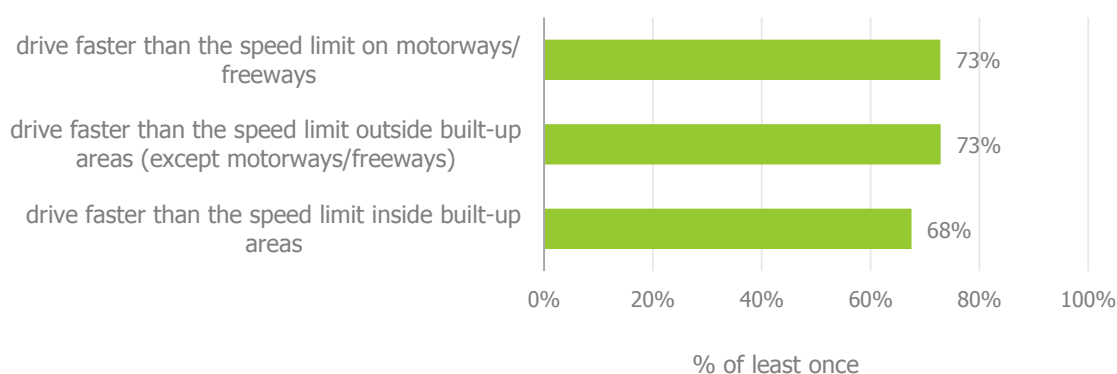


Figure 7: Self-declared speeding, in the past 12 months, in Europe.

Notes: (1) % of people that did it at least once in the past 12 months. (2) European weight B.

The analysis by country (Table 1) shows that the countries where fewer people reported having driven faster than the speed limit at least once in the past 12 months are Ireland for roads inside built-up areas (50%) and for roads outside built-up areas except motorways / freeways (59%), and Poland for motorways / freeways (57%). On the other hand, Finland is the country where most

people reported having driven faster than the speed limit at least once in the past 12 months in all the examined cases.

Table 1: Self-declared speeding in the past 12 months, by country.

drive faster than the speed limit (% of at least once)			
	inside built-up areas	outside built-up areas (except motorways/freeways)	on motorways/ freeways
AT	74%	84%	81%
BE	67%	76%	74%
CH	63%	75%	80%
DE	76%	82%	80%
DK	75%	84%	81%
EL	58%	64%	71%
ES	64%	64%	74%
FI	85%	91%	84%
FR	68%	73%	68%
IE	50%	59%	61%
IT	73%	79%	76%
NL	66%	75%	78%
PL	64%	68%	57%
PT	72%	77%	81%
SE	64%	78%	83%
SI	61%	73%	73%
UK	55%	60%	66%
EU	68%	73%	73%

Notes: (1) % of people that did it at least once in the past 12 months. (2) The two countries with the highest % are indicated in yellow, the two countries with the lowest % in green. (3) Countries based on individual country weight, Europe based on European weight B.

The analysis by gender shows that self-declared speeding depends on the gender. The percentages of respondents that drove faster than the speed limit at least once in the past 12 months inside built-up areas, outside built-up areas and on motorways / freeways are lower amongst females (Figure 8). In all the cases, the differences between females and males are statistically significant (Chi-square test: $p < 0.001$).

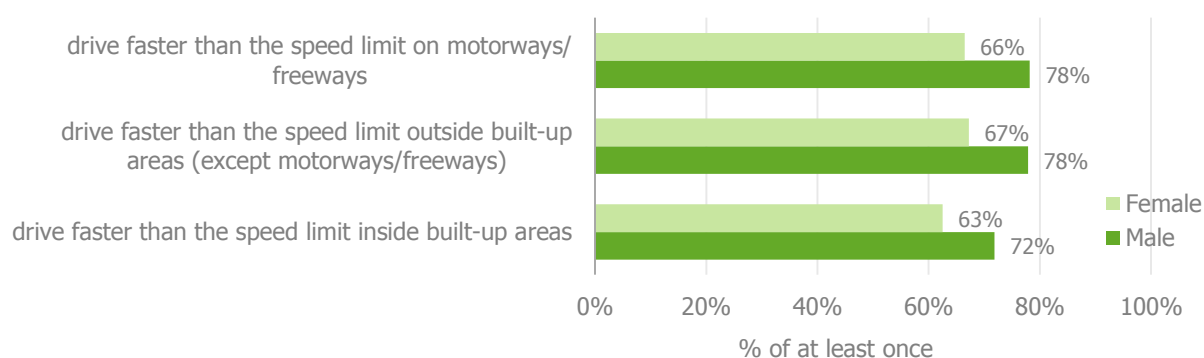


Figure 8: Self-declared speeding in the past 12 months, by gender.

Notes: (1) % of people that did it at least once in the past 12 months. (2) European weight B.

The percentage of respondents that drove faster than the speed limit at least once in the past 12 months also depends on the age group (Figure 9). Age increase is generally associated with a decrease in the tendency to violate the speed limit; an exception is observed in the case of motorways / freeways, where the greatest percentage of having driven faster than the speed limit at

least once in the past 12 months is reported by the 35-54 years of age group. The differences in the reported percentages between the three assumed age groups (18-34, 35-54 and 55+) are statistically significant (Chi-square test: $p < 0.001$) in all cases.

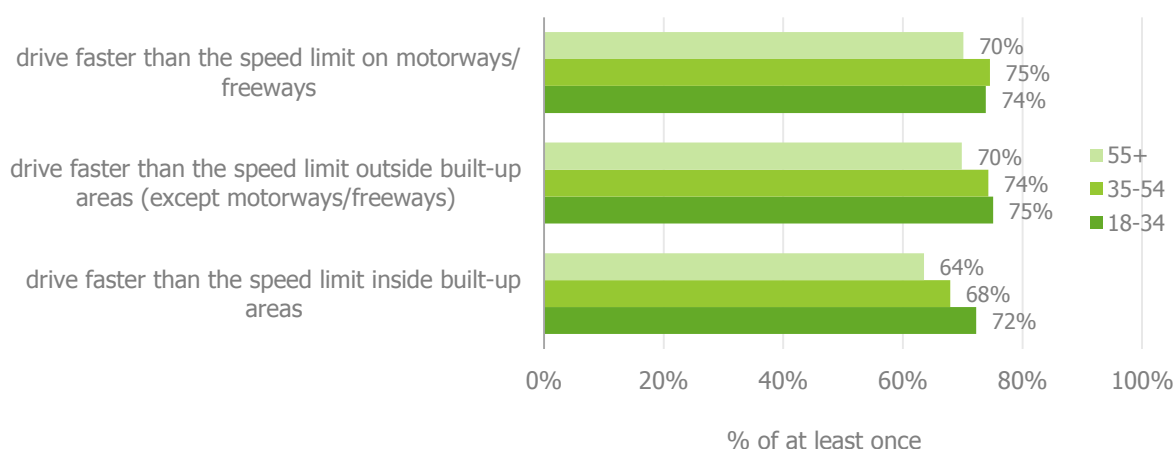


Figure 9: Self-declared speeding in the past 12 months, by age group.

Notes: (1) % of people that did it at least once in the past 12 months. (2) European weight B.

3.1.3. Attitudes towards unsafe traffic behaviour

Question: To what extent do you agree with each of the following statements?

- *Driving fast is risking your own life, and the lives of others*
- *I have to drive fast, otherwise I have the impression of losing time*
- *Driving faster than the speed limit makes it harder to react appropriately in a dangerous situation*
- *Most of my acquaintances / friends feel one should respect the speed limits*
- *Speed limits are usually set at acceptable levels*
- *By increasing speed by 10 km/h, you get a much higher chance of being involved in an accident*

Regarding the influence of speeding on road safety (Figure 10), 76% of the respondents agree with the statement that 'driving fast is risking your own life, and the lives of others' and 72% with the statement that 'driving faster than the speed limit makes it harder to react appropriately in a dangerous situation'. 60% agree that most of their acquaintances / friends feel one should respect the speed limits. However, only 51% agree that speed limits are usually set on acceptable levels and only 45% consider that a 10 km/h increase in speed results in a much higher chance of being involved in an accident. Finally, 15% reported that they agree with the statement 'I have to drive fast, otherwise I have the impression of losing time'.

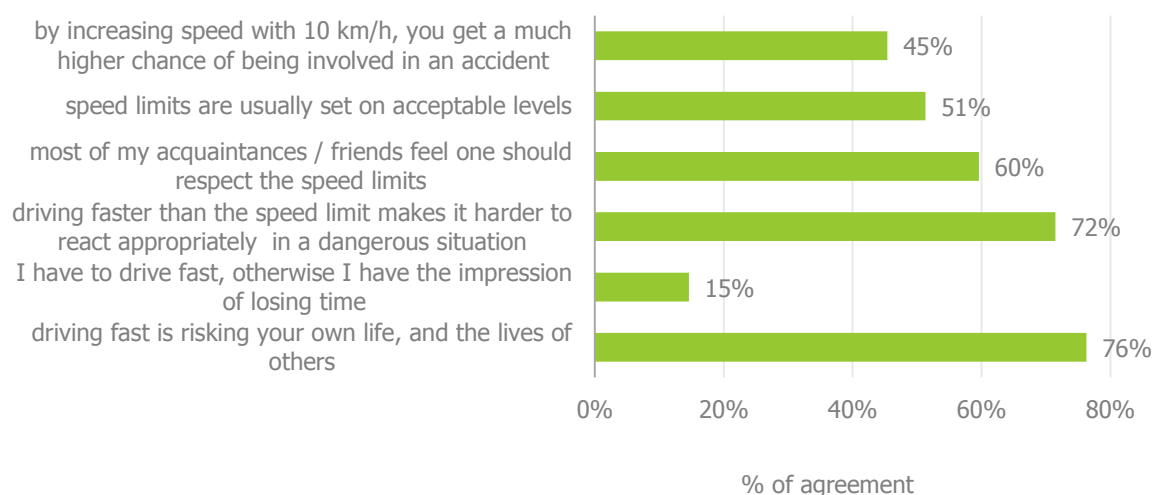


Figure 10: Opinions on speeding and its influence on road safety, in Europe.

Notes: (1) % of agreement: scores 4 and 5 on a 5-point scale from 1 'disagree' to 5 'agree'. (2) European weight B.

The comparison by country (Table 2) shows that there are differences among the percentages of agreement among countries. Agreement with the statement 'driving fast is risking your own life, and the lives of others' ranges from 62% in the Netherlands and 72% in France to 85% in Italy and 87% in Finland. Italy and Greece are the countries with the largest percentage of respondents agreeing with the statement that 'driving faster than the speed limit makes it harder to react appropriately in a dangerous situation' (84% and 82% respectively), with the lowest percentages observed in Austria (62%) and the Netherlands (59%).

The largest percentages of respondents stating that most of their acquaintances / friends feel one should respect the speed limits are found in Italy (80%) and in Finland (72%) and the lowest in Austria (35%) and in Germany (42%). 69% in Finland and 63% in Denmark believe that speed limits are usually set at acceptable levels, compared to 45% in France and 40% in Poland.

Greater differences are observed in the agreement rates with the statement 'by increasing speed with 10 km/h, you get a much higher chance of being involved in an accident'. Agreement percentages range from 33% in Austria and 34% in the Netherlands to 59% in Ireland and 62% in the UK. Finally, only 7% of the respondents in Finland report that they have to drive fast, otherwise they have the impression of losing time, compared to 30% in Italy.

Table 2: Opinions on speeding and its influence on road safety, by country (% of agreement).

	driving fast is risking your own life, and the lives of others	I have to drive fast, otherwise I have the impression of losing time	driving faster than the speed limit makes it harder to react appropriately in a dangerous situation	most of my acquaintances / friends feel one should respect the speed limits	speed limits are usually set on acceptable levels	by increasing speed with 10 km/h, you get a much higher chance of being involved in an accident
AT	76%	11%	62%	35%	53%	33%
BE	76%	9%	65%	56%	47%	43%
CH	73%	11%	68%	52%	61%	43%
DE	73%	10%	66%	42%	54%	36%
DK	76%	8%	74%	61%	63%	53%
EL	84%	15%	82%	61%	51%	49%
ES	75%	13%	73%	63%	51%	38%
FI	87%	7%	80%	72%	69%	56%
FR	72%	17%	64%	58%	45%	44%
IE	80%	11%	77%	62%	49%	59%
IT	85%	30%	84%	80%	50%	43%
NL	62%	9%	59%	60%	52%	34%
PL	84%	13%	74%	62%	40%	58%
PT	80%	12%	77%	65%	51%	46%
SE	72%	10%	71%	59%	57%	57%
SI	80%	10%	74%	64%	50%	50%
UK	75%	11%	74%	62%	58%	62%
EU	76%	15%	72%	60%	51%	45%

Notes: (1) % of agreement: scores 4 and 5 on a 5-point scale from 1 'disagree' to 5 'agree'. (2) The two countries with the highest % are indicated in yellow, the two countries with the lowest % in green. (3) Countries based on individual country weight, Europe based on European weight B.

The analysis by gender (Figure 11) shows that females are generally more aware of the influence of speeding on road safety, since they more often agree with the statements 'by increasing speed by 10 km/h, you get a much higher chance of being involved in an accident', 'driving faster than the speed limit makes it harder to react appropriately in a dangerous situation' and 'driving fast is risking your own life, and the lives of others'. Also, females more often report that most of their acquaintances / friends feel one should respect the speed limits. Finally, it is less often for females to feel that they have to drive fast, otherwise they have the impression of losing time. The differences in acceptability rates between males and females are statistically significant (Chi-square test: $p < 0.01$) in all cases.

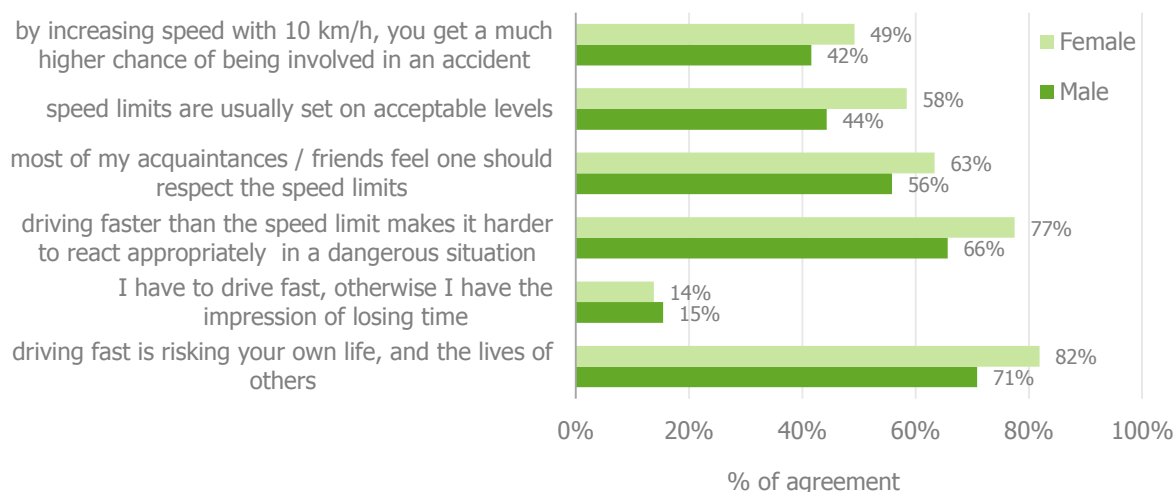


Figure 11: Opinions on speeding and its influence on road safety, by gender.

Notes: (1) % of agreement: scores 4 and 5 on a 5-point scale from 1 'disagree' to 5 'agree'. (2) European weight B.

The percentages of agreement also depend significantly on the age group (Chi-square test: $p < 0.001$). Respondents of 55 years and older are more aware of the influence of speeding on road safety than responders in the 35-54 year old age group, who in turn are more aware than the 18-34 year old age group (Figure 12).

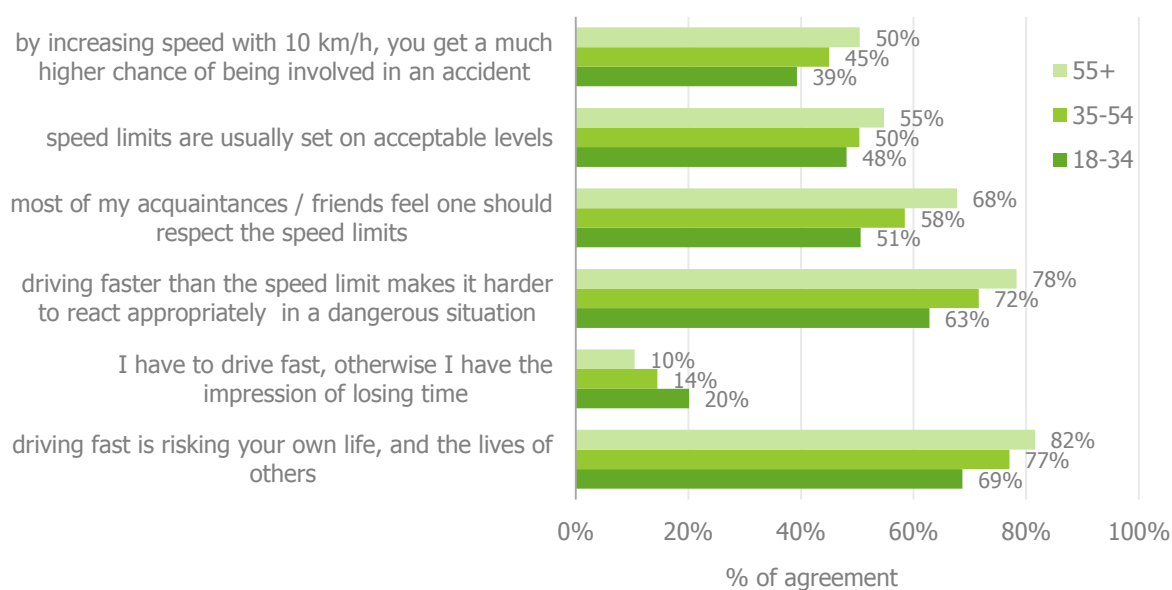


Figure 12: Opinions on speeding and its influence on road safety, by age group.

Notes: (1) % of agreement: scores 4 and 5 on a 5-point scale from 1 'disagree' to 5 'agree'. (2) European weight B.

3.1.4. Support for road safety policy measures

Question: What do you think about the current traffic rules and penalties in your country for each of the following themes?

- *The traffic rules (on speeding) should be stricter*
- *The traffic rules (on speeding) are not being checked sufficiently*
- *The penalties (for speeding) are too severe*

Regarding traffic rules and penalties related to speeding, approximately half of the respondents agree that in their country traffic rules (for speeding) should be stricter (52%) and that traffic rules (for speeding) are not being checked sufficiently (54%). However, more than one third (37%) believe that penalties for speeding in their country are too severe (Figure 13).

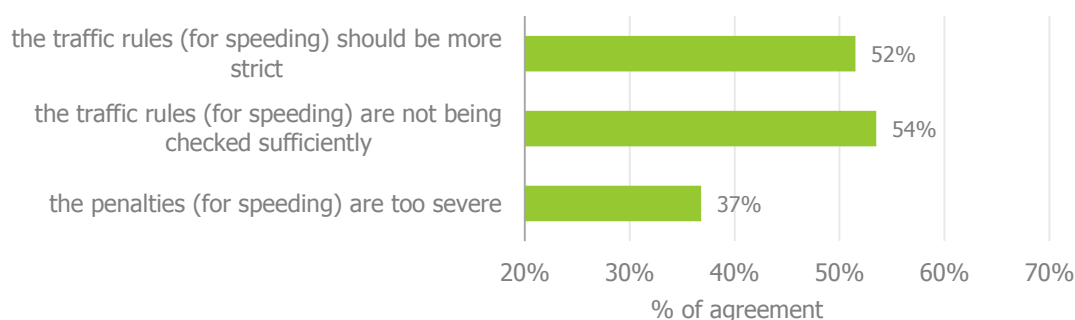


Figure 13: Support for road safety policy measures related to speeding, in Europe.

Notes: (1) % of agreement: scores 4 and 5 on a 5-point scale from 1 'disagree' to 5 'agree'. (2) European weight B.

The comparison by country (Table 3) shows that there are significant differences among countries. Acceptability rates of the statement 'the traffic rules (for speeding) should be stricter' range from 27% in Denmark and 33% in Austria to 72% in Poland and 83% in Greece. As far as insufficient enforcement of traffic rules for speeding is concerned, Greece (80%) and Poland (66%) again have the largest percentages, compared to less than 40% in the Netherlands and in Switzerland. More than 50% of the respondents in Slovenia, the Netherlands, France, Spain and Portugal believe that penalties for speeding are too severe, whereas the lowest percentages are observed in the United Kingdom (28%) and in Denmark (27%).

The analysis by gender (Figure 14) shows that females are generally more supportive of road safety policy measures related to speeding. 58% of female respondents agree with stricter traffic rules for speeding, compared to 45% for male respondents; also, 56% of females believe that the rules are not being checked sufficiently, compared to 51% of males. Finally, only 33% of female respondents believe that penalties for speeding are too severe, compared to 41% for males respondents. The aforementioned differences between males and females are statistically significant (Chi-square test: $p < 0.001$ in all cases).

Table 3: Support for road safety policy measures related to speeding, by country (% of agreement).

	the traffic rules (for speeding) should be stricter	the traffic rules (for speeding) are not being checked sufficiently	the penalties (for speeding) are too severe
AT	33%	42%	44%
BE	45%	51%	33%
CH	34%	35%	43%
DE	42%	49%	28%
DK	27%	57%	27%
EL	83%	80%	35%
ES	52%	52%	51%
FI	49%	56%	30%
FR	43%	45%	53%
IE	62%	62%	30%
IT	59%	58%	29%
NL	37%	37%	54%
PL	72%	66%	29%
PT	52%	55%	51%
SE	44%	60%	28%
SI	47%	53%	58%
UK	60%	62%	28%
EU	52%	54%	37%

Notes: (1) % of agreement: scores 4 and 5 on a 5-point scale from 1 'disagree' to 5 'agree'. (2) The two countries with the highest % are indicated in yellow, the two countries with the lowest % in green. (3) Countries based on individual country weight, Europe based on European weight B.

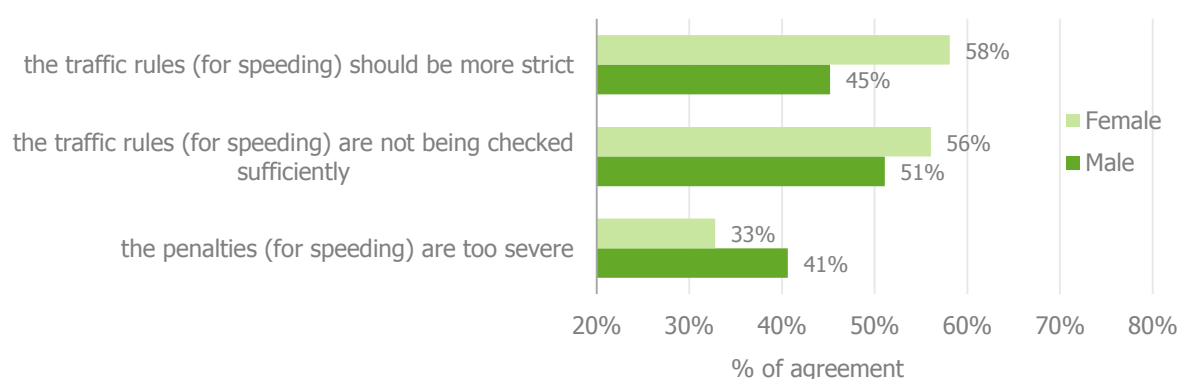


Figure 14: Support for road safety policy measures related to speeding, by gender

Notes: (1) % of agreement: scores 4 and 5 on a 5-point scale from 1 'disagree' to 5 'agree'. (2) European weight B.

The support for road safety policy measures related to speeding also depends on the age group (Figure 15). Age increase is associated with greater support of strict traffic rules, speeding checks and severe penalties for speeding, with statistically significant differences (Chi-square test: $p < 0.001$) in all three cases.

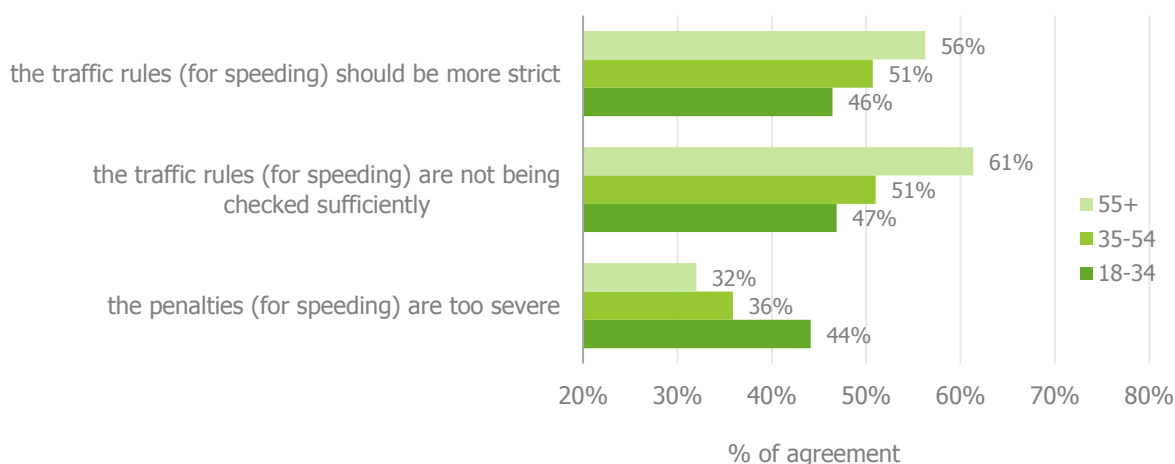


Figure 15: Support for road safety policy measures related to speeding, by age group.

Notes: (1) % of agreement: scores 4 and 5 on a 5-point scale from 1 'disagree' to 5 'agree'. (2) European weight B.

3.1.5. Reported police checks and perceived likelihood of getting caught for traffic offences

Question: On a typical journey, how likely is it that you (as a driver) will be checked by the police for respecting the speed limits (including checks by police car with a camera and/or flash cameras)?

At an overall European level, a 36% of respondents consider it likely to be checked by the police for respecting the speed limits (including checks by police car with a camera and/or flash cameras) on a typical journey. Analysis by country reveals obvious differences among countries (Figure 16). The percentage of respondents that believe that they will be checked at least once on a typical journey ranges from 11% in Denmark and 18% in Sweden to 53% in Poland and 55% in France.

Regarding the gender and age of the respondents, there is no statistically significant difference, even at the 95% level, in the responses to this question provided by males (36%) or females (36%), nor between the age groups 18-34 years old (37%), 35-54 years old (36%) and more than 55 years old (35%).

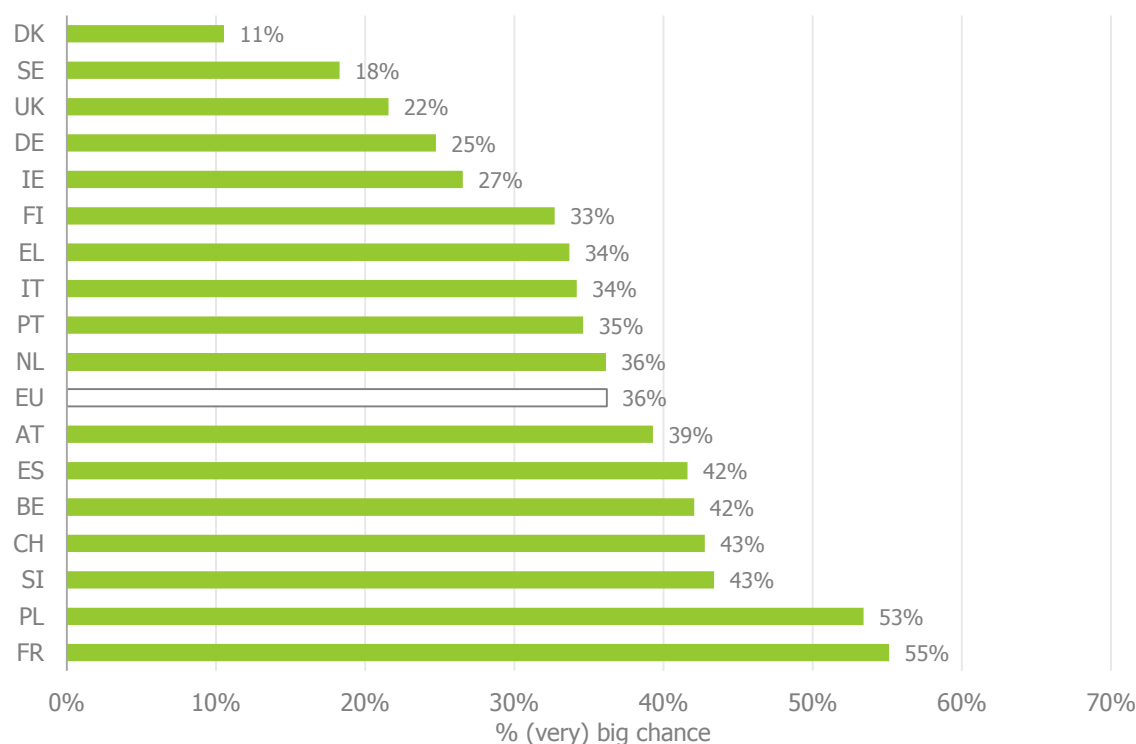


Figure 16: Perceived likelihood of being checked by the police for respecting the speed limits, by country.

Notes: (1) % of (very) big chance; scores 4 and 5 on a 5-point scale from 1 'very small chance' to 5 'very big chance'. (2) Countries based on individual country weight, Europe based on European weight B.

Question: In the past 12 months, how many times have you ...?

- had to pay a fine for violating the speed limits?
- been convicted at court for violating the speed limits?

At an overall European level 15% of respondents answered that they had to pay a fine for speed limits violation at least once in the past 12 months, and 2% that they were convicted at court for violating the speed limits at least once in the past 12 months (Figure 17).

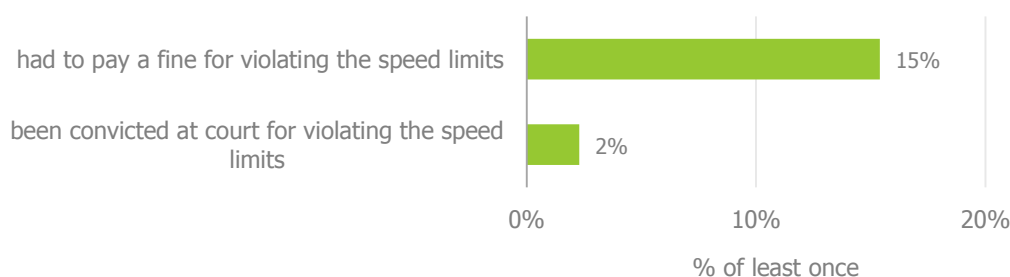


Figure 17: Speeding related fines and convictions at court, in the past 12 months, in Europe.

Notes: (1) % of people that reported at least once in the past 12 months. (2) European weight B.

The analysis by country (Table 4) reveals differences among countries. The highest rates of respondents indicating that they had to pay a fine for speeding at least once in the past 12 months originated from Italy (35%) and Switzerland (26%), whereas the lowest rates were found in Finland (5%) and Sweden (4%). Regarding court convictions, the highest rate was also observed in Italy

(8%), with France and Portugal at the second place (4%), whereas the lowest rates were observed in Finland (0.3%) and Belgium (0.2%).

Table 4: Speeding related fines and convictions at court, in the past 12 months, by country.

	had to pay a fine for violating the speed limits (% of at least once)	been convicted at court for violating the speed limits (% of at least once)
AT	25%	1%
BE	13%	0.2%
CH	26%	2%
DE	18%	0.4%
DK	8%	3%
EL	11%	3%
ES	12%	2%
FI	5%	0.3%
FR	18%	4%
IE	6%	1%
IT	35%	8%
NL	19%	2%
PL	12%	1%
PT	8%	4%
SE	4%	1%
SI	10%	2%
UK	6%	3%
EU	15%	2%

Notes: (1) % of people that reported at least once in the past 12 months. (2) The two countries with the highest % are indicated in yellow, the two countries with the lowest % in green. (3) Countries based on individual country weight, Europe based on European weight B.

The analysis by gender shows that both the percentage of respondents that had to pay a fine for speeding at least once in the last 12 months and the percentage of respondents that had been convicted at court for speeding at least once in the last 12 month are lower amongst females (Figure 18). In both cases, the differences between females and males are statistically significant (Chi-square test: $p < 0.001$).

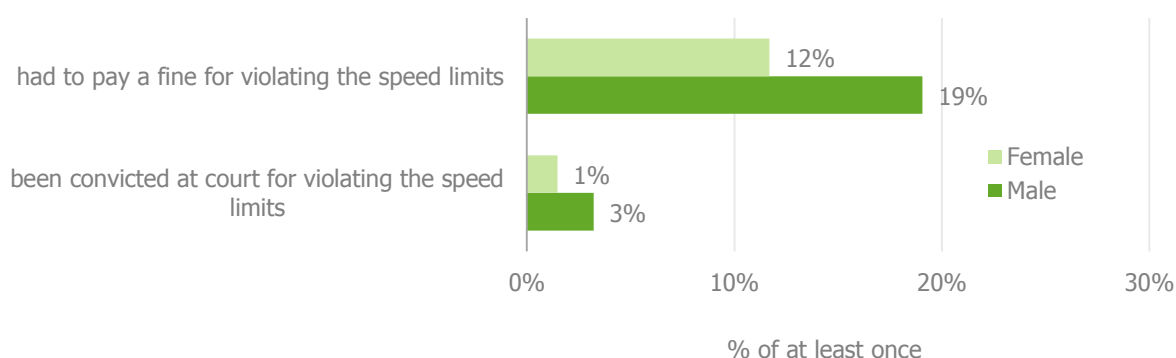


Figure 18: Speeding related fines and convictions at court, in the past 12 months, by gender.

Notes: (1) % of people that reported at least once in the past 12 months. (2) European weight B.

The percentage of respondents that had to pay a fine or were convicted at court for speeding at least once in the past 12 months also depends on the age group (Figure 19). Age increase is generally associated with a decrease in the percentage of having had to face consequences for speeding at

least once in the last 12 months, regarding both fines and court convictions. The differences in the reported percentages between the three assumed age groups (18-34, 35-54 and 55+) are statistically significant (Chi-square test: $p < 0.01$) in all cases.

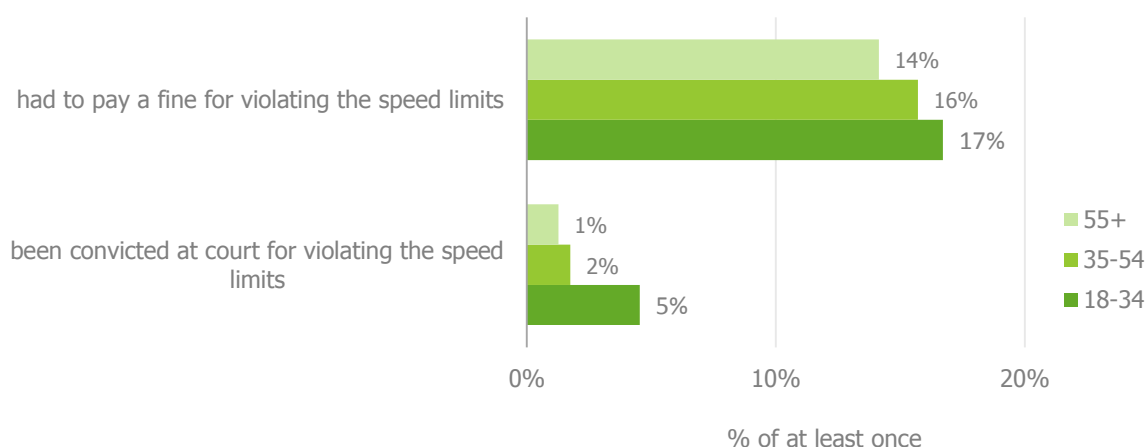


Figure 19: Speeding related fines and convictions at court, in the past 12 months, by age group.

Notes: (1) % of people that reported at least once in the past 12 months. (2) European weight B.

3.2. Further analysis

The following chapter comprises ESRA results based on the cross analysis of selected questions related to the topic of speeding.

3.2.1. Unsafe traffic behaviour and related road safety measures

Acceptability of unsafe traffic behaviour: speeding

Question: How acceptable do you, personally, feel it is for a driver to ...?

- drive 20 km/h over the speed limit on a freeway / motorway
- drive 20 km/h over the speed limit on a residential street
- drive 20 km/h over the speed limit in an urban area
- drive 20 km/h over the speed limit in a school zone
- drive up to 10 km/h above the legal speed limit

Answer: Acceptability of unsafe traffic behaviour related to speeding (scores 4 and 5 on a 5-point scale from 1 'unacceptable' to 5 'acceptable')

in combination to

Support for road safety policy measures:

Question: What do you think about the current traffic rules and penalties in your country for each of the following themes?

- The traffic rules (on speeding) should be stricter
- The traffic rules (on speeding) are not being checked sufficiently
- The penalties (for speeding) are too severe

Answer: Support for road safety policy measures related to speeding (% of agreement: scores 4 and 5 on a 5-point scale from 1 'disagree' to 5 'agree'), in Europe.

The cross analysis of the acceptability of unsafe traffic behaviours related to speeding and the support for related road safety policy measures shows a general coherence in the answers to the two questions (Figure 20).

The percentage of respondents who find driving over the speed limit acceptable and also think that the traffic rules for speeding should be stricter reaches only 27% and 29% respectively in the case of freeways/motorways and for an increase of 10 km/h over the speed limit. This percentage is increased to 39% and 38% respectively in the case of residential streets and urban areas and 50% in the case of school zones. The same trend is observed regarding the sufficient enforcement of traffic rules for speeding. These findings indicate that even people who accept driving over the speed limit, are in favour of enforcement measures to increase road safety in urban areas and especially in school zones. Still it should be noted that a small number of respondents consider driving over the speed limit in urban areas acceptable and an even smaller number find it acceptable in school zones.

As far as the penalties for speeding are concerned, in all examined cases, they are considered too severe by more than 50% of those who find driving over the speed limit acceptable.

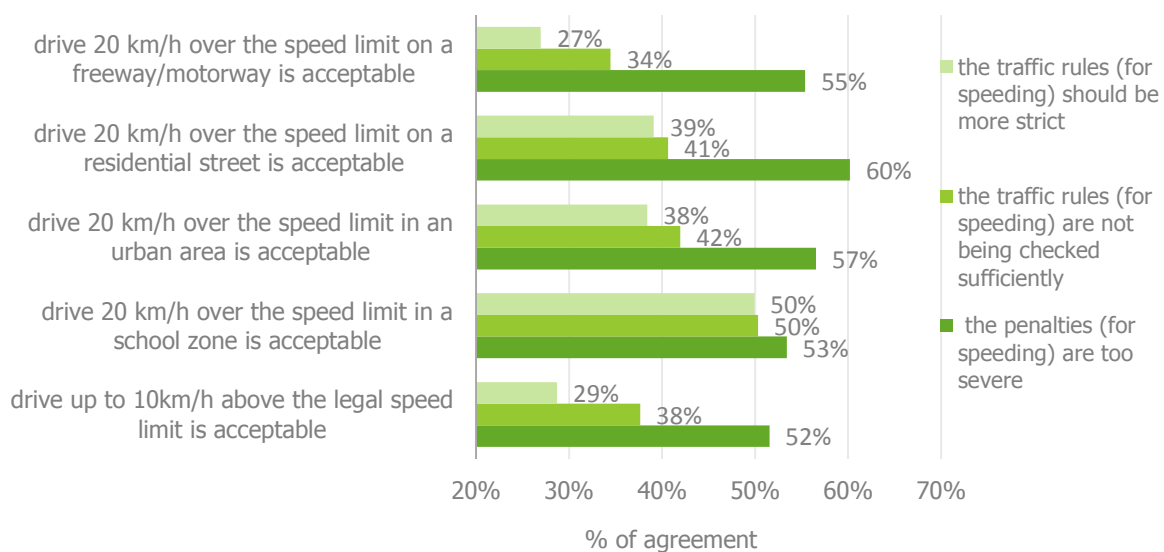


Figure 20: Responses combining acceptability of unsafe traffic behaviour related to speeding (1) and support for road safety policy measures related to speeding (2), in Europe.

Notes: (1) Scores 4 and 5 on a 5-point scale from 1 'unacceptable' to 5 'acceptable'. (2) % of agreement: scores 4 and 5 on a 5-point scale from 1 'disagree' to 5 'agree'. (3) European weight B.

3.2.2. Acceptability of unsafe traffic behaviour and self-declared behaviour

Acceptability of unsafe traffic behaviour: speeding

Question: How acceptable do you, personally, feel it is for a driver to ...?

- drive 20 km/h over the speed limit on a freeway / motorway
- drive 20 km/h over the speed limit on a residential street
- drive 20 km/h over the speed limit in an urban area
- drive 20 km/h over the speed limit in a school zone
- drive up to 10 km/h above the legal speed limit

Answer: Acceptability of unsafe traffic behaviour related to speeding (5-point scale from 1 'unacceptable' to 5 'acceptable')

in combination to

Self-declared (unsafe) behaviour in traffic

Question: In the past 12 months, as a road user, how often did you...?

- drive faster than the speed limit inside built-up areas
- drive faster than the speed limit outside built-up areas (except motorways/freeways)
- drive faster than the speed limit on motorways/ freeways

Answer: % of people that never did so or did so at least once

The examination of the self-declared behaviour of those who consider acceptable an unsafe traffic behaviour related to speeding revealed a significant inconsistency between practice (self-declared behaviour) and theory (acceptability of unsafe behaviour) (Table 5). Specifically, in all the examined cases (i.e. driving 20 km/h over the speed limit on a freeway / motorway, on a residential street, in an urban area, in a school zone or driving up to 10 km/h above the legal speed limit), those who consider driving over the speed limit unacceptable, admitted having done so at least once during the last 12 months in a percentage that ranges from 60% to 72%. However, it must also be taken into account that driving 20 km/h over the speed limit on motorways may happen even unintentionally or without realising it due to the high speeds developed on this type of roads. Similarly, driving up to 10 km/h over the speed limit can accidentally happen on all types of roads and areas. In addition, a positive answer to 'at least once' includes drivers who have adopted such an unsafe driving behaviour very few times, even just once.

Table 5: Responses combining acceptability of unsafe traffic behaviour related to speeding (1) and adopted attitudes as a road user in the past 12 months, related to speeding, in Europe.

			How acceptable do you, personally, feel it is for a driver to:									
			drive 20 km/h over the speed limit on a freeway / motorway?		drive 20 km/h over the speed limit on a residential street?		drive 20 km/h over the speed limit in an urban area?		drive 20 km/h over the speed limit in a school zone?		drive up to 10 km/h above the legal speed limit?	
			(rather) unacceptable/neutral	(rather) acceptable	(rather) unacceptable/neutral	(rather) acceptable	(rather) unacceptable/neutral	(rather) acceptable	(rather) unacceptable/neutral	(rather) acceptable	(rather) unacceptable/neutral	(rather) acceptable
In the past 12 months, as a road user, how often did you drive faster than the speed limit	inside built-up areas?	never at least once	38% 62%	16% 84%	34% 66%	15% 85%	34% 66%	14% 86%	33% 67%	15% 85%	40% 60%	15% 85%
		at least once	67%	90%	72%	87%	72%	87%	72%	87%	65%	89%
	outside built-up areas (except motorways/freeways)?	never at least once	33% 67%	10% 90%	28% 72%	13% 87%	28% 72%	13% 87%	28% 72%	13% 87%	35% 65%	11% 89%
		at least once	67%	90%	72%	85%	72%	85%	72%	83%	66%	88%
	on motorways/freeways?	never at least once	33% 67%	10% 90%	28% 72%	15% 85%	28% 72%	15% 85%	28% 72%	17% 83%	34% 66%	12% 88%
		at least once	67%	90%	72%	85%	72%	85%	72%	83%	66%	88%

Notes: (1) Grouped scores 1 to 3 '(rather) unacceptable / neutral' and 4 to 5 '(rather) acceptable' on a 5-point scale from 1 'unacceptable' to 5 'acceptable'. (2) Responses combining non-acceptability of driving over the speed limit and admitting having adopted the specific behaviour at least once in the past 12 months are indicated in yellow.

3.2.3. Acceptability of attitudes towards unsafe traffic behaviour

Acceptability of unsafe traffic behaviour: speeding

Question: How acceptable do you, personally, feel it is for a driver to ...?

- drive 20 km/h over the speed limit on a freeway / motorway
- drive 20 km/h over the speed limit on a residential street
- drive 20 km/h over the speed limit in an urban area
- drive 20 km/h over the speed limit in a school zone
- drive up to 10 km/h above the legal speed limit

Answer: Acceptability of unsafe traffic behaviour related to speeding (5-point scale from 1 'unacceptable' to 5 'acceptable')

in combination to

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Attitudes towards unsafe traffic behaviour

Question: To what extent do you agree with each of the following statements?

- *Driving fast is risking your own life, and the lives of others*
- *I have to drive fast, otherwise I have the impression of losing time*
- *Driving faster than the speed limit makes it harder to react appropriately in a dangerous situation*
- *Most of my acquaintances / friends feel one should respect the speed limits*
- *Speed limits are usually set at acceptable levels*
- *By increasing speed by 10 km/h, you get a much higher chance of being involved in an accident*

Answer: Opinions on speeding and its influence on road safety (5-point scale from 1 'disagree' to 5 'agree')

The cross analysis of the above questions (Table 6) showed that one fourth to one third of the people who consider driving over the speed limit on motorways, residential streets and in urban areas acceptable, also accept that this increases the risk of being involved in an accident. The specific percentage reaches 42% when driving in school zones is considered. This indicates that these people are willing to take this increased risk. However, they also seem to realise that hazards may be increased in a school zone. On that matter, their answers don't differ much from people who consider driving over the speed limit as unacceptable (or are neutral) whose percentage reaches 45%.

Similar findings are observed when the difficulty to react appropriately in dangerous situations caused by driving over the speed limit is examined. More than 50% of people considering driving over the speed limit acceptable also admit that the difficulty to react appropriately is higher with percentages for the different types of road ranging from 56% to 61%. Again it can be concluded that these people are willing to take the increased risk. On the other way round, 39% to 44% of them, depending on the road types, do not recognize the risks of speeding.

The same conclusions can be made even more clearly when the risk for life is examined. The percentage of people who consider driving over the speed limit acceptable but also agree that driving fast is risking your life and the lives of others ranges from 59% to 68% in the various examined cases.

An expected finding is that the majority of people who accept driving over the speed limit do not believe that the speed limits are set at acceptable levels.

On the other hand, in all examined cases, the percentage of respondents who accept driving over the speed limit and also agree that they have to drive fast, otherwise they have the impression of losing time is much higher on residential roads, urban areas and school zones than on motorways.

Table 6: Responses combining acceptability of unsafe traffic behaviour related to speeding (1) and agreement with certain opinions on speeding and its influence on road safety (2), in Europe.

			How acceptable do you, personally, feel it is for a driver to:									
			drive 20 km/h over the speed limit on a freeway / motorway?		drive 20 km/h over the speed limit on a residential street?		drive 20 km/h over the speed limit in an urban area?		drive 20 km/h over the speed limit in a school zone?		drive up to 10 km/h above the legal speed limit?	
			(rather) unacceptable/ neutral	(rather) acceptable	(rather) unacceptable/ neutral	(rather) acceptable	(rather) unacceptable/ neutral	(rather) acceptable	(rather) unacceptable/ neutral	(rather) acceptable	(rather) unacceptable/ neutral	(rather) acceptable
To what extent do you agree with each of the following statements	driving fast is risking your own life, and the lives of others	(rather) disagree/ neutral	19%	37%	22%	41%	22%	39%	23%	37%	20%	32%
		(rather) agree	81%	63%	78%	59%	78%	61%	77%	63%	80%	68%
	I have to drive fast, otherwise I have the impression of losing time	(rather) disagree/ neutral	88%	78%	87%	60%	88%	58%	87%	57%	88%	79%
		(rather) agree	12%	22%	13%	40%	12%	42%	13%	43%	12%	21%
	Driving faster than the speed limit makes it harder to react appropriately in a dangerous situation	(rather) disagree/ neutral	23%	44%	27%	43%	27%	44%	28%	43%	24%	39%
		(rather) agree	77%	56%	73%	57%	73%	56%	72%	57%	76%	61%
	Most of my acquaintances / friends feel one should respect the speed limits	(rather) disagree/ neutral	35%	56%	40%	48%	40%	49%	40%	48%	34%	55%
		(rather) agree	65%	44%	60%	52%	60%	51%	60%	52%	66%	45%
	Speed limits are usually set at acceptable levels	(rather) disagree/ neutral	43%	66%	48%	62%	47%	65%	48%	60%	43%	63%
		(rather) agree	57%	34%	52%	38%	53%	35%	52%	40%	57%	37%
	By increasing speed by 10 km/h, you have a higher risk of being involved in an accident	(rather) disagree/ neutral	48%	75%	54%	65%	54%	66%	55%	58%	46%	76%
		(rather) agree	52%	25%	46%	35%	46%	34%	45%	42%	54%	24%

Notes: (1) Grouped scores 1 to 3 '(rather) unacceptable / neutral' and 4 to 5 '(rather) acceptable' on a 5-point scale from 1 'unacceptable' to 5 'acceptable'. (2) Grouped scores 1 to 3 '(rather) disagree / neutral' and 4 to 5 '(rather) agree' on a 5-point scale from 1 'disagree' to 5 'agree'.

3.2.4. Support for road safety policy measures and perceived likelihood of getting caught for traffic offences

Support for road safety policy measures:

Question: What do you think about the current traffic rules and penalties in your country for each of the following themes?

- The traffic rules (on speeding) should be stricter
- The traffic rules (on speeding) are not being checked sufficiently
- The penalties (for speeding) are too severe

Answer: Support for road safety policy measures related to speeding (% of agreement: scores 4 and 5 on a 5-point scale from 1 'disagree' to 5 'agree').

in combination to

Question: On a typical journey, how likely is it that you (as a driver) will be checked by the police for respecting the speed limits (including checks by police car with a camera and/or flash cameras)?

Answer: Very big chance (scores 4 and 5 on a 5-point scale from 1 'very small chance' to 5 'very big chance').

As shown in Figure 21, only one third of the respondents who find that traffic rules should be stricter and that they are not being checked sufficiently (33% and 32% respectively), also agree that there is a (very) big chance to be checked by the police for respecting the speed limits on a typical journey. These findings are logical and indicate a coherence between the answers to the two questions.

On the other hand, almost half (45%) of those considering penalties for speeding too severe, also agree that there is a (very) big chance to be checked by the police for respecting the speed limits on a typical journey. This might indicate a general belief of an existing strict speed enforcement system.

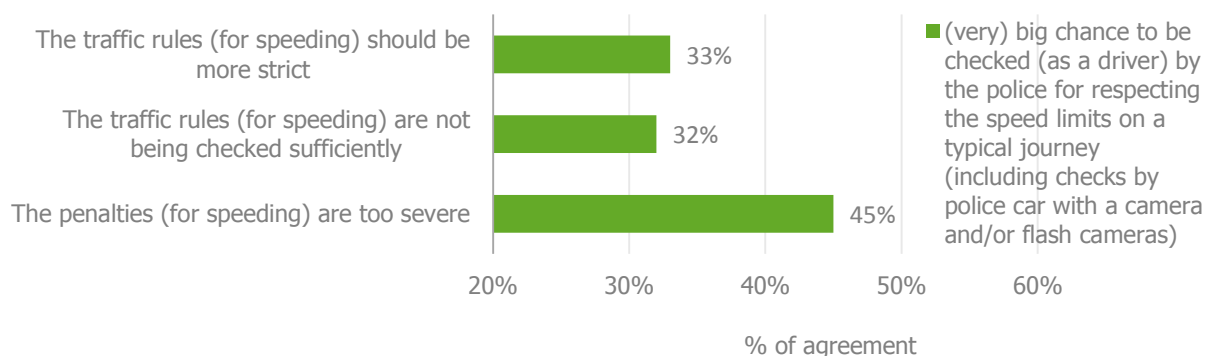


Figure 21: Responses combining positive support for road safety policy measures related to speeding (1) and an increased likelihood of being checked by the police for respecting the speed limits, in Europe.

Notes: (1) % of agreement: scores 4 and 5 on a 5-point scale from 1 'disagree' to 5 'agree'. (2) European weight B.

3.2.5. Self-declared traffic behaviour and reported police checks

Self-declared (unsafe) behaviour in traffic

Question: In the past 12 months, as a road user, how often did you...?

- drive faster than the speed limit inside built-up areas
- drive faster than the speed limit outside built-up areas (except motorways/freeways)
- drive faster than the speed limit on motorways/ freeways

Answer: % of people that did so at least once

in combination to

Support for road safety policy measures

Question: In the past 12 months, how many times have you...?

- *had to pay a fine for a traffic violation*
- *been convicted at court for a traffic violation*

Answer: % of people that reported at least once

A significant percentage of respondents who admitted having driven faster than the speed limit at least once in the last 12 months (19% on motorways and outside built-up areas and 20% inside built-up areas), have also had to pay a fine for a traffic violation during the same period. This might imply a general tendency to disobey traffic rules.

As expected, the respective percentage of those who have also been convicted at court for a traffic violation (not only for speeding) is much lower, only 2% in all examined cases (Figure 22). This is quite expected because of the fewer and generally rarer traffic violations that lead to a court trial plus the time needed for such a procedure to be completed.

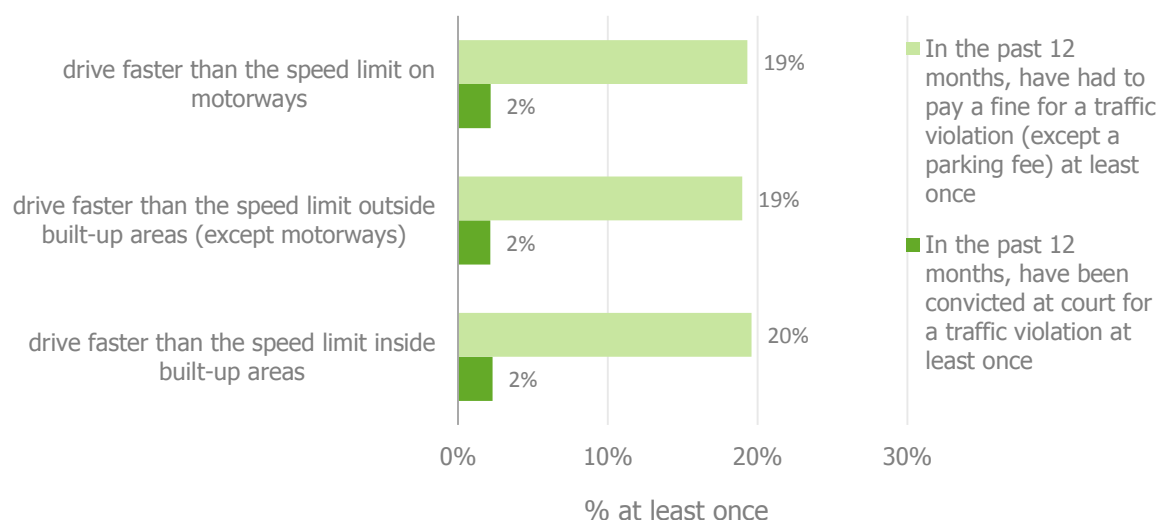


Figure 22: Responses combining adopted attitudes as a road user in the past 12 months, related to speeding (1) and speeding related fines and convictions at court, in the past 12 months, in Europe.

Notes: (1) % of people that did it at least once in the past 12 months. (2) % of people that reported at least once in the past 12 months. (3) European weight B.

4. Discussion

Speed is generally considered a central issue in road safety, and one of the basic risk factors in traffic (ETSC, 2010; OECD/ECMT, 2006; Wegman & Aarts, 2006). Despite the known consequences of speed on safety, speed limit violations are very common. Typically 40% to 60% of the drivers exceed the limit, and around 10 to 20% exceed the speed limit by more than 10 km/h (OECD/ECMT, 2006).

Based on the findings of the ESRA survey, the respondents consider that perceived social acceptability is higher than the personal acceptability, indicating a self-declared safer personal attitude towards speeding. A particularly high (more than 10%) difference between the perceived social acceptability and of personal acceptability is mostly reported in Italy and in Greece. Similar results were found in the previous SARTRE surveys.

- The two countries that consistently - in all examined speeding related behaviours - show higher acceptability rates of behaviours related to speeding than the European average, both regarding social perceived acceptability and personal acceptability, are Italy and Poland.
- Acceptability of behaviours related to speeding can be divided into two groups: there is minor acceptability of driving 20 km/h over the speed limit in urban areas, on residential streets and in school zones. On the other hand, acceptability of driving 20 km/h over the speed limit on a freeway / motorway and acceptability of driving up to 10 km/h over the speed limit, regardless of the road environment, is much higher. These findings imply an increased sensitivity towards the violation of speed limits in areas with increased pedestrian traffic and may be attributed to the recognition of the increased risk for pedestrians due to speed. However, it must also be taken into account that driving 20 km/h over the speed limit on motorways may happen even unintentionally or without realising it due to the high speeds developed on this type of roads. Similarly, driving up to 10 km/h over the speed limit can accidentally happen on all types of roads and areas.

The analysis of reported acceptability of speeding behaviours by gender reveals that acceptability rates are lower amongst females comparing to males, for all five examined speeding related behaviours, both regarding perceived social acceptability and personal acceptability.

Acceptability rates also vary according to the age of the respondents. Age increase is associated with a decrease in acceptability rates for all five examined speeding related behaviours. Furthermore, this decrease in acceptability rates is observed both at the personal level and the 'other people' level.

Concerning self-declared behaviours, more than two-thirds of the respondents reported having driven faster than the speed limit at least once in the past 12 months, for all the examined cases. The analysis by gender shows that all the reported behaviours related to speeding depend on the gender with more males than females declaring that they have driven faster than the speed limit. Speeding also depends on age. Age increase is generally associated with a decrease in the tendency to violate the speed limit; an exception is observed in the case of motorways / freeways, where the greatest percentage of having driven faster than the speed limit at least once in the past 12 months is reported by those in the 35-54 years old group.

Regarding the influence of speeding on road safety, the majority of the respondents agree that 'driving fast is risking your own life, and the lives of others' and that 'driving faster than the speed limit makes it harder to react appropriately in a dangerous situation' which shows that the consequences of speeding are quite clear to them. However, only half of them agree that speed limits are usually set on acceptable levels indicating a low trust to the enforcement rules.

The analysis by gender shows that females are generally more aware of the influence of speeding on road safety. Similarly, respondents of 55 years old and older are more aware of the influence of speeding on road safety than responders in the 35-54 year old age group, who in turn are more aware than the 18-34 year old age group.

Regarding traffic rules and penalties related to speeding, approximately half of the respondents agree that in their country traffic rules should be stricter and that traffic rules are not being checked sufficiently. However, more than one third believe that penalties for speeding in their country are too severe.

The comparison by country shows that there are significant differences among European countries. This could be explained based on the different cultural and social background of the respondents from various countries as well as the different legislation and enforcement systems.

The analysis by gender shows that females are generally more supportive of strict traffic rules, efficient enforcement and severe penalties for speeding. The same applies for people of older age.

At an overall European level, a 36% of respondents consider it likely to be checked by the police for respecting the speed limits (including checks by police car with a camera and/or flash cameras) on a typical journey. This percentage differs between the countries.

The cross analysis of the acceptability of unsafe traffic behaviours related to speeding and the support for relevant traffic rules and penalties shows a general coherence in the answers to the two questions.

The percentage of respondents who find driving over the speed limit acceptable and also think that the traffic rules for speeding should be stricter reaches only 27% and 29% respectively in the case of freeways/motorways and for an increase of 10 km/h over the speed limit. However, this percentage is increased to 39% and 38% respectively in the case of residential streets and urban areas and 50% in the case of school zones. The same trend is observed regarding the sufficient enforcement of traffic rules for speeding. These findings indicate that even people who accept driving over the speed limit, are in favour of enforcement measures to increase road safety in urban areas and especially in school zones.

As far as the penalties for speeding are concerned, in all examined cases, they are considered too severe by more than 50% of those who find driving over the speed limit acceptable.

The examination of the self-declared behaviour and acceptability of unsafe traffic behaviour related to speeding revealed a significant inconsistency between practice (self-declared behaviour) and theory (acceptability of unsafe behaviour). Specifically, those who consider driving over the speed limit unacceptable, admitted having done so at least once during the last 12 months in a percentage that ranges from 60% to 72%.

One fourth to one third of the people who consider driving over the speed limit on motorways, residential street and in urban areas acceptable, also accept that this increases the risk of being involved in an accident. The specific percentage reaches 42% when driving in school zones is considered. This indicates that these people are willing to take this increased risk. However, they also realise the increased hazards in a school zone.

Similar findings are observed when the difficulty to react appropriately in dangerous situations caused by driving over the speed limit is examined and when the risk for life is examined.

An expected finding is that the majority of people who accept driving over the speed limit do not believe that the speed limits are set at acceptable levels.

Only one third of the respondents who find that traffic rules should be stricter and that they are not being checked sufficiently, also agree that there is a (very) big chance to be checked by the police for respecting the speed limits on a typical journey. These findings are logical and indicate a coherence between the answers to the two questions.

On the other hand, a bit less than half of those considering penalties for speeding too severe, also agree that there is a (very) big chance to be checked by the police for respecting the speed limits on a typical journey. This might indicate a general belief of an existing strict speed enforcement system.

5. Conclusions and recommendations

5.1. Conclusions

Speed is a key road safety issue as it has been found to be a major contributory factor in around 10% of all accidents and in around 30% of the fatal accidents. Both excess speed (exceeding the posted speed limit) and inappropriate speed (faster than the prevailing conditions allow) are important accident causation factors. Many drivers drive faster than the posted speed limit. This is the case for all road types as it becomes clear from both objective observations and self-reported speed behaviour. The reasons for speeding are diverse and may relate to temporary motives (e.g. being in a hurry), to more permanent personality characteristics (e.g. risk taking), to human perceptual skills and limitations, as well as to characteristics of the road, the road environment and the vehicle (European Commission, 2015).

In order to solve the problem of speeding an integrated set of countermeasures is necessary. This approach increases the effectiveness of each individual measure (OECD/ECMT, 2006). The most appropriate combination of measures will differ with circumstances. In principle, effective speed management requires an integrated, systematic and stepwise approach. Within the current system of largely fixed speed limits, the following steps are important: setting speed limits, providing information about the speed limit in force, implementing road engineering measures, enforcing speed limit and ensuring driver education and publicity.

Currently, speed limits vary across Member States and depend on the type of road (e.g. motorways, rural roads, residential areas), on the type of vehicle (e.g. Heavy Goods Vehicles, buses/coaches) on the weather (e.g. rain, snow, fog), and on traffic conditions (to avoid congestion). In addition, several different types of speed enforcement methods are implemented in the various countries. These facts imply that there may be significant differences in speed management among the Member States that should be addressed at a European level through the implementation of relevant EU Directives and other legislative procedures.

At the moment, speed related issues are included in four out of the seven strategic objectives of the current Road Safety Programme 2011-2020 of the European Union (i.e. improved safety measures for vehicles, boost smart technology, better enforcement, a new focus on motorcyclists). Speed management strategies in different countries may follow common principles but it is necessary that they are adapted to the actual conditions and driver characteristics in the area where they will be implemented.

Speeding aspects for which significant differences among countries were recorded include the acceptability of unsafe traffic behaviours, opinions concerning traffic rules and penalties and probability to be checked. Strategies to address these issues should be defined according to the local conditions.

In the framework of an integrated speed management strategy, there are several stakeholders with specific roles and responsibilities. Apart from public authorities at national, regional and local level (i.e. Ministry of Infrastructure, Ministry of Transport, Prefecture Authorities, National and Municipal Public Work Authorities, Traffic Police etc.) other stakeholders such as non-governmental organisations, private road network operators, research organisations, vehicle manufacturers may have significant role in speed management.

Based on the above, recommendations in relation to speeding at different levels of authority are listed in the following sub-chapter.

5.2. Recommendations²

5.2.1. Policy recommendations at European level

- Develop common principles and goals for effective and efficient speed management strategies in the Member States as part of EU directives and/or other legislative mechanisms.
- Define speed related indicators and set targets at EU level, such as the number of speed checks, the number of speeders and the number of traffic casualties attributable to speed.
- Make ISA systems compulsory for all new cars in the EU.
- Facilitate and support the exchange of best practice in terms of speed management across Member States.
- Support more research on how speed management can be improved through developments in vehicle, road and ICT technology.

5.2.2. Specific policy recommendations at national and regional level

- Establish an effective and efficient speed management strategy that is based on integrated set of countermeasures, such as setting speed limits, providing information about the speed limit in force, implementing road engineering measures, enforcing speed limits, ensuring appropriate driver education and informing the public of the negative impact of speeding.
- Select the most appropriate combination of speeding measures based on an assessment of the local circumstances.
- Implement a road infrastructure that supports and encourages road users to drive at safe speeds.
- Develop and implement public education campaigns to provide information and influence road users to modify their behaviour.
- Develop an efficient speed enforcement system that includes a careful selection of location and duration of control activities, user awareness of speed enforcement activities, systematic recording of speed controls and infringements and public communication of the results of speed enforcement activities.
- Raise awareness of the impact of speeding on road safety and the need of speed enforcement.
- Ensure that there is sufficient political support and persistence during the implementation of a speed management strategy.

5.2.3. Specific recommendations to particular stakeholders

- *[To Non-Governmental Organizations (NGOs)]* Contribute to education and awareness raising campaigns and events against speeding.
- *[To Private Concessionaire Companies (if applicable)]* Improve road infrastructure, undertake campaigns and provide information about high risk sites and traffic conditions.
- *[To research organisations]* Contribute to the development, monitoring and evaluation of the implementation of speed management strategies.
- *[To vehicle manufacturers]* Develop low cost solutions to be incorporated in vehicles that will avoid speeding (e.g. ISA) or will reduce the impact of speeding (e.g. Automatic Breaking Systems).

² These recommendations reflect the common view of all authors of the ESRA core group.

The initial aim of ESRA was to develop a system for gathering reliable information about people's attitudes towards road safety in a number of European countries. This objective has been achieved and the initial expectations have even been exceeded. The outputs of the ESRA project can become building blocks of a road safety monitoring system in Europe that goes beyond monitoring road traffic casualties and also includes indicators for the underlying causal factors.

The ESRA project has also demonstrated the feasibility and the added value of joint data collection on road safety attitudes and performance by partner organizations in a large number of European countries. The intention is to repeat this initiative on a biennial or triennial basis, retaining a core set of questions in every wave allowing the development of time series of road safety performance indicators. This will become a solid foundation for a joint European (or even global) monitoring system on road safety attitudes and behaviour.

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Appendix - ESRA 2015 Questionnaire

Legend

Dichotomization of the variables has been indicated in green below the question; the reference category is indicated in italics.

Introduction

In the questionnaire, we ask about different traffic situations and your reactions to them. We would like to ask you when responding to **only be guided by your opinion on road safety in [COUNTRY]**, and to not take into account any experience with road safety abroad.

Thank you for your contribution!

Socio-demographic information (1)

Q1) Are you a... male - female

Q2a) In which year were you born?

Q2b) In which month were you born?

Mobility and exposure

Q3) Do you have a car driving licence or permit? yes – no

Q4) How often do you drive a car?

Items: At least 4 days a week – 1 to 3 days a week – A few days a month – A few days a year – Never – Don't know / no response

Q5a) During the last 12 months, which of the following transport modes have you been using in [COUNTRY]...

Items: walking (pedestrian; including jogging, inline skate, skateboard,...) - cycling on an electric bicycle / e-bike / pedelec – cycling (non-electric) – moped as a driver (moped: ≤ 50 cc) – motorcycle as driver (> 50 cc) – hybrid or electrical car as driver – car as driver (non-electrical or hybrid) – car as passenger – (mini)van as a driver – truck/lorry as a driver – public transport – other

Q5b) What were your most frequent modes of transport during the last 12 months? Start with your most frequent mode first, followed by your second most frequent, and so on.

Items: only items marked in Q5a are displayed

Q6) Did you drive a car yourself in the past 6 months? yes – no

Q7) How many kilometres³ would you estimate you have driven a car in the past 6 months? ___ km in total

Q8) Think about all the trips you undertook yesterday, so not only as a car driver but also as a pedestrian or cyclist, as a car passenger,... . How many kilometres have you travelled using each of these transport modes?

Items: only items marked in Q5a are displayed

Road safety in general

Q9) How concerned are you about each of the following issues?

³ In the UK, miles instead of kilometres are used.

You can indicate your answer on a scale from 1 to 4, where 1 is “very concerned” and 4 is “not at all concerned”. The numbers in between can be used to refine your response.

Binary variable: *concerned* (1-2) - not concerned (3-4)

Items: rate of crime – pollution - road accidents - standard of health care - traffic congestion – unemployment

Acceptability of unsafe traffic behaviour

Q10) Where you live, how acceptable would most other people say it is for a driver to....?

You can indicate your answer on a scale from 1 to 5, where 1 is “unacceptable” and 5 is “acceptable”. The numbers in between can be used to refine your response.

Binary variable: *acceptable* (4-5) – unacceptable (1-3)

Items (random)

- drive 20 km per hour over the speed limit on a freeway / motorway
- drive 20 km per hour over the speed limit on a residential street
- drive 20 km per hour over the speed limit in an urban area
- drive 20 km per hour over the speed limit in a school zone
- talk on a hand-held mobile phone while driving
- type text messages or e-mails while driving
- check or update social media (example: Facebook, twitter, etc.) while driving
- drive when they're so sleepy that they have trouble keeping their eyes open
- drive through a light that just turned red, when they could have stopped safely
- drive when they think they may have had too much to drink
- drive 1 hour after using drugs (other than medication)
- drive after using both drugs (other than medication) and alcohol
- drive with incorrect tyre pressure
- drive without insurance
- park their car where it is not allowed
- not wear a seat belt in the back of the car
- not wear a seat belt in the front of the car
- transport children in the car without securing them (child's car seat, seat belt, etc.)

Q11) How acceptable do you, personally, feel it is for a driver to...?

You can indicate your answer on a scale from 1 to 5, where 1 is “unacceptable” and 5 is “acceptable”. The numbers in between can be used to refine your response.

Binary variable: *acceptable* (4-5) – unacceptable (1-3)

Items (random): idem Q10

Support for road safety policy measures

Q12) Do you support each of the following measures?

Answering options: *support (pro)* – oppose (contra) – no opinion

Items (random):

- Obligatory winter tyres for cars, trucks and buses
- A licence system with penalty points for traffic violations that results in the revocation of the licence when a certain number of points are reached
- Drivers who have been caught drunk driving on more than one occasion should be required to install an “interlock” (*) *interlock: technology that won't let the car start if the driver's alcohol level is over the legal limit*
- Zero tolerance for alcohol (0,0‰) for novice drivers (licence obtained less than 2y)
- Zero tolerance for alcohol (0,0‰) for all drivers
- Zero tolerance for using any type of mobile phone while driving (hand-held or hands-free) for all drivers
- Ban on alcohol sales in service / petrol stations along the highways / motorways

- Allowing cyclists to run red lights when permitted by specific road signs
- Having a law requiring all cyclists to wear a helmet
- Obligation for pedestrians and cyclists to wear high-visibility vests when in the dark

Q13) What do you think about the current traffic rules and penalties in your country for each of the following themes?

Answering options: *yes* – *no* – *don't know/no response*

Items (fixed order): each time for: speeding – alcohol – drugs – seat belt

- The traffic rules should be more strict
- The traffic rules are not being checked sufficiently
- The penalties are too severe

Self-declared behaviour

Q14) In the past 12 months, as a road user, how often did you...?

You can indicate your answer on a scale from 1 to 5, where 1 is “never” and 5 is “(almost) always”. The numbers in between can be used to refine your response. (+ answering options: ‘not applicable’ and ‘no response’)

Binary variable: never (1) – *at least once* (2-5)

Binary variable for seat belt use: *(almost) always* (5) – *at least once not* (1-4)

Items (random; only items compatible with the road user types indicated in Q5a are shown):

- wear your seat belt as driver
- wear your seat belt as passenger in the front of the car
- wear your seat belt as passenger in the back of the car
- make children (under 150cm)⁴ travelling with you use appropriate restraint (child seat, cushion)
- make children (over 150cm) travelling with you wear a seat belt
- listen to music through headphones as a pedestrian
- cycle without a helmet
- cycle while listening to music through a headphone
- cycle on the road next to the cycle lane
- not wear a helmet on a moped or motorcycle
- drive faster than the speed limit inside built-up areas
- drive faster than the speed limit outside built-up areas (except motorways/freeways)
- drive faster than the speed limit on motorways/ freeways
- drive after drinking alcohol
- drive after using illegal drugs
- talk on a hand-held mobile phone while driving
- talk on a hands-free mobile phone while driving
- read a text message or email while driving
- send a text message or email while driving
- realise that you were actually too tired to drive
- stop and take a break because you were too tired to drive
- drive while taking medication that carries a warning to say it may influence your driving ability
- drive aggressively
- drive too slow
- drive without respecting a safe distance to the car in front
- not indicating directions when you overtake, turn left or turn right
- drive dangerously
- as a pedestrian, cross the road when a pedestrian light was red
- as a cyclist, cross the road when a traffic light was red
- as a pedestrian, cross streets at places other than at a pedestrian crossing

⁴ Adapted in each country to the correct legislation (e.g. in BE 135cm)

- Q15) Over the last 30 days, how many times did you drive a car, when you may have been over the legal limit for drinking and driving?** (dropdown 0 – 30 + no response)
Binary variable: *never (0) – at least once (1-30)*

Attitudes towards (unsafe) traffic behaviour

- Q16) To what extent do you agree with each of the following statements?**
You can indicate your answer on a scale from 1 to 5, where 1 is “disagree” and 5 is “agree”. The numbers in between can be used to refine your response.
Binary variable: *agree (4-5) – disagree (1-3)*

Items (random)

- Driving under the influence of alcohol seriously increases the risk of an accident
- Most of my acquaintances / friends think driving under the influence of alcohol is unacceptable
- If you drive under the influence of alcohol, it is difficult to react appropriately in a dangerous situation
- Driving under the influence of drugs seriously increases the risk of an accident
- Most of my acquaintances / friends think driving under the influence of drugs is unacceptable
- I know how many drugs I can take and still be safe to drive
- Driving fast is risking your own life, and the lives of others
- I have to drive fast, otherwise I have the impression of losing time
- Driving faster than the speed limit makes it harder to react appropriately in a dangerous situation
- Most of my acquaintances / friends feel one should respect the speed limits
- Speed limits are usually set at acceptable levels
- By increasing speed by 10 km/h, you have a higher risk of being involved in an accident
- It is not necessary to wear a seat belt in the back seat of the car
- I always ask my passengers to wear their seat belt
- The instructions for using the child restraints are unclear
- It is dangerous if children travelling with you do not wear a seat belt or use appropriate restraint
- For short trips, it is not really necessary to use the appropriate child restraint
- My attention to the traffic decreases when talking on a hands free mobile phone while driving
- My attention to the traffic decreases when talking on a hand-held mobile phone while driving
- Almost all car drivers occasionally talk on a hand-held mobile phone while driving
- People talking on a hand-held mobile phone while driving have a higher risk of getting involved in an accident
- When I feel sleepy, I should not drive a car
- Even if I feel sleepy while driving a car, I will continue to drive
- If I feel sleepy while driving, then the risk of being in an accident increases

Subjective safety and risk perception

- Q17) How (un)safe do you feel when using the following transport modes in [country]?**
You can indicate your answer on a scale from 0 to 10, where 0 is “very unsafe” and 10 is “very safe”. The numbers in between can be used to refine your response.
Items (random): only items marked in Q5a are displayed

- Q18) In your opinion, how many road traffic accidents are caused by each of the following factors? Estimate a percentage of accidents for each factor. In other words, how many accidents out of 100 were caused by the following factors. Provide a separate estimate for each factor. Always answer using a figure between 0 and 100 (+ option: don't know) The total sum of all the factors can be more than 100.**
Items (random):

- Tiredness behind the wheel
- Driving under the influence of alcohol
- Driving too close to the vehicle in front
- Driving too fast
- Taking psychoactive medication and driving(*) *psychoactive medications: with side effect on the central nervous system (e.g. sedatives, antidepressants)*
- Taking drugs and driving
- Poorly maintained roads
- Poor road design
- Using a mobile phone to make a call while driving without using a hands-free device
- Congestion / traffic jams
- Bad weather conditions
- Technical defects in vehicles
- Aggressive driving style
- Inattentiveness
- Insufficient knowledge of the rules of the road
- Sending a text message while driving

Behaviour of other road users

Q19) Can you specify, for each of the following behaviours how often you, as a road user, are confronted with these behaviours?

You can indicate your opinion by means of a number from 0 to 10. '0' is "never", and '10' is "very often". The numbers in between can be used to refine your answer.

Items (random):

- aggressive drivers
- distracted drivers (drivers who are busy with something else, e.g. phone, tuning the radio etc)
- road users who don't respect traffic rules
- speeding drivers / drivers who drive too fast
- drivers who drive too slow
- drivers who don't leave a safe distance to the car in front
- careless drivers (e.g., not indicating direction)
- drivers who don't take into account the needs of other road users (e.g., blocking an exit etc)
- drivers committing dangerous driving offences

Q20) Do you think the occurrence of the following behaviour has increased, decreased or not changed compared to 2 years ago?

Answering options: *increased* – no change – decreased

Items (random): idem Q19

Involvement in road crashes

Q21a) In the past three months have you been involved in a road traffic accident as a ...

(if no accident: answering option: 'none of these')

Items (multiple responses possible; only items indicated in Q5a are displayed):

Extra sub-items for

- motorcycling: motorcyclist (50-125 cc) – motorcyclist (>125 cc)
- public transport: on the train – on the subway – on a tram – on the bus

Q21b) Please indicate the severity of the accident:

Answering options (multiple responses possible per transport mode (i.e.; if a respondent had multiple accidents as pedestrian e.g.)): Without material damage or

any injured parties⁵ – With only material damage – With only minor injuries to myself or others – In which someone had to be taken to hospital
Items: each transport mode indicated in Q21a

Enforcement

Q22) On a typical journey, how likely is it that you (as a driver) will be checked by the police for...

You can indicate your answer on a scale from 1 to 5, where 1 is "very small chance" and 5 is "very big chance". The numbers in between can be used to refine your response. (+ option: don't know/no response)

Binary variable: *big chance (4-5) – small chance (1-3)*

Items (random):

- ... alcohol, in other words, being subjected to a Breathalyser test
- ... the use of illegal drugs
- ... seat belt wearing
- ... respecting the speed limits (including checks by police car with a camera and/or flash cameras)

Q23a) In the past 12 months, how many times have you...

Answering options: number + don't know/no response

Items:

- been stopped by the police for a check?
- had to pay a fine for a traffic violation? (except a parking fee)
- been convicted at court for a traffic violation?

Q23b) Was this a fine for

Items (multiple responses possible): violating the speed limits – driving under the influence of alcohol – driving under the influence of drugs (other than medication) – not wearing a seat belt – transporting children in the car without securing them correctly (child's car seat, seat belt, etc.) – talking on a hand-held mobile phone while driving – other reason – no response

Q23c) Was this conviction for

Items (multiple responses possible): idem Q23b

Q24) In the past 12 months, how many times were you checked by the police for alcohol while driving a car (i.e., being subjected to a Breathalyser test)?

Binary variable: *at least once - never*

Q25) In the past 12 months, how many times have you been checked by the police for the use of drugs/medication while driving?

Binary variable: *at least once - never*

Socio-demographic information (2)

Q26) What is the highest qualification or educational certificate you obtained?

Items: None – Primary education – Secondary education – Bachelor's degree or similar – Master's degree or higher – No answer

Q27) What is the postal code of the municipality in which you live?⁶

⁵ This option refers to an 'incident', not a crash → left out in the analysis

⁶ If in a country no postal codes are in use, this question is rephrased as follows: In which county do you live?



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