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E-Survey of Road users' Attitudes

Support for policy measures and enforcement

ESRA3 Thematic report Nr. 9

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Support for policy measures and enforcement

ESRA3 Thematic report Nr. 9

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List of abbreviations

Country codes (in accordance with ISO 3166-1 alpha-2 (International Organization for Standardization (ISO), 2024))

AM	Armenia	KG	Kyrgyzstan
AU	Australia	LV	Latvia
AT	Austria	LU	Luxembourg
BE	Belgium	MX	Mexico
BA	Bosnia and Herzegovina	NL	Netherlands
BR	Brazil	PA	Panama
CA	Canada	PE	Peru
CL	Chile	PL	Poland
CO	Colombia	PT	Portugal
CZ	Czech Republic	RS	Republic of Serbia
DK	Denmark	SI	Slovenia
FI	Finland	ES	Spain
FR	France	SE	Sweden
DE	Germany	CH	Switzerland
EL	Greece	TH	Thailand
IE	Ireland	TR	Türkiye
IL	Israel	UK	United Kingdom
IT	Italy	US	United States
JP	Japan	UZ	Uzbekistan
KZ	Kazakhstan		

Other abbreviations

ESRA	E-Survey of Road users' Attitudes
EU	European Union
ICW	Individual country weight used in ESRA3
HIC	High income countries based on World Bank classification 2023 (The World Bank Group, 2023)
UMIC	Upper-middle income countries based on World Bank classification 2023 (The World Bank Group, 2023)
LMIC	Lower-middle income countries based on World Bank classification 2023 (The World Bank Group, 2023)

Executive summary

Objective and methodology

ESRA (E-Survey of Road users' Attitudes) is a joint initiative of road safety institutes, research centres, public services, and private sponsors from all over the world. The aim is to collect and analyse comparable data on road safety performance and road safety culture. The ESRA data are used as a basis for a large set of road safety indicators. These provide scientific evidence for policy making at national and international levels.

Vias institute in Brussels (Belgium) initiated and coordinates ESRA, in cooperation with ten steering group partners (BASt (Germany), DTU (Denmark), IATSS (Japan), ITS (Poland), KFV (Austria), NTUA (Greece), PRP (Portugal), SWOV (the Netherlands), TIRF (Canada), University Gustave Eiffel (France)). At the heart of ESRA is a jointly developed questionnaire survey, which is translated into national language versions. The themes covered include self-declared behaviour, attitudes and opinions on unsafe traffic behaviour, enforcement experiences and support for policy measures. The survey addresses different road safety topics (e.g., driving under the influence of alcohol, drugs and medicines, speeding, distraction) and targets car occupants, moped riders and motorcyclists, cyclists, pedestrians, and riders of e-scooters. In ESRA3 the questions related to vulnerable road uses (moped riders and motorcyclists, cyclists, pedestrians, and riders of e-scooters) have been expanded and questions on e-scooters and infrastructure have been added.

The present report is based on the third edition of this global survey, which was conducted simultaneously in 39 countries in 2023. In total this survey collected data from more than 37000 road users in 39 countries across five continents. An overview of the ESRA initiative and the project results is available on: www.esranet.eu.

This thematic ESRA3 report describes the results regarding support for policy measures and enforcement. The findings on support for policy measures concern nine policy measures in the field of road safety targeting drivers and cyclists: three measures in relation to drunk driving, one in relation to drunk cycling, two measures related to speed limits (30km/h and 80 km/h), two related to helmet use by cyclists (by all cyclists and by cyclists younger than 12) and one related to hand-held mobile phone use while driving. The report presents and discusses the level of support for the measures considered, including differences across world regions (Europe22, America8, AsiaOceania6), countries, age groups and gender. More advanced analysis focuses on the association between the level support for measures and one's tendency to engage in risky behaviour. Additionally, this report includes comparisons over time, where ESRA3 results on support for policy measures are compared with ESRA2 results.

The findings concerning enforcement related to: 1) the experience with traffic checks on alcohol and drugs while driving (experienced enforcement) and 2) the perceived likelihood of enforcement checks on alcohol and drugs, speeding, seatbelt use and mobile phone use for car drivers (perceived enforcement). For both types of enforcement comparisons amongst the participating regions and countries as well as age and gender are presented. Furthermore, the report contains comparisons on both experienced and perceived enforcement between ESRA2 and ESRA3 results.

Key results

Support for policy measures

In general, a majority support for the policy measures was found. The highest support, around 80%, was found for: requiring cyclists under 12 years old to wear a helmet, forbidding all drivers to use a hand-held phone and alcohol 'interlock' for recidivists. In contrast the measures related to speed limit (30 km/h limit and 80 km/h limit) received the lowest support especially in Europe22. In Europe22 only less than half of the respondents supported 30km/h and 80 km/h speed limit. Similarly, in AsiaOceania6 a minority support was also found for 30km/h speed limit. On average, in all regions the level of support for the 30 km/h speed limit was lower than for the 80 km/h speed limit.

The level of support for the measures concerned differed significantly according to world region. For example, individuals in Europe22 were significantly less supportive than those in America8 or in AsiaOceania6 when it comes to zero tolerance for alcohol for all drivers and for cyclists, alcohol 'interlock' for recidivists and both speed limit measures (30km/h limit and 80km/h limit). In contrast in America8 significantly higher levels of support were found than in Europe22 and in AsiaOceania6 for measures regarding obligatory helmet use by cyclists.

Additionally, age and gender were important factors affecting the level of support for policy measures. Females were generally more supportive of the policy measures than males. Youngest individuals in all regions tended to be the least supportive of the measures. Additionally, in Europe22 the oldest individuals were the most in favour of the policy measures. In contrast, the oldest age group in America8 and AsiaOceania6 was the least supportive of limiting the speed limit to 30km/h in built-up areas.

For about half of the policy measures significant associations were found between support for policy measures and self-declared engagement in risky behaviour. The lower the support for a measure, the higher the frequency of engagement in a specific risky behaviour related to the measure.

The comparison between ESRA2 and ESRA3 results concerning the five measures included in both editions suggest that on average, support for each of these measures decreased slightly in 26 countries. The level of support decreased on average by 1.6% to 4.0%, depending on the measure. The largest decrease was found for installing an alcohol 'interlock' for recidivists and the smallest decrease for zero tolerance for alcohol for all drivers. However, these differences must be interpreted with caution, since they might be influenced by methodological differences in ESRA2 and ESRA3.

Enforcement

Generally, significant variations in driver's experienced and perceived enforcement of police checks were found for alcohol, drugs, speeding, seatbelt use and mobile phone use, depending on country, regions age and gender. Across all regions, drivers reported more frequent alcohol checks than drug checks, with the highest rates found in America8. Drivers indicated that the likelihood of being checked for alcohol is around 1.5 to 2 times as great as being checked by drugs. The highest reported likelihood for being checked for alcohol was found for AsiaOceania6 (30.1%) followed by America8 (25.6%) and Europe22 (17.1%). The highest expected likelihood for being checked for drugs was found in AsiaOceania6 (20.3%), followed by America8 (12.4%) and Europe22 (10.9%). Younger drivers in America8 and Europe22 reported more frequent checks than older drivers, though this was not the case for AsiaOceania6. Also, men reported slightly more checks than women.

Regarding the perceived likelihood of being checked by the police, drivers believed that alcohol checks are more likely than drug checks. The highest reported likelihoods of being checked were found in AsiaOceania6. The highest likelihood of being checked for speeding, seatbelt use and mobile phone checks by the police were also found in AsiaOceania6. The perceived likelihood of encountering these enforcement types generally remained low from the ESRA2 survey to the ESRA3 survey. A small decrease in alcohol checks and a slight increase in seatbelt checks was found. In general, the actual experience of checks showed minor changes between to the surveys.

Key recommendations

- Use the majority support for policy measures found in ESRA3 (and earlier in ESRA1 and ESRA2) as an argument to convince policymakers to implement new measures improving road safety despite the concerns whether the measures will be found popular.
- Improve the support for the speed limit measures, especially the 30 km/h speed limit which received the lowest support in ESRA3. To do so, it is essential to understand the type of resistance against these policy measures, and people's beliefs related to them.
- Monitor the level of public support for road safety policy measures to be aware of a possible decreasing trend, which consequently needs to be targeted.

- Prioritize and improve the objective and subjective probability of being caught by police for driving under the influence of drugs and alcohol, driving over the speed limit, wearing a seatbelt and for mobile phone use while driving.
- Look into legislation differences and similarities among various countries regarding police enforcement to understand drivers' subjective and objective probability of being caught by the police. Countries could learn from each other.

The ESRA initiative has demonstrated the feasibility and the added value of joint data collection on road safety performance by partner organizations all over the world. The intention is to repeat this survey every three to four years, retaining a core set of questions in every edition. In this way, ESRA produces consistent and comparable road safety performance indicators that can serve as an input for national road safety policies and for international monitoring systems on road safety performance.

1 Introduction

Road safety policy measures are meant to improve road safety, i.e., to reduce the number of people injured or killed in road traffic crashes, or to minimize the consequences of a crash. Despite the expected benefits of such policy measures, public support may be less than ideal, because such measures may require road users to give up some of their freedom or autonomy (Van den Berghe & Christie, 2022; Van den Berghe et al., 2022).

We can describe public support for road safety policy as a positive valuation of road safety and of measures that increase road safety. For a policy measure to be effective, i.e. causing people to adapt their behaviour accordingly, it is important that there is public support for the measure (Goldenbeld, 2002). Opposition to measures is rooted in people's beliefs about several issues, including effectiveness, costs, burdens, restrictions on freedom, possible discrimination, and so on (Van den Berghe & Christie, 2022).

The level of public support for policy measures has been measured in the first and second edition of ESRA. Although there are differences between the editions on sample level and the specific measures included in the surveys, the results show that in both ESRA1 and ESRA2 the majority of respondents are generally in favour of the policy measures. The high support was especially found for alcohol related measures such as 'zero tolerance for alcohol for novice drivers' and 'installing an alcohol interlock' (one average more than three quarters of the respondents were supportive). Measures against distracted driving received lower support (47% in ESRA1; between 53% and 65% in ESRA2, depending on the region).

Several characteristics of road users have been found to influence support for policy measures. Studies show that the level of support for a road safety policy measure is associated with the extent to which road users involve in risky driving behaviour. For example, a higher frequency of drinking behaviour and drunk driving was associated with a lower support for alcohol related measures in ESRA2 and in other studies (Bishop et al., 2017; Downs, Shults, & West, 2017; Eby et al., 2017; Runyan & Earp, 1985, Van den Berghe et al., 2022). Similarly, a higher opposition to intervening ISA-systems was related to a higher frequency of speeding occasions in ESRA2 and other studies (Garvill, Marell, & Westin, 2003; Van den Berghe et al., 2022). In ESRA2 positive relationship was also found between the frequency of wearing a seatbelt and the level of support for seatbelt reminder for all seats. Furthermore, the higher the frequency of riding without a helmet, the lower the support for requiring all cyclists to wear a helmet. Finally, a higher frequency of talking on handsfree mobile phone while driving, the lower the support for not using a mobile phone inside cars (Van den Berghe et al., 2022).

The results of ESRA1 and ESRA2 show furthermore that the level of support for policy measures depends to a great extent on gender and age (Buttler, 2016; Van den Berghe et al., 2022). Almost systematically, females were found to be more supportive for road safety measures than males. In general, the younger age groups were more supportive for policy measures than the oldest ones, especially in Europe22.

In the ESRA3 survey, questions were asked in a sample from 39 countries worldwide on the support for nine road safety policy measures. Three measures were related to drunk driving, one to drunk cycling, two to speeding, two to helmet use and one to distraction. The measures targeted two groups of road users: car drivers and cyclists. This report presents the results regarding the level of support for the measures considered, including differences across world regions, countries, age groups and gender.

Furthermore, this report describes experiences and expectations of road users concerning one particular road safety measure: police enforcement. In a safe systems approach, the measure of police enforcement is needed to persuade road-users to obey traffic laws and regulations through threat of detection of violation and the imposition of a penalty (Goldenbeld et al., 2022; European Commission, 2024).

The ESRA2 questionnaire provided valuable insights into global perceptions and experiences of police enforcement concerning traffic violations. Across all regions, drivers reported the highest likelihood of being checked for sticking to the speed limit and for wearing seatbelt. Being checked for the use of illegal drugs was perceived as the least likely across all regions, highest in Africa (24.2%) and lowest in America (10.4%). Overall, male drivers and young drivers reported a higher likelihood of being checked

for traffic violations compared to female drivers and older age categories (Meesmann et al., 2022; Goldenbeld et al., 2022).

ESRA2 also examined actual experienced traffic checks by the police for alcohol and drug use while driving in the past 12 months. Alcohol checks were reported more frequent than drug checks in all regions. AsiaOceania6 reported the highest likelihood of alcohol checks (33.1%), and America reported the lowest (4.9%). Equivalently, checks by the police for drug use were most reported in AsiaOceania6 (11.5%), Africa (10.3%) and least commonly in Europe (4.1%) and America (2.3%). These findings highlighted the regional differences regarding experienced and perceived enforcement for various unsafe driving behaviours (Meesmann et al., 2022; Goldenbeld et al., 2022).

In this report, the ESRA3 findings are used to address the following research questions regarding the support for policy measures:

- How high is the level of support for further measures on road safety?
- How does the level of support vary across regions, countries, age groups and gender?
- How is the level of support for new policy measures associated with one's risky behaviour?
- To what extent has the level of support changed over time (ESRA2 results compared with ESRA3 results)?

On enforcement-related issues, this report addresses the following research questions:

- What proportion of drivers are being checked by the police on alcohol and drug and how does this differ per region, country, age and gender?
- How do road users rate the likelihood of being checked for alcohol, drugs, speeding, wearing a seatbelt and held-held mobile phone use and how does this differ per region, country, age and gender?
- To what extent the enforcement perception and enforcement experiences has changed over time (ESRA2 results compared with ESRA3 results)?

2 Methodology

ESRA (E-Survey of Road users' Attitudes) is a joint initiative of road safety institutes, research centres, public services, and private sponsors from all over the world. The aim is to collect and analyse comparable data on road safety performance, in particular road safety culture and behaviour of road users. The ESRA data are used as a basis for a large set of road safety indicators. These provide scientific evidence for policy making at national and international levels.

ESRA data are collected through online panel surveys, using a representative sample of the national adult populations in each participating country (aiming at n=1000 per country). A few exceptions exist. In four countries (Armenia, Kyrgyzstan, Luxembourg, and Uzbekistan) the targeted sample size was reduced to 500 respondents, as sample sizes of 1000 respondents were not feasible due to limitations of the national panel or too high costs.

At the heart of this survey is a jointly developed questionnaire, which was translated into 49 national language versions in ESRA3 (Appendix 1). The themes covered include self-declared behaviour, attitudes and opinions on unsafe traffic behaviour, enforcement experiences and support for policy measures. The survey addresses different road safety topics (e.g., driving under the influence of alcohol, drugs and medicines, speeding, distraction) and targets car occupants, moped riders and motorcyclists, cyclists, pedestrians, and riders of e-scooters. In ESRA3 the questions related to vulnerable road users (moped riders and motorcyclists, cyclists, pedestrians, and riders of e-scooters) have been expanded and questions on e-scooters and infrastructure have been added. The present report is based on the third edition of this global survey, which was conducted simultaneously in 39 countries in 2023. In total this survey collected data from more than 37000 road users in 39 countries, across five continents.

The participating countries in ESRA3 were:

- Europe: Austria, Belgium, Bosnia and Herzegovina, Czech Republic, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Latvia, Luxembourg, Netherlands, Poland, Portugal, Republic of Serbia, Slovenia, Spain, Sweden, Switzerland, United Kingdom;
- America: Brazil, Canada, Chile, Colombia, Mexico, Panama, Peru, USA;
- Asia and Oceania: Armenia, Australia, Israel, Japan, Kazakhstan, Kyrgyzstan, Thailand, Türkiye, Uzbekistan.

Vias institute in Brussels (Belgium) initiated and coordinates ESRA, in cooperation with ten steering group partners (BASt (Germany), DTU (Denmark), IATSS (Japan), ITS (Poland), KFV (Austria), NTUA (Greece), PRP (Portugal), SWOV (the Netherlands), TIRF (Canada), and University Gustave Eiffel (France)). The common results of the ESRA3 survey are published in a Main Report, a Methodology Report and 13 Thematic Reports (Table 1). Furthermore, 39 country fact sheets, including different language versions, have been produced in which national key results are compared to a regional mean (benchmark). Scientific articles, national reports and many conference presentations are currently in progress. All common ESRA3 reports have been peer-reviewed within the consortium, following a pre-defined quality control procedure. An overview of the results and news on the ESRA initiative is available on: www.esranet.eu. On this website one can also subscribe to the ESRA newsletter.

Table 1: ESRA3 Thematic Reports

Driving under influence of alcohol, drugs and medication	Support for policy measures and enforcement	Pedestrians	Young and aging road users
Speeding	Subjective safety and risk perception	Cyclists	Male and female road users
Distraction (mobile phone use) and fatigue	Infrastructure	Riders of e-scooters	
Seat belt & child restraint systems		Moped riders and motorcyclists	

The present report summarizes the ESRA3 results with respect to support for policy measures and enforcement. A more detailed overview of the data collection method and the sample per country can be found in the ESRA3 methodology report (Meesmann & Wardenier, 2024). This report describes the general levels of support for policy measures per region and support for: (1) drinking and driving measures, measures concerning speed limits, ban on hand-held phone use for drivers, helmet measures for cyclists and measures concerning drinking and cycling. Subsequently, this report describes drivers actual experience with alcohol and drug checks (objective probability of detection) by the police and their perceived likelihood of police checks (subjective probability of detection) for alcohol and drugs, seatbelt use, speeding and hand-held mobile phone use.

Note that a weighting of the data was applied in the analyses. This weighting took into account small corrections with respect to national representativeness of the sample based on gender and six age groups: 18-24y, 25-34y, 35-44y, 45-54y, 55-64y, 65-74y (United Nations Statistics Division, 2023). The results are presented by country and region. The following regional means are used in the report: Europe22 (including 22 countries), America8 (including eight countries) and AsiaOceania6[1] (including six countries). For the regional means, the weighting also took into account the relative size of the population of each country within the total set of countries from this region (Appendix 2).

The weighted sample size per region, country and main road user type are presented in Appendix 3. SPSS 29.0 (IBM Corp., 2022) and R 4.3.1 (R Core Team., 2023) were used for all analyses. Because of the large sample size, only differences with a p-value less than 0.01 are considered statistically significant in section 3.1 with overall results. In other sections, depending on the type of analysis, also some results with higher p-values (up to 0.05) are considered. p

2.1 Support for policy measures and enforcement

In the ESRA3 questionnaire respondents were asked about their degree of support for the nine following policy measures (see Q20 in Appendix 1).

- forbidding all drivers of motorized vehicles to drive with a blood alcohol concentration above 0.0 ‰ (zero tolerance)
- forbidding all novice drivers of motorized vehicles (license obtained less than 2 years ago) to drive with a blood alcohol concentration above 0.0 ‰ (zero tolerance)
- installing an alcohol 'interlock' for drivers who have been caught drunk driving on more than one occasion (technology that won't let the car start if the driver's alcohol level is over a certain limit)
- limiting the speed limit to a maximum of 80 km/h on all rural roads without a median strip
- limiting the speed limit to 30 km/h in all built-up areas (except on main thoroughfares)
- forbidding all drivers of motorized vehicles to use a hand-held mobile phone while driving
- requiring all cyclists to wear a helmet
- requiring cyclists under the age of 12 to wear a helmet
- forbidding all cyclists to ride with a blood alcohol concentration above 0.0‰ (zero tolerance)

The policy measures concerning speed limits for drivers (30 km/h in all built-up areas except on main thoroughfares and 80 km/h on all rural roads without a median strip) and the one forbidding all cyclists to ride with a blood alcohol concentration above 0.0‰ (zero tolerance) were not included in the previous ESRA editions.

To measure the level of public support, respondents were requested to answer nine questions starting with: "*Do you oppose or support a legal obligation …?"* followed by the specific policy measure. Respondents could indicate their answer on a Likert scale varying from 1 (oppose) to 5 (support). The

[1] *Armenia, Kyrgyzstan, and Uzbekistan were not included due to different methodology in data collection – face-to-face CAPI*

answers were dichotomized into support (= score 4-5) and oppose/neutral (= score 1-3). The percentages of respondents who were supportive (answers 4 or 5) are shown in the results.

2.2 Enforcement

The questions on experience with enforcement concerned the expected likelihood of encountering a police check and the factual experience with a police check (See Q22, Q23_1 and Q23_2 in Appendix 1). The two questions on actual experience with enforcement were the following:

- "In the past 12 months, how many times have you been checked by the police for using alcohol while driving a car (i.e., being subjected to a Breathalyser test)?"
- In the past 12 months, how many times have you been checked by the police for using drugs (other than prescribed or over the counter medication) while driving a car?"

The answer scales were: never, 1 time, at least 2 times. For data-analysis, the responses were transformed into a binary variable: *at least once* and *never.*

The question on expected likelihood ("on a typical journey, how likely is it that you (as a car driver) will be checked by the police (including cameras or radars) for …?") concerned the following traffic violations:

- alcohol, in other words, being subjected to a Breathalyser test
- the use of illegal drugs
- respecting the speed limits
- wearing your seatbelt
- the use of hand-held mobile phone to talk or text while driving

The answers to the items were presented in random order and could be answered using a scale from 1 to 7, where 1 is "very unlikely" and 7 is "very likely". The responses were transformed into a binary variable: *likely* (5-7) and *unlikely/neutral* (1-4).

3 Results

3.1 Overall results

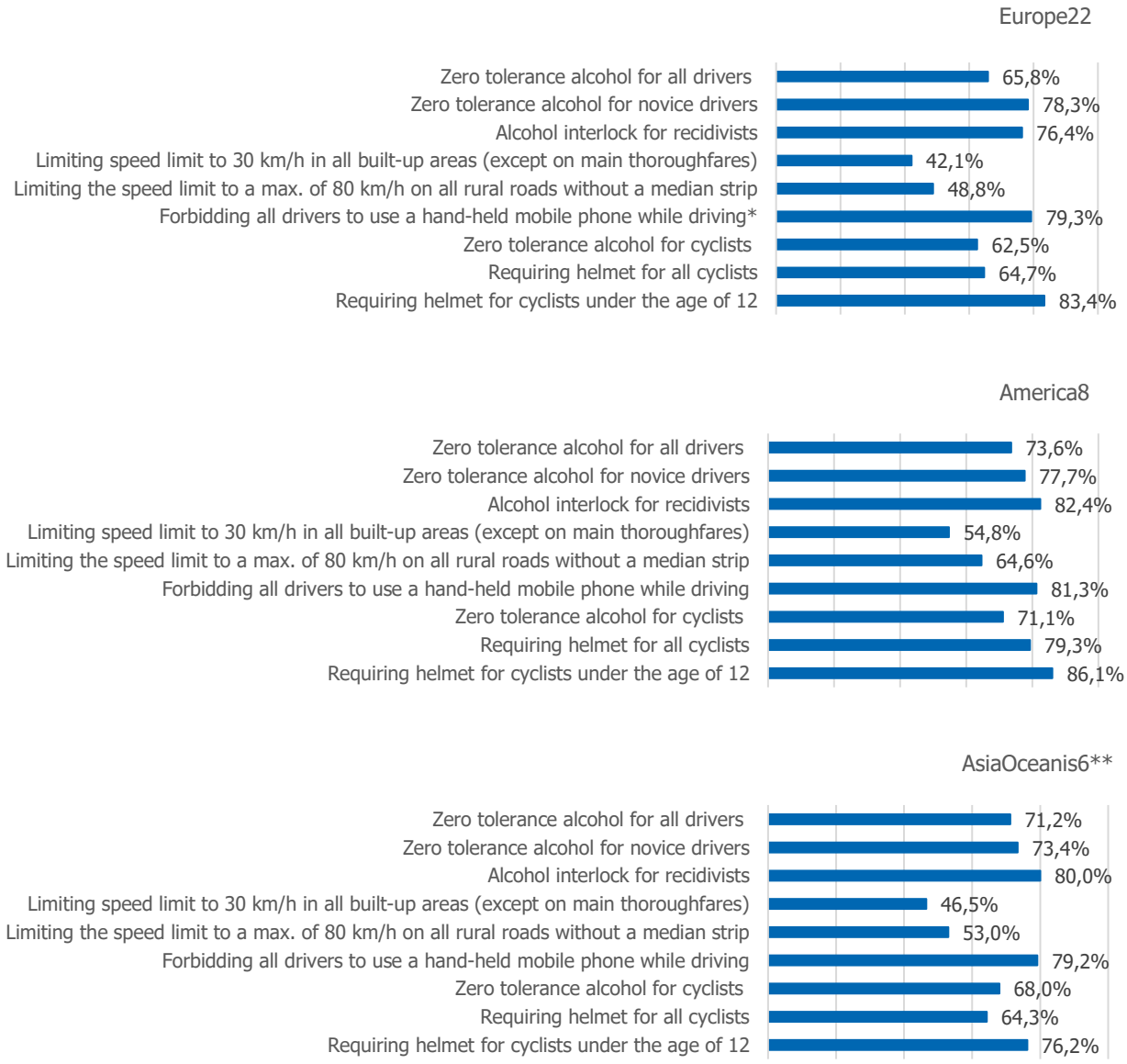
This section presents the descriptive statistics concerning questions about support of policy measures (section 3.1.1) and about traffic enforcement (section 3.1.2). The results are presented by region and country, by age group and by gender. The three ESRA3 regions were: Europe22, America8, and AsiaOceania6. The AsiaOcenaia6 mean does not include Armenia, Kyrgyzstan, and Uzbekistan due to a different methodology in data collection in these countries (see Meesmann, & Wardenier, 2024).

To investigate possible differences between regions, gender and age groups, Chi^2 Tests for Independence were performed. For the pairwise comparisons between pairs of groups (region, gender, age groups), Bonferroni correction was used. The strength of the association between variables (effect size) was assessed by the Cramer's V coefficient (Cohen, 1988). For detailed statistical output concerning the results presented in the sections below, see Appendix 4.

3.1.1 Support for policy measures

3.1.1.1 General level of support for policy measures per region

Figure 1 shows the mean level of support for all nine measures by region. On average, almost all policy measures considered received a majority support. However, this does not apply to limiting speed limit to 30km/h in all built-up area (except for main thoroughfares) in Europe22 and AsiaOceania6, where less than half of the respondents supported the measure. Similarly, a minority support (48.8%) was found in Europe22 for the 80km/h speed limit on all rural roads with a median strip. The policy measures related to speed limits, especially the 30 km/h limit received the lowest support as compared to the other measures. The measures with the highest support (around 80%) were: requiring cyclists under 12 years old to wear a helmet (especially high support in Europe22 and America8), forbidding all drivers to use a held-held phone and alcohol 'interlock' for recidivists (especially high support in America8 and AsiaOceania6).



** Europe21 (Luxemburg not included)*
*** Armenia, Kyrgyzstan, and Uzbekistan not included in regional mean (due to different methodology)*

Figure 1: Support among road users for the nine policy measures, by region.

3.1.1.2 Support for drinking and driving measures for drivers

The degree of support for the policy measures on drinking and driving is shown in Figure 2.

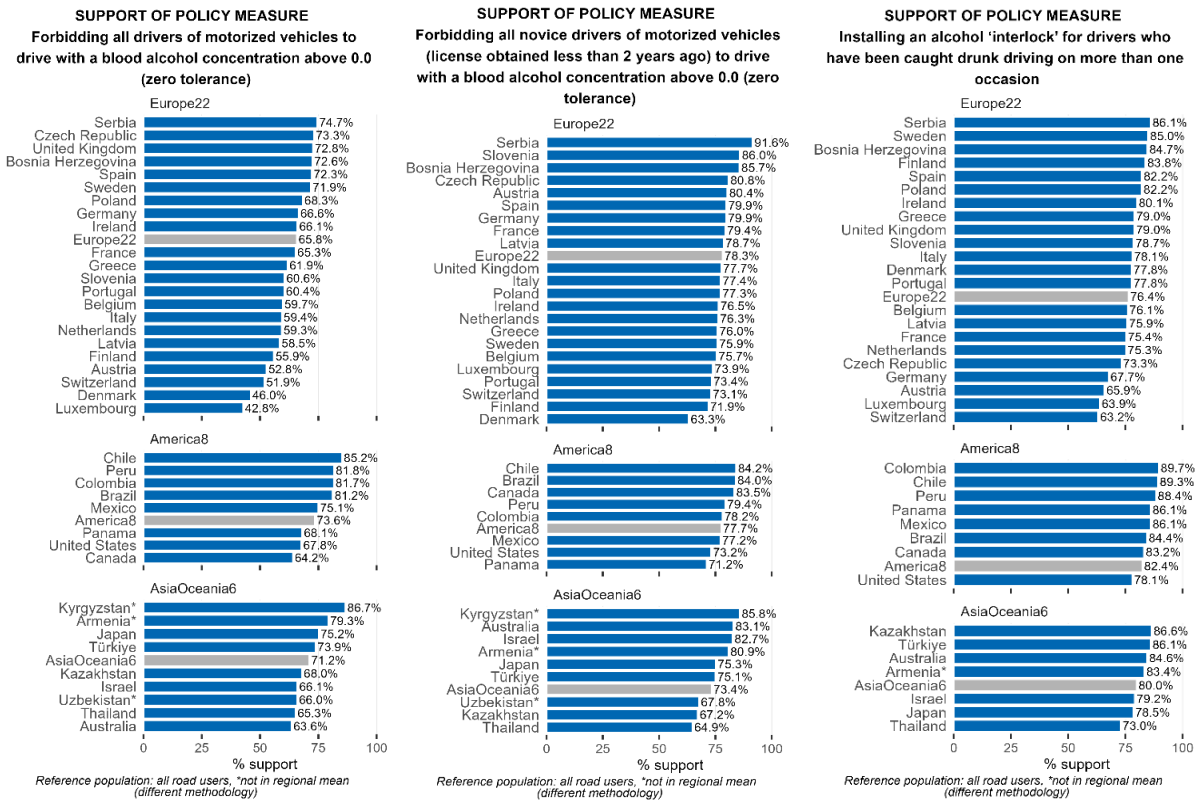


Figure 2: Support among road users for policy measures concerning drinking and driving for drivers, by region and country.

Generally, in all three world regions, the majority of respondents supported measures related to driving under the influence of alcohol. There were, however, significant differences between regions in the support for each of the three measures, although the effect sizes were small (zero tolerance for drinking and driving for all drivers: p-value < 0.001, Cramer's V: 0.073; zero tolerance for novice drivers: p-value < 0.001, Cramer's V = 0.043; installation of an alcohol "interlock": p-value < 0.001, Cramer's V = 0.062).

The proportion of respondents supporting zero tolerance for drinking and driving for all drivers was lowest in Europe22 (65.8%) compared to the other two regions (p-value < 0.001). America8 (73.6%) and AsiaOceania6 (71.2%) did not differ significantly from each other in this aspect (p-value > 0.01, Cramer's V = 0.073).

Regarding zero tolerance for alcohol for novice drivers, respondents in Europe22 and America8 were more supportive than in AsiaOceania6 (respectively 78.3%; 77.7% and 73.4%; p-value < 0.001, Cramer's V = 0.043). As for the installation of an alcohol 'interlock' for drivers who have been caught drunk driving on more than one occasion, the support in America8 and AsiaOceania6 (respectively 82.4% and 80.0%) was again higher than in Europe22 (76.4%) (p-value < 0.01, Cramer's V = 0.062).

Figure 2 also shows that the level of support varies across countries. Serbia was the European country with the highest level of support for all measures related to driving under the influence of alcohol. The lowest level of support for zero tolerance for alcohol for all drivers was in Luxemburg (42.8%). Respondents in Denmark were the least supportive of zero tolerance for alcohol for novice drivers (63.3%) while respondents in Switzerland were the least supportive of alcohol 'interlock' (63.2%).

Among countries in America, Chile showed the highest support for zero tolerance for both all drivers and for novice drivers, and Colombia the highest support for alcohol "interlock". The countries with the

lowest support were: Canada (for zero tolerance for all drivers), Panama (for zero tolerance for novice drivers) and United States (for alcohol "interlock").

Kyrgyzstan was the country in AsiaOceania6 with the highest support for all measures related to driving under the influence of alcohol. Thailand showed the lowest support for alcohol "interlock" and zero tolerance for alcohol for novice drivers. The lowest support for zero tolerance for alcohol for all drivers in AsiaOceania6 was found in Australia.

The analysis by age group shows that in Europe22, the level of support for each of the three measures depended significantly on age (see Figure 3), although the strength of the association was rather small in all cases (Cramer's V between 0.091 and 0.163). In Europe22, the older the respondents, the higher level of support: the youngest group was found the least supportive and the oldest group the most supportive. This pattern is less clear in the other regions: in America8 and AsiaOceania6 the youngest group was generally the least supportive of the measures. However, there was no linear increase found in the level of support across the age groups, and the oldest respondents were not necessarily the ones showing the highest level of support.

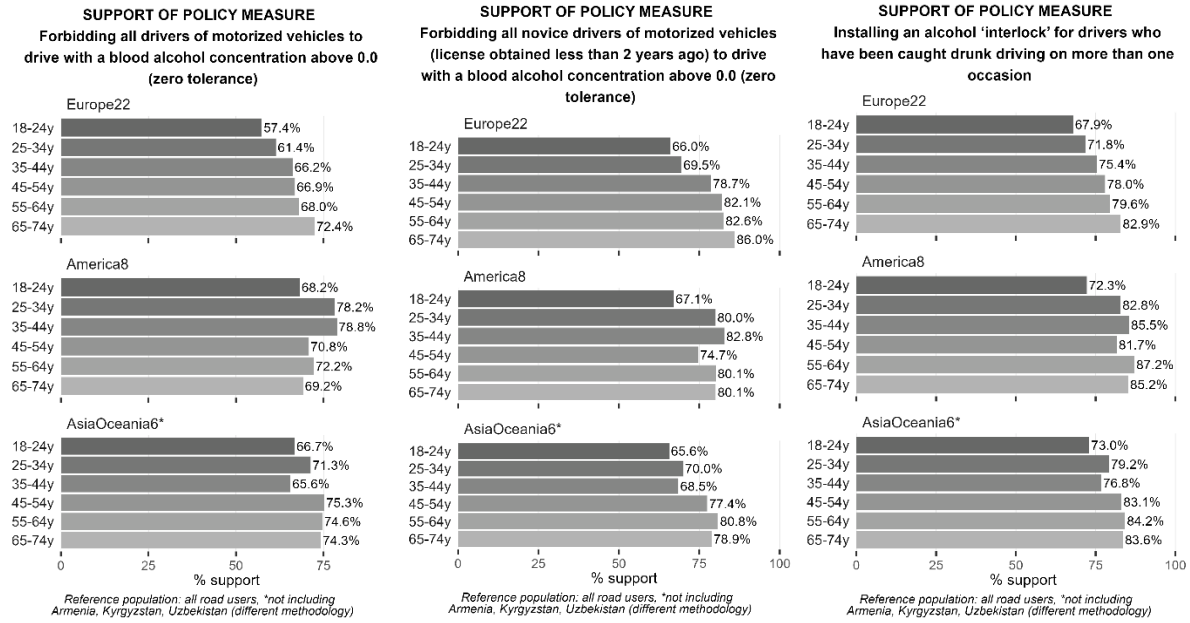


Figure 3: Support among road users for policy measures concerning drinking and driving for drivers, by region and age group.

In Europe22, the oldest group (65 to 74y) showed the highest support for zero tolerance for alcohol for all drivers compared to all younger age groups (p-value < 0.01). The two youngest groups (18 to 24 and 25-34 years old) were significantly less supportive of zero tolerance for alcohol for all drivers and for novice drivers than the older age groups of respondents (35 to 44y, 45 to 54y, 54 to 65y and 65 to 74y) (p-value < 0.01). In Europe22, there were also significant differences found between the respondents younger than 35 (age groups: 18-24y and 25-34y) and the ones older than 45 (age groups 45 to 54, 54 to 64 and 65 to 74) (p-value < 0.001) when it comes to the installation of an alcohol 'interlock'.

In America8, the youngest group (18 to 24y) was significantly less supportive than the ones aged 25 to 34 and those aged 35 to 44 when it comes to zero tolerance for alcohol for all drivers (p-value < 0.01). However, there were no significant differences between the youngest group (18 to 24y) and the ones aged 45 and above (p-value > 0.01). With respect to zero tolerance for alcohol for novice drivers, the youngest group was significantly less supportive of this measure than all the other age groups (p-value > 0.01), except for the ones aged 45 to 54 (no significant difference, p-value > 0.01). The ones aged 18 to 24 were furthermore the least supportive of installing an alcohol 'interlock' as compared to all other age groups (p-value < 0.01), while the level of support for this measure did not differ between the other age groups (p-value > 0.01).

In AsiaOceania6, the youngest group did not differ significantly from the older age groups with regard to the support for zero tolerance for alcohol for all drivers. As for the other two measures, i.e. support for zero tolerance for novice drivers and for installation of alcohol 'interlock', the youngest respondents did not differ significantly from the ones aged 25-34 and 35-44. The 18–24-year-olds were, however, less supportive of these measures than the respondents older than 45 (p-value < 0.01).

As far as gender is concerned, women in all regions were generally more supportive than men of all measures related to driving under the influence of alcohol (see Figure 4). The only exception concerns the support for the installation of alcohol 'interlock' in AsiaOceania6, where no differences between genders were found (p-value > 0.01).

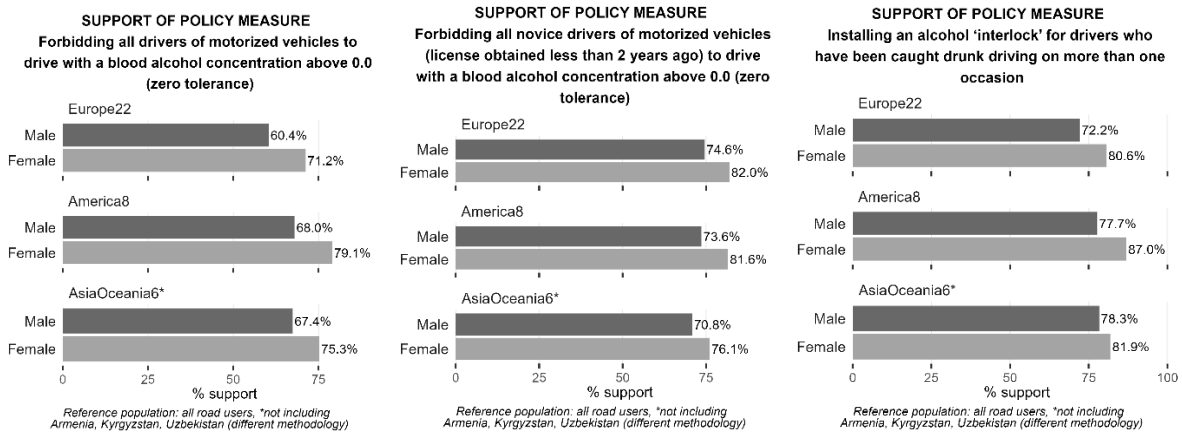


Figure 4: Support among road users for policy measures concerning drinking and driving for drivers, by region and gender.

3.1.1.3 Support for measures concerning speed limit

Figure 5 displays the degree of support by region and country for policy measures regarding two speed limits: the 80 km/h speed limit for all rural roads without a median strip and the 30 km/h speed limit for all built-up areas (except for main thoroughfares). On average the level of support in the three regions was not high - in some regions a minority of respondents were supportive of the one of both measures. Of the three regions, America8 had the highest support. The level of support for the 30 km/h speed limit seemed lower than for the 80 km/h speed limit.

There were significant regional differences found in the level of support for both the 80 km/h speed limit (p-value < 0.001, Cramer's V = 0.128 indicating small effect size) and the 30 km/h speed limit (p-value < 0.001, Cramer's V = 0.104 indicating small effect size). The highest level of support for both measures was found in America8 (64.6% for the 80 km/h speed limit and 54.8% for the 30 km/h speed limit), and the lowest in Europe22 (48.8% for the 80 km/h speed limit and 42.1 for the 30 km/h speed limit) (p-value < 0.01).

The level of support varied, however, across countries, see also Figure 5. Regarding the 80 km/h speed limit in Europe22, the lowest level of support was found in Latvia and the highest in Serbia. As for the 30 km/h speed limit respondents in Spain were most supportive of the measure and in Czech Republic the least supportive. In America8, the lowest support for both measures was found in Canada and the highest in Colombia (for the 80 km/h speed limit) and Peru (for the 30 km/h speed limit). In AsiaOceania, Kyrgyzstan was the most supportive and Japan the least supportive of the measures.

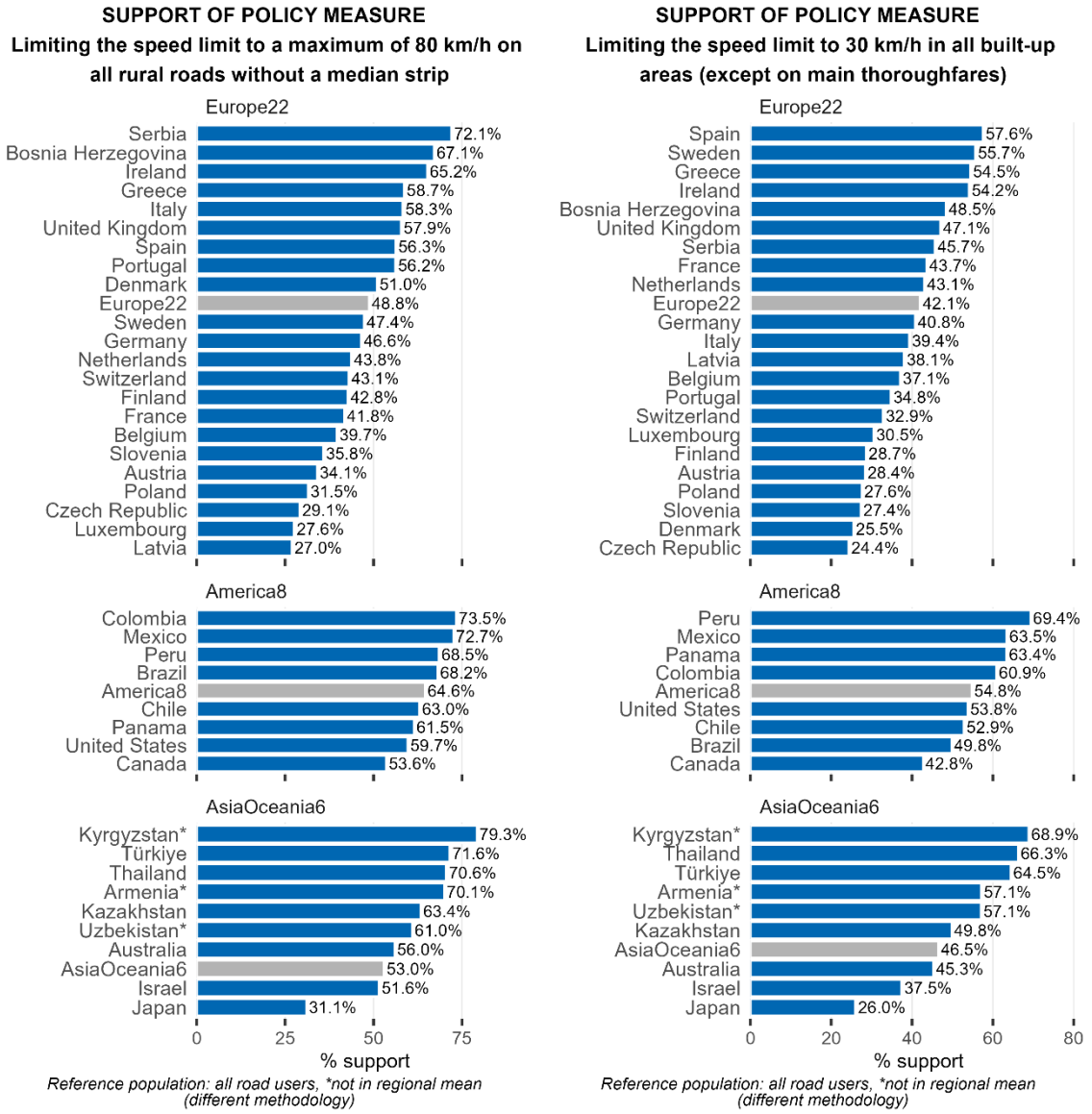


Figure 5: Support among road users for policy measures concerning speed limits, by region and country.

As far as age is concerned, the level of support for both 30 km/h speed limit and 80 km/h speed limit in all three regions depended significantly on age (p-value < 0.001; Figure 6). The strength of the association for varied from small to medium (for 30 km/h speed limit Europe22: Cramer's V = 0.087; America8: Cramer's V = 0.166; AsiaOceania6: Cramer's V = 0.115; for 80 km/h Europe: Cramer's V = 0.117; America8: Cramer's V = 0.150 and AsiaOceania6: Cramer's V = 0.080).

In Europe22 the youngest group was the least supportive of the 80 km/h speed limit and the oldest group the most supportive (p-value < 0.01). As for the 30 km/h speed limit, the oldest group was again the most supportive of the measure (p-value < 0.01). In America8, the youngest respondents (aged 18 to 24) showed significantly less support for both measures than the respondents aged 25-34 and 35-44 (p-value < 0.01), but the youngest group did not differ significantly from the ones older than 45. Interestingly the oldest age group (65 to 74y) in America8 showed the lowest support for the 30 km/h speed limit, although no significant differences were found between the oldest respondents and the youngest ones (age group 18 to 24) or the ones aged 45 to 64 (age groups 45 to 54 and 55 to 64).

In AsiaOceania6, the youngest respondents generally did not differ significantly from the older ones when it comes to support for the 80 km/h speed limit. There was, however, a significant difference between the youngest age group and the age group 25-34. The latter was more supportive of the

measure than the ones aged 18-24 (p-value < 0.01). As for the 30 km/h speed limit, the results by age are less clear.

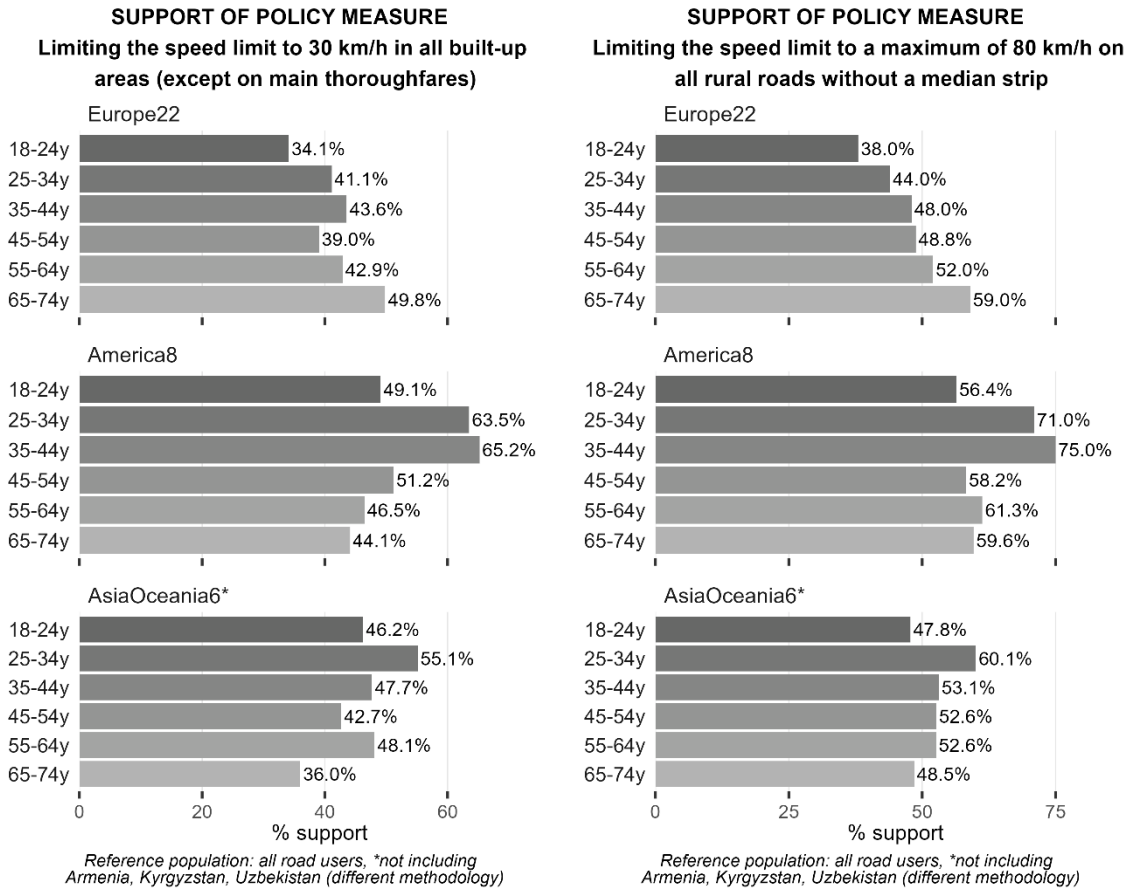


Figure 6: Support among road users for policy measures concerning speed limits, by region and age group.

Results by gender (see Figure 7) showed that women were significantly more supportive of both measures related to speed limit than men (p-value < 0.01), although the strength of the association was small (Cramer's V varied from 0.063 to 0.102). The only exception concerned the level of support for the 80 km/h speed limit in AsiaOceania6, where no gender differences were found (p-value > 0.01).

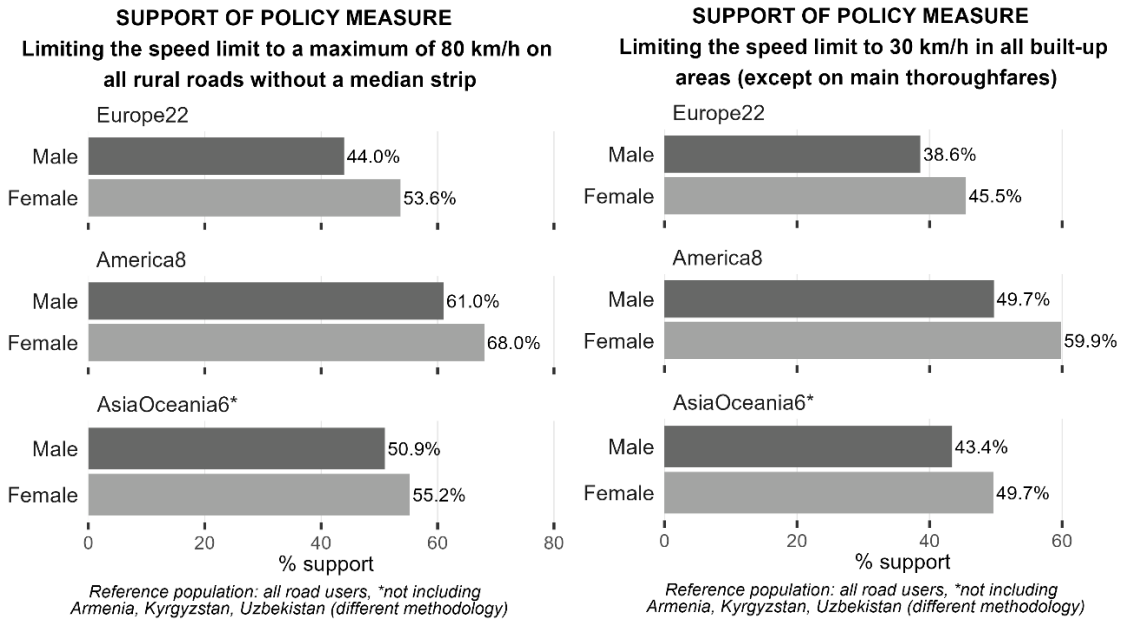


Figure 7: Support among road users for policy measures concerning speed limits, by region and gender.

3.1.1.4 Support for the ban on hand-held phone use for drivers

As can be seen in Figure 8, the majority of respondents in the three regions and in all countries supported the prohibition to use a hand-held phone while driving for all drivers of motorized vehicles. The mean level of support did not differ significantly among regions (in Europe22 79.3%, in America8 81.3% and in AsiaOceania6 79.2%, p-value = 0.040).

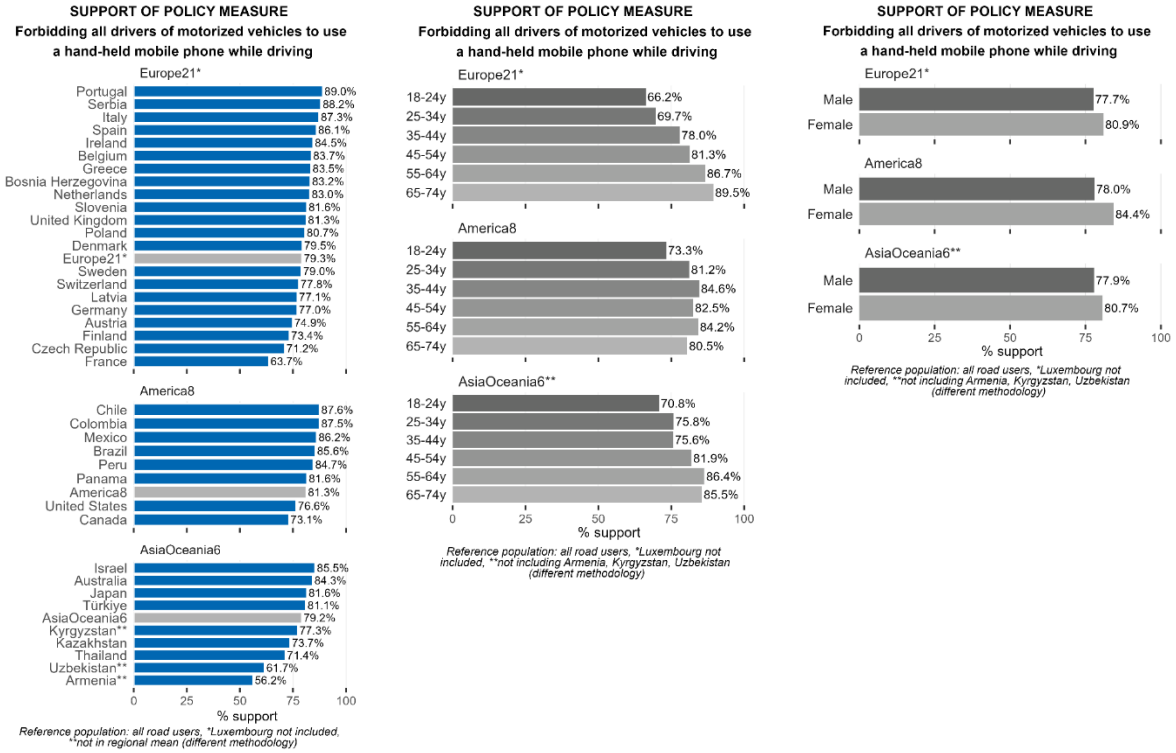


Figure 8: Support among road users for policy measures concerning hand-held mobile phone use while driving, by region, country, age group and gender.

In most countries the level of support was very high. In Europe22, the lowest level of support, but still a majority support, was found among French road users: 63.7%. In America8, Canada showed the lowest support (73.1%) for the measure and in AsiaOceania6, Armenia (56.2%).

In all three regions support for the prohibition to use a hand-held phone for all drivers was influenced by the age of the respondents (p-value < 0.001). The strength of the relationship was small to medium (Cramer's V between 0.095 and 0.193). In Europe22 the two youngest age groups (18 to 24y and 25 to 34y) were the least supportive of the measure and the two oldest age groups (55 to 64y and 65 to 74y) were the most supportive (p-value < 0.01). In AsiaOceania6 the road users aged 18 to 44 were less supportive than those aged 45 and older (p-value < 0.01). In America8 the effect of age was less clear.

Significant gender differences were found in Europe22 and America8, where females were more supportive of the measure than males (p-value < 001), although the strength of the association was small (Cramer's V varied from 0.040 to 0.082 America8). In contrast, no gender differences were found in AsiaOceania6.

3.1.1.5 Support for helmet measures for cyclists

Figure 9 displays the degree of support for two measures concerning helmet use by cyclists, by region and country: 1) requiring all cyclists to wear a helmet and 2) requiring cyclists under the age of 12 to wear a helmet.

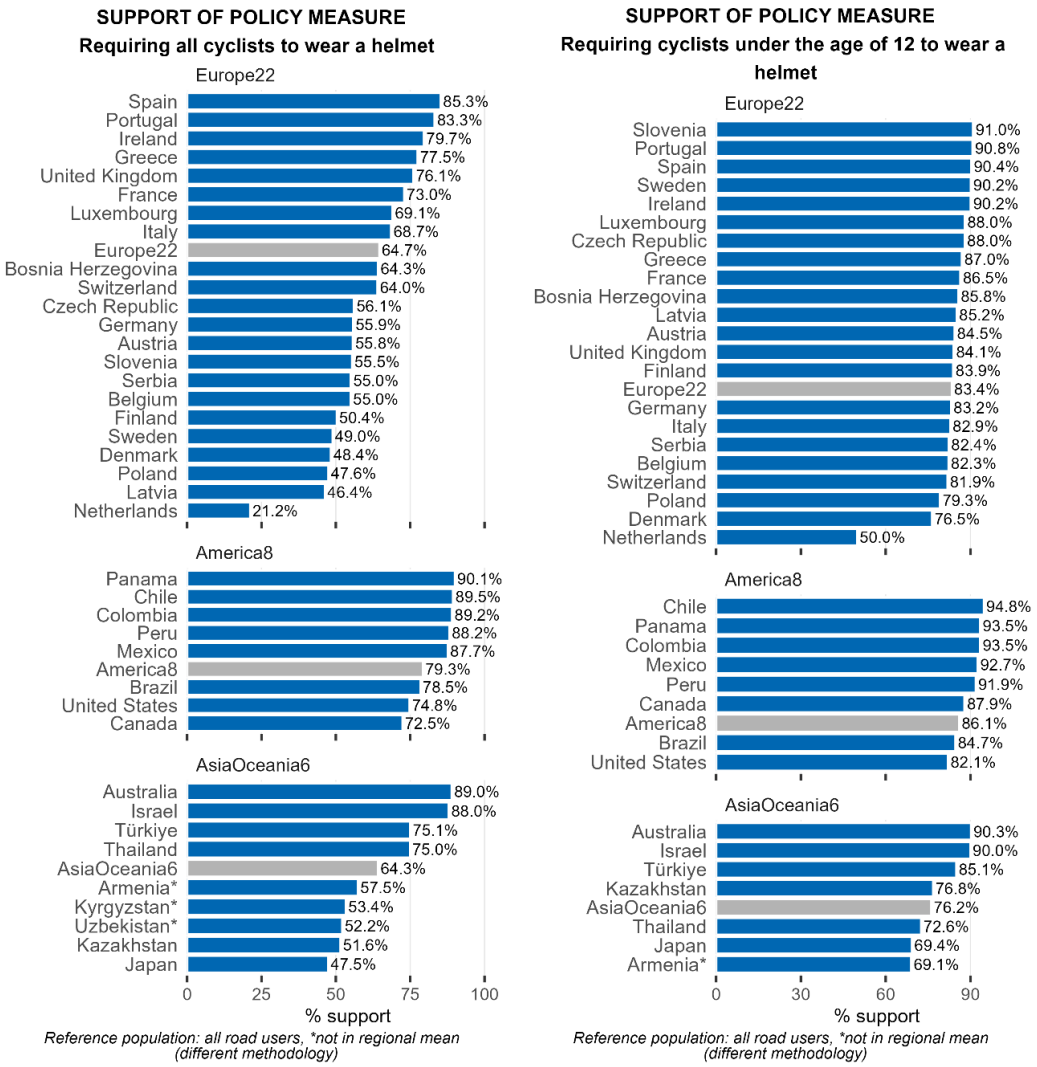


Figure 9: Support among road users for policy measures concerning helmet use for cyclists, by region and country.

In three world regions, there was majority support among road users for obligatory helmet use for all cyclists (Europe22: 64.7%; America8: 79.3%; AsiaOceania6: 64.3%), and even larger majority for obligatory helmet use for cyclists aged younger than 12 (Europe22: 83.4%; America8: 86.1%; AsiaOceania6: 76.2%). The level of support for obligatory helmet use for all cyclists differed significantly per region (p-value < 0.001, Cramer's V = 0.131 indicating small effect size) and was the highest in America8 (p-value < 0.01) compared to the other two regions. Europe22 and AsiaOceania6 did not differ significantly on the support for this measure (p-value > 0.01). Regarding obligatory helmet use for cyclists aged younger than 12, the regions differed in the level of support for the measure (p-value < 0.001, Cramer V = 0.083 indicating small effect size). The highest level of support was found in America8 and the lowest in AsiaOceania6 (p-value < 0.01).

The lowest support for obligatory helmet use found in the Netherlands (only 21.2%), one of the foremost cycling countries in the world can possibly be explained by several factors (Van den Berghe, 2022). To begin with, the Netherlands is a country with a very high level of individualism. Countries with higher levels of individualism tend to oppose road safety measures to a greater extent than more collectivistic countries. Additionally, people affected by a measure appear to be less likely to support a measure. The low support for obligatory helmet use in the Netherlands can be also related to the high levels of cycling in the country (see for example Schepers et al. 2017). A road safety measure concerning cyclists affect therefore a high percentage of people in the Netherlands. Still another possible explanation is that cycling is perceived as safe (due to extensive and safe cycling facilities), and a bicycle helmet is therefore considered as less necessary. Furthermore, obligatory helmet use for cyclists is considered to encroach a sense of freedom and is therefore very controversial in the Netherlands as shown by a Dutch public support study among (road safety) organisations (Aarts, Eenink, & Weijermars, 2014). As for helmet use for cyclists aged younger than 12, the lowest support was again found in the Netherlands (50%), although it was higher than for the obligatory helmet use for all cyclists.

Results show furthermore that there were age differences in all regions (p-value < 0.001) regarding the level of support for both measures, see also Figure 10. The strength of the association was, however, small (regarding the support for obligatory helmet use for all cyclists, Cramer's V varied from 0.088 to 0.125; as for the obligatory helmet use for cyclists aged younger than 12, Cramer's V varied from 0.097 to 0.122).

In Europe22, requiring all cyclists to wear a helmet received the lowest support by the youngest age group, while the oldest age group was the most supportive (50.2% and 73.5% respectively) (p-value < 0.01). In America8 the youngest age group was less supportive of both measures than all older age groups (25 years old and more). Those older age groups (25-34y, 35-44y, 45-54y, 55-64y and 65-74y) did not differ on the level of support for both measures (p-value < 0.01). In AsiaOceania6 the youngest age group was less supportive of the obligatory helmet use for all cyclists (57.2%) than and the two oldest age groups (69.3% among 55–64-year-olds and 71% among 65–74-year-olds) (p-value < 0.01).

As for the obligatory helmet for cyclists under 12 years old, in Europe22 the youngest age group was again more supportive of the measure than the oldest one (75.2% and 90.1%) (p-value < 0.01). In America8 there was a less clear effect of age. In AsiaOceania6, the youngest group showed a significantly lower support (71.4%) for the measure than the oldest age groups: 55-64 and 65-74 (respectively 81.8% and 83.9%) (p-value < 0.01).

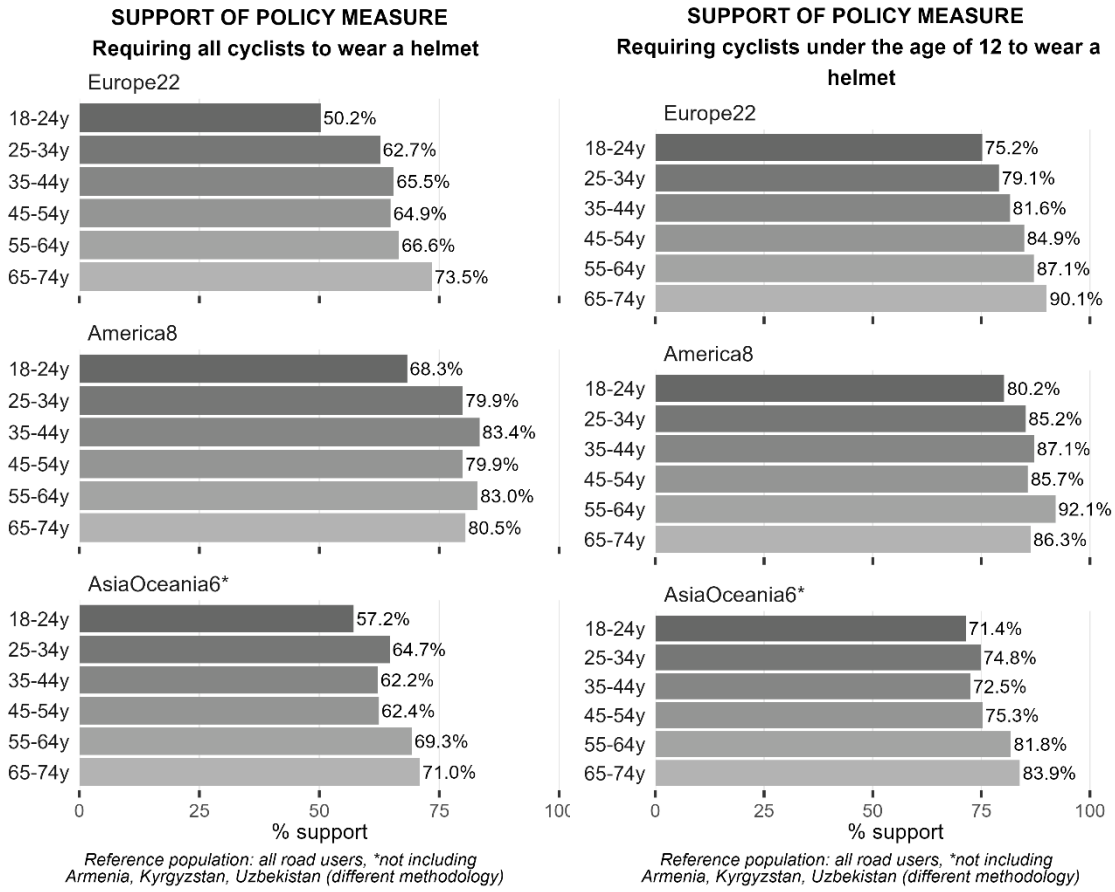


Figure 10: Support among road users for policy measures concerning helmet use for cyclists, by region and age.

As far as gender is concerned, there were significant differences found for all regions for both measures (p-value < 0.01). Women were more supportive of both measures than men, see also Figure 11.

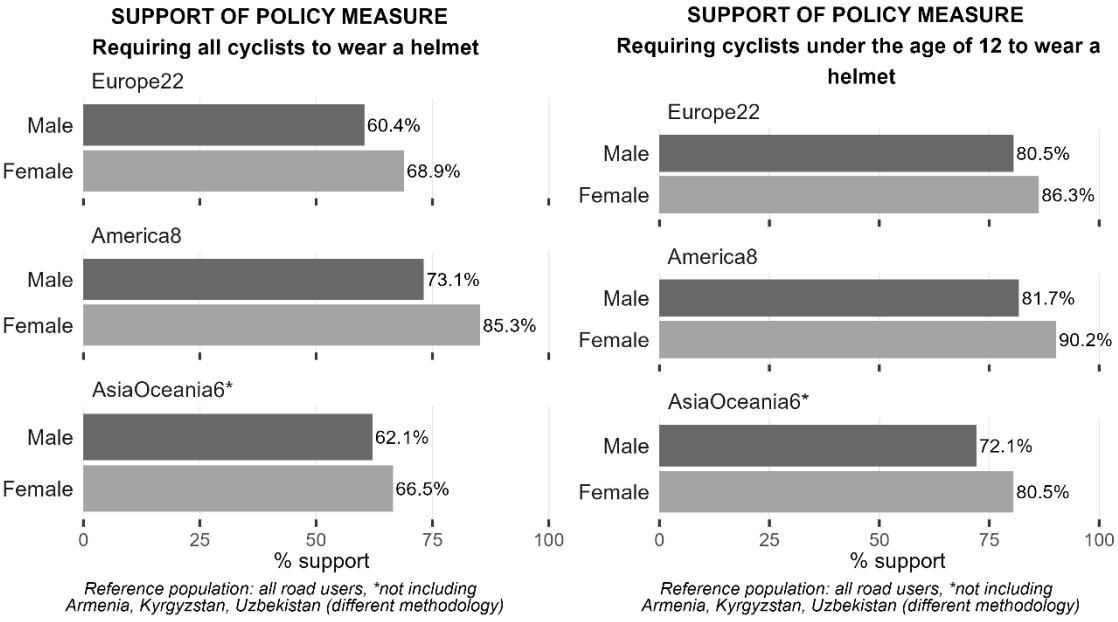


Figure 11: Support among road users for policy measures concerning helmet use for cyclists, by region and age.

3.1.1.6 Support for the measure concerning drinking and cycling

The support for zero tolerance for drinking and cycling by region and country is shown in Figure 12. Respondents in the three world regions were on average quite supportive for the measure. In each region a clear majority supported the measure (in Europe22: 62.5%; in America8: 71.1%; in AsiaOceania6: 68.0%). The regional differences were significant (p-value < 0.001, Cramer's V=0.077 indicating small effect size). Respondents in Europe22 were on average less supportive of the measure than the respondents in the other two regions (p-value < 0.01). There were no differences between the level of support between America8 and AsiaOceania6 (p-value > 0.01).

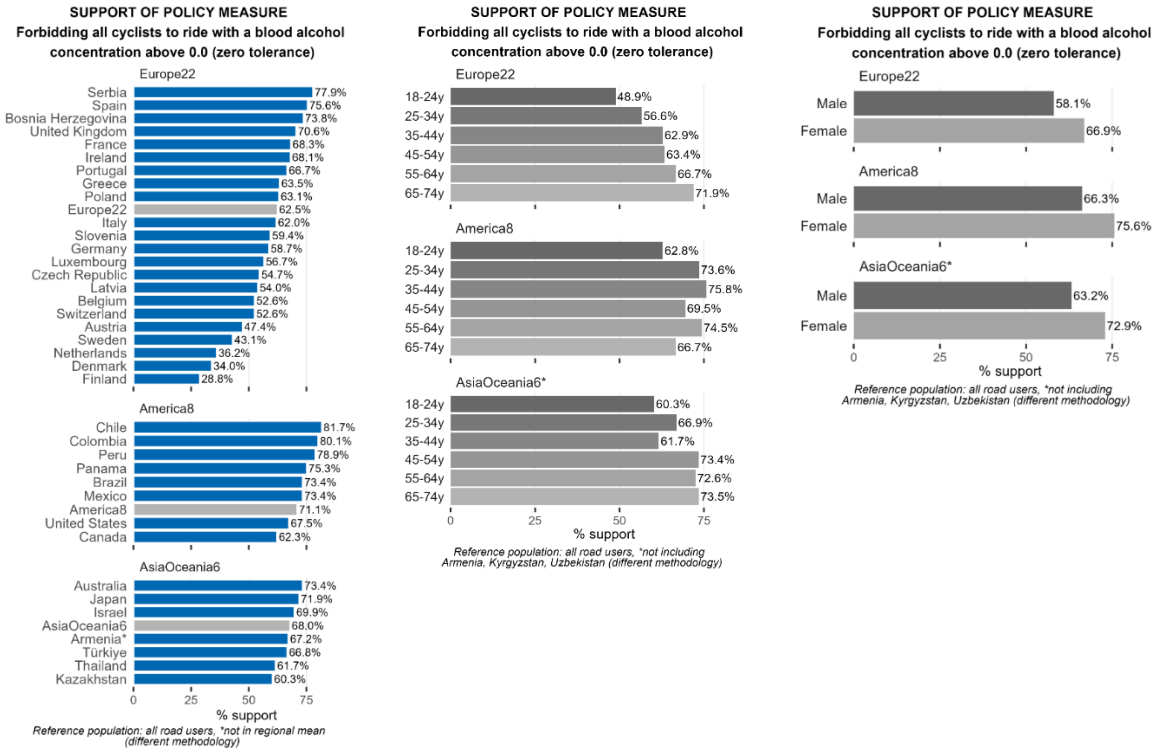


Figure 12: Support for zero tolerance for alcohol while cycling, by region, country, age group and gender.

While all countries in America and AsiaOceania6 showed a majority support for the measure, in Europe some countries did not, i.e. Finland (28.8%), Denmark (34.0%), the Netherlands (36.2%), Sweden (43.1%) and Austria (47.4%).

In all regions there were age differences found (p-value < 0.001), and the strength of the association was small to medium (Cramer's V varied from 0.100 to 0.135). In Europe22 the youngest age group was the least supportive (48.9%) of the measure and the oldest one the most supportive (71.0%) (p-value < 0.01). In America8 the youngest age group was less supportive than some other age groups (i.e. 25-34y, 34-45y and 55-64y) (p-value < 0.01). In AsiaOceania6, the age groups 18-24y and 35-44y were significantly less supportive than the age groups 45 and older (p-value < 0.01).

Results by gender show that in all regions females were more supportive of the measure than men (p-value < 0.001, Cramer's V varied between 0.092 and 0.104 indicating small effect size).

3.1.2 Enforcement

For detailed statistical output concerning the results presented in the sections below, see Appendix 4.

3.1.2.1 Experienced enforcement

Car drivers' experience with police checks on alcohol and drugs in the past 12 months is shown in Figure 13. The percentages in these figures refer to drivers who have been checked at least once in the past 12 months.

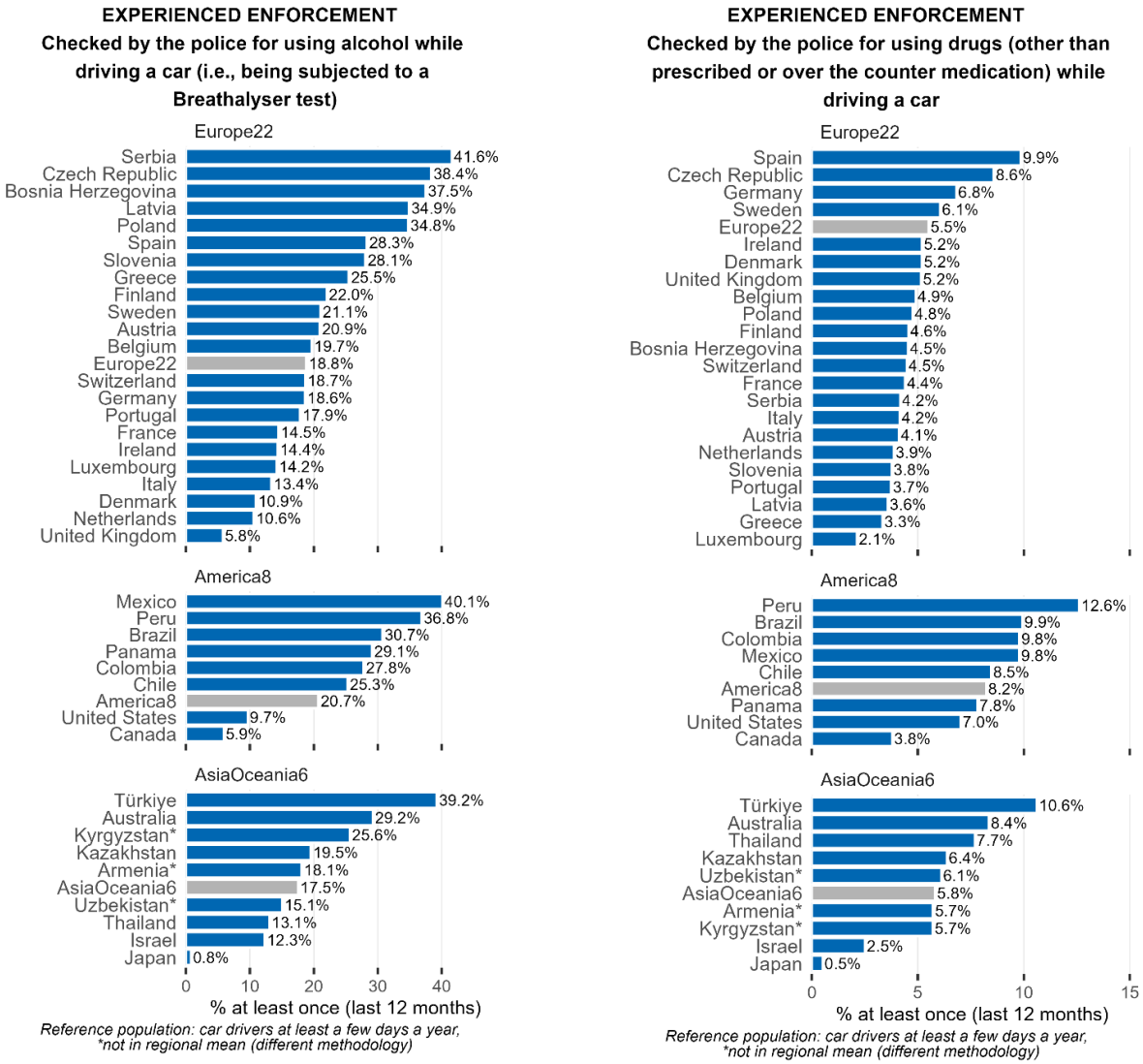


Figure 13: Car drivers' experience with police checks for alcohol and drugs, by region and country.

On average, almost one in five drivers reported being checked for alcohol in Europe22 (18.8%), about one in five drivers in America8 (20.7%) and almost one in six drivers in AsiaOceania6 (17.5%). However, the regional differences were not significant at the 0.01 level (p-value = 0.023). In Europe22, the highest percentages of car drivers who reported a check for alcohol are Serbia, Czech Republic, Bosnia Herzegovina, Latvia, and Poland. In America, the highest percentages of being checked for alcohol were reported in Mexico and the South American countries: Peru, Brazil, Panama, Colombia and Chile. In AsiaOceania6 being subjected to a Breathalyser test was most frequently reported in Türkiye (39.2%), followed by Australia (29.2%) and Kyrgyzstan (25.6%).

Compared to being checked for alcohol in traffic, being checked for drugs in traffic was reported much less frequent across all regions: Europe22 (5.5%), America8 (8.2%) and Asia Oceania (5.8%). The regional differences concerning checks for drugs were significant (p-value < 0.001 and Cramer's V= 0.046 indicating a very small effect size). Respondents in America reported being checked for drugs more often than the other two regions (p-value < 0.01). There was no difference between Europe22 and AsiaOceania6 (p-value > 0.01).

Comparing the frequency of alcohol checks with drug checks, it is important to note that the costs of screening tests for drug use are higher than those of alcohol test, and often require more time. Additionally, legislation and enforcement difficulties of drug testing have not had as much attention as legislation on drinking and driving.

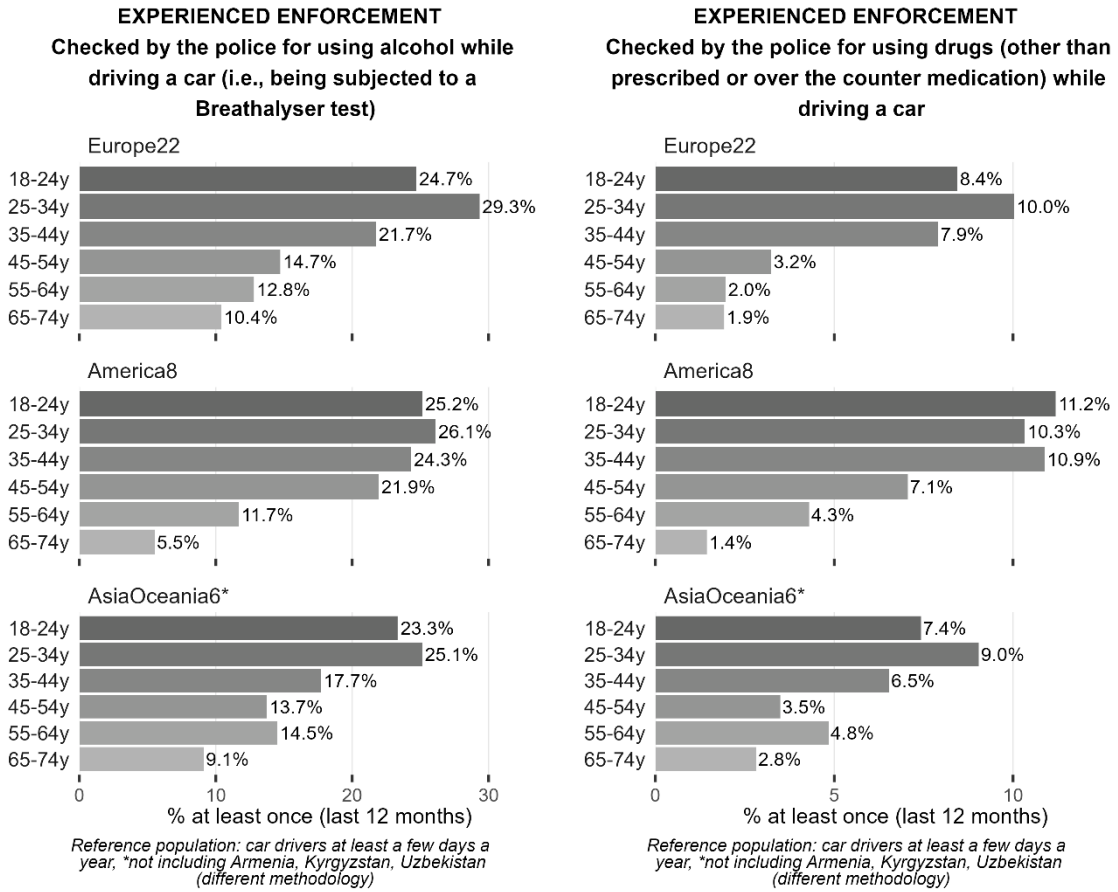


Figure 14: Car drivers' experience with police checks on alcohol and drugs, by region and age.

As far as age is concerned, for the experienced enforcement of alcohol checks, significant age differences were found in each region (p-value < 0.001, Cramer's V varying between 0.140 and 0.173 indicating medium effect sizes), see Figure 14. The experienced enforcement of drug checks also showed age differences for each region (p-value ≤ 0.001, Cramer's V varying between 0.094 and 0.144 indicating small to medium effect sizes). In Europe22, the experience of both enforcement types was significantly more common in age group 25-34y compared to older age groups 45-54y, 55-64y and 65-74y (p-value < 0.01). In America8, experiencing either enforcement type was significantly less common in the age groups 55-64y and 65-74y (p-value < 0.01) compared to the other age groups under 45y. For Asia-Oceania, most age groups did not significantly differ on a 0.01 level.

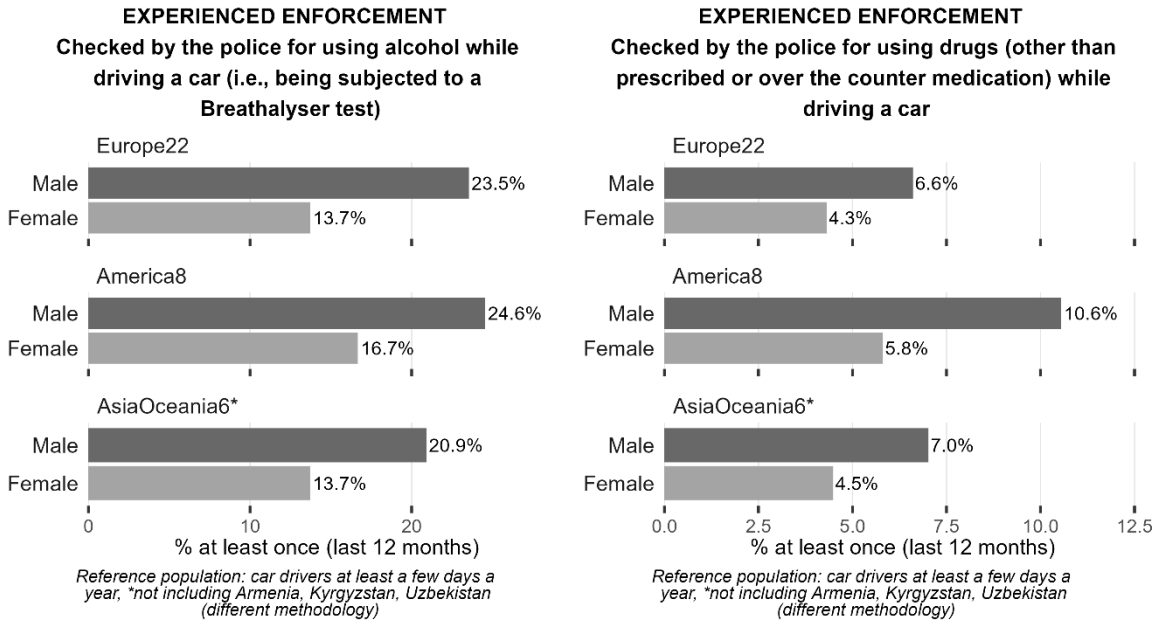


Figure 15: Car drivers' experience with police checks on alcohol and drugs, by region and gender.

For both enforcement types and in every region, the experienced enforcement depended on gender (see Figure 15). Males were significantly more likely to have experienced a police check (p-value < 0.001, with the exception of p-value = 0.008 for AsiaOceania6 on drug checks). Cramer's V varied between 0.050 and 0.125, indicating a (very) small strength of the association.

3.1.2.2 Perceived enforcement

Car drivers' expected likelihood of being checked by the police by region and country is displayed in Figure 16 (for alcohol and drugs), Figure 17 (for speeding and seat belt use) and Figure 18 (for hand-held phone use).

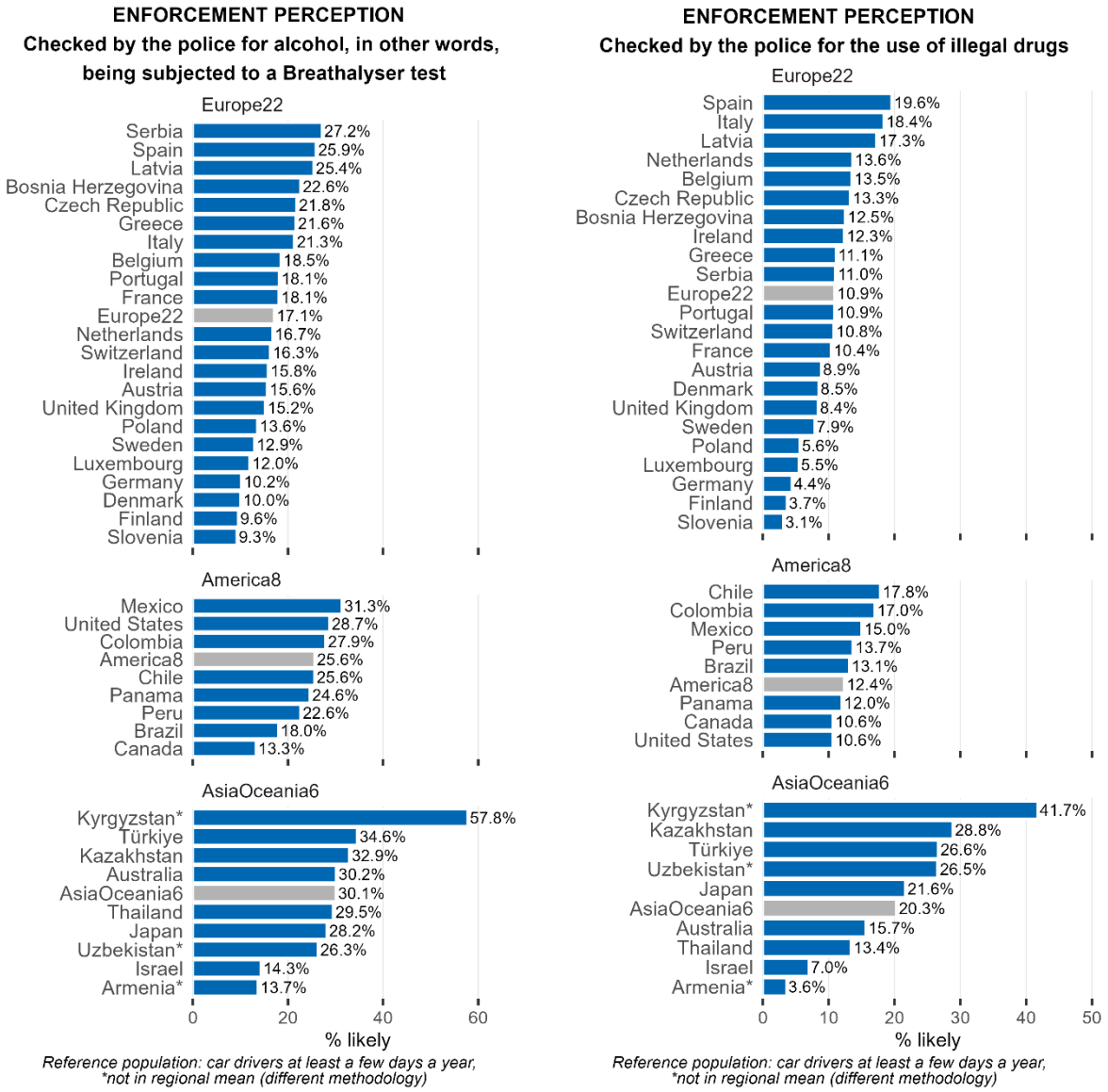


Figure 16: Car drivers' perceived likelihood of being checked by police for alcohol and drugs, by region and country.

Comparing the perceived likelihood of being checked for alcohol and drugs, in all regions and countries, 1.5 to 2 times higher percentage of drivers considered it likely to be checked for alcohol than for drugs.

Looking at the three world regions, the highest likelihood of being checked for alcohol or drugs was reported in AsiaOceania6 (30.1% for alcohol; 20.3% for drugs), followed by America8 (25.6% for alcohol; 12.4% for drugs), and the lowest likelihood was reported in Europe22 (alcohol: 17.1%; drugs: 10.9%). The differences between regions were significant (p-value < 0.001, Cramer's V = 0.127 for alcohol checks and 0.098 for drug checks, both indicating a small effect size). For drug checks, AsiaOceania6 significantly differed from the other two regions (p-value < 0.01), but America8 and Europe22 did not significantly differ from each other on the 0.01 level.

In Europe, three countries Serbia, Spain, and Latvia over one in four drivers report it likely to be checked for alcohol. Spain, Italy and Latvia are noticeable for drivers reporting the perceived likelihood of being checked for drugs in traffic (19.6%; 18.4% and 17.3% respectively). In America, drivers in Mexico and Colombia reported higher than average likelihood of both alcohol and drugs checks. In Asia Oceania, drivers in Kyrgyzstan reported a very high likelihood of being check for drugs or alcohol in traffic, along with Türkiye and Kazakhstan.

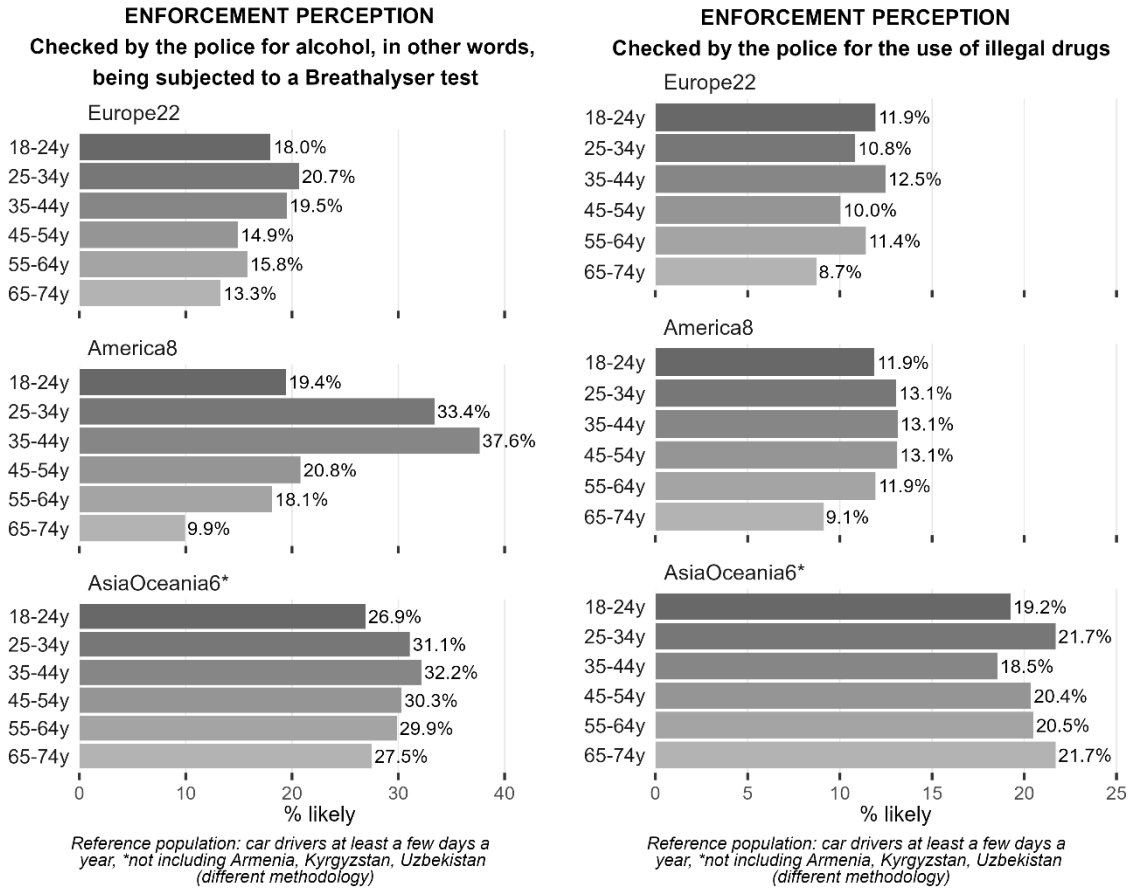


Figure 17: Car drivers' perceived likelihood of being checked by police for alcohol and drugs, by region and age.

As far as age is concerned, for the perceived likelihood of being checked for alcohol, significant differences between age groups were only found in Europe22and America8 (p-value < 0.001, Cramer's V varying from 0.070 to 0.214 indicating a small to medium strength of the associations), see Figure 17. Specifically, in America8, more respondents in age groups 25-34y and 35-44y reported this enforcement type as likely compared to the other age groups (p-value < 0.01). For the drug checks, no significant differences between age groups were found in any region (at the 0.01 level).

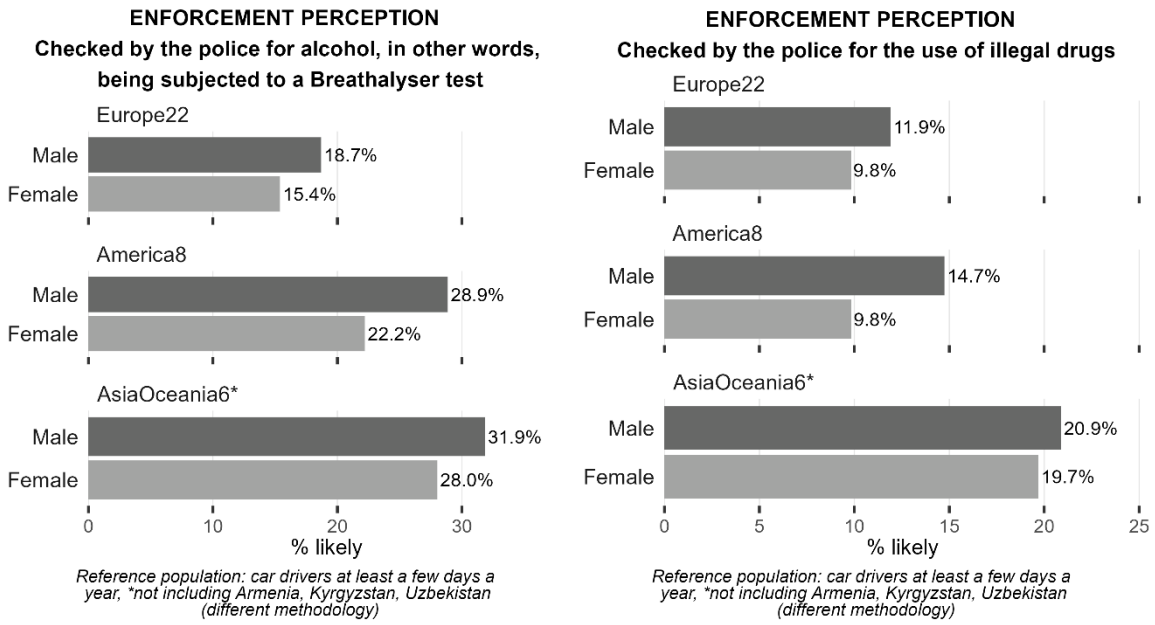


Figure 18: Car drivers' perceived likelihood of being checked by police for alcohol and drugs, by region and gender.

In Europe22 and America8, the perceived likelihood depended significantly on gender (see Figure 18). Males reported a higher likelihood of being checked for alcohol and drugs than females (p-value < 0.001, with the exception of p-value = 0.005 for Europe22 on drug checks). Cramer's V varied between 0.033 and 0.076 indicating very small effect sizes. In AsiaOceania6, no significant gender differences were found at the 0.01 level.

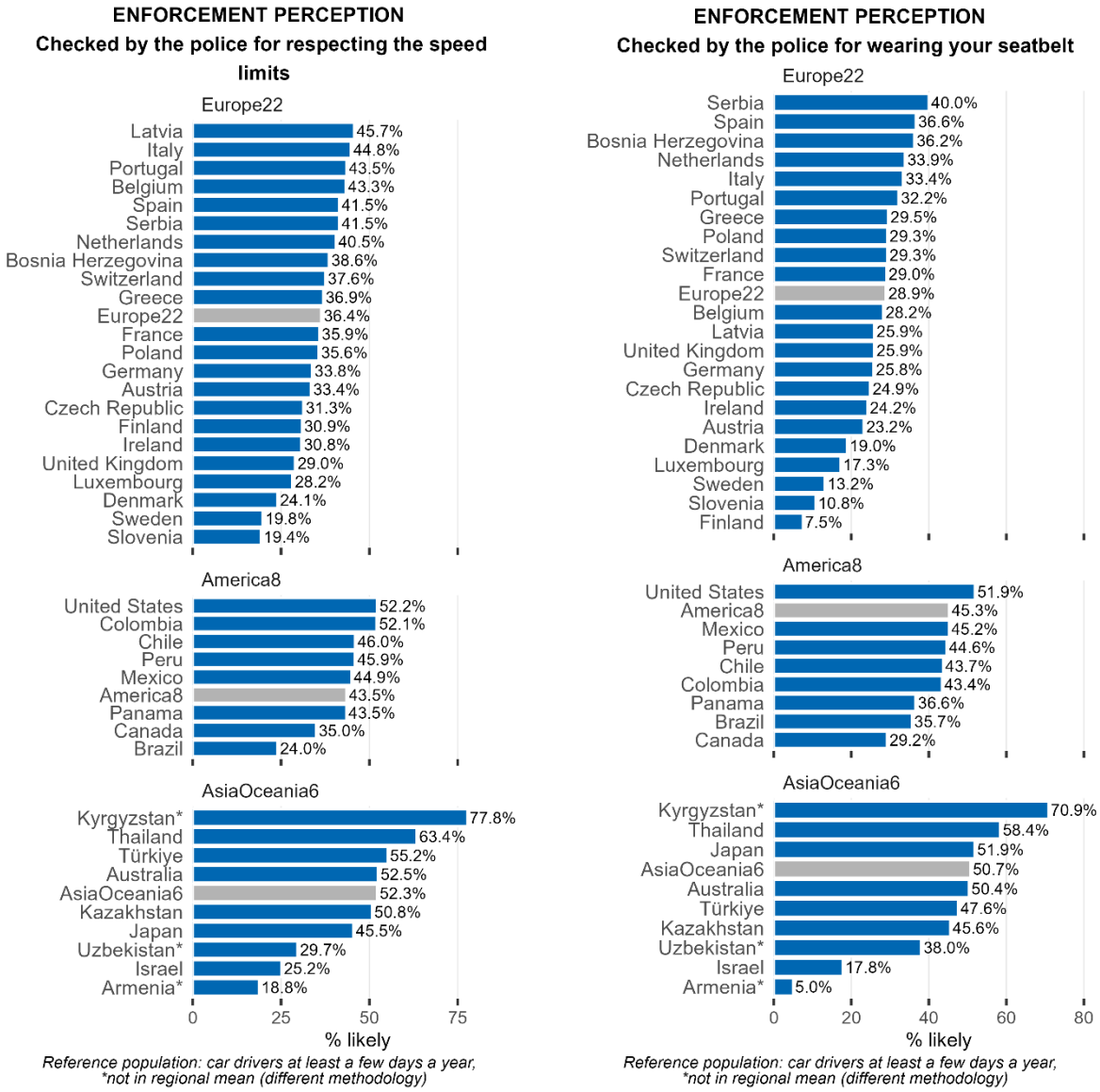


Figure 19: Car drivers' perceived likelihood of being checked by police for speeding and seat belt use, by region and country.

The perceived likelihood of checks on speeding or seat belt use is shown in Figure 19. Concerning checks for speeding, a higher percentage of respondents in AsiaOceania6 (52.3%) and America8 (43.5%) consider it likely to be checked than in Europe22 (36.4%). The difference between regions was significant (p-value < 0.001, Cramer's V= 0.117 indicating a small effect size). In AsiaOceania, drivers in Kyrgyzstan stand out with 77.8% of drivers perceiving speeding checks to be likely. In contrast, the percentages in Israel and Armenia are relatively low (25.2% and 18.8% respectively). Within America, there is a large difference between the United States and Columbia where more than half of drivers reported speed checks as likely to occur (52.2%, 52.1% respectively) versus 35% of Canadian and 24.0% of Brazilian drivers. Within Europe, relatively high proportions of drivers in Belgium, Portugal, Italy and Latvia (43%-46%) considered being checked for speeding as likely.

Concerning seatbelt checks, again higher percentages of drivers in AsiaOceania6 (50.7%) and America8 (45.3%) considered the checks as likely compared to Europe22 (28.9%). The difference between each region was significant (p-value < 0.001, Cramer's V=0.190 indicating a small effect size). Within AsiaOceania6, there were large differences between countries ranging from 5.0% (Armenia) to 70.9% (Kyrgyzstan). In the two other regions, the variation between counties was less extensive: in Europe ranging from 7.5% (Finland) and 40% (Serbia); in America ranging from 29.2% (Canada) and (51.9% (United States).

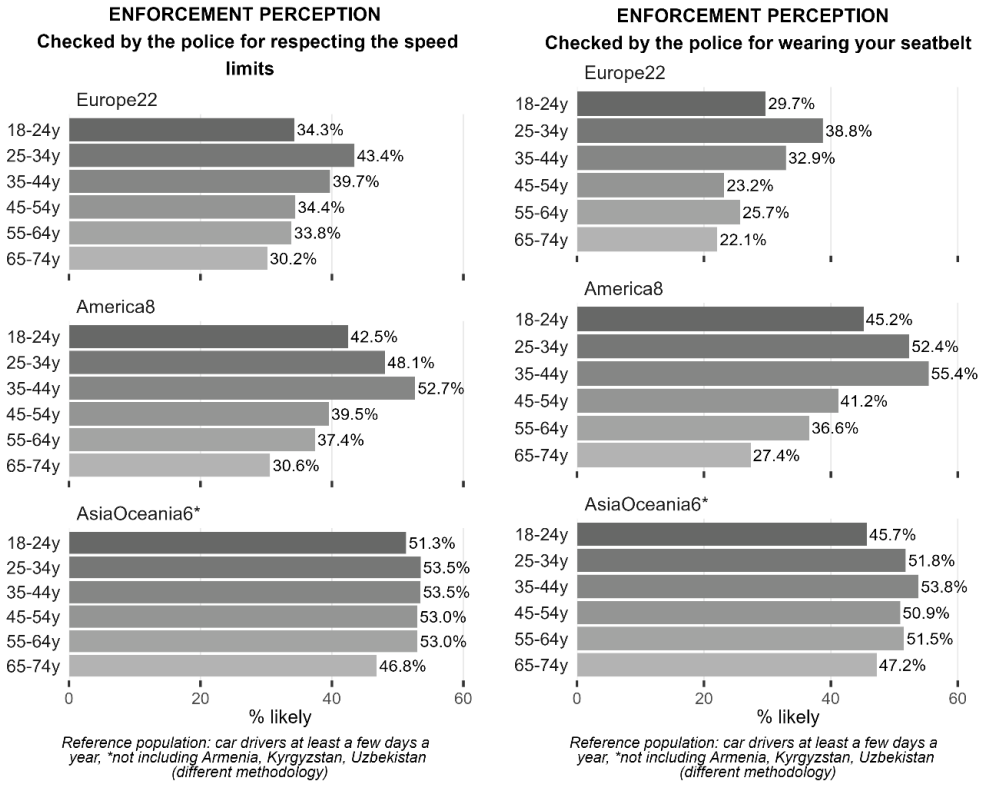


Figure 20: Car drivers' perceived likelihood of being checked by police for speeding and seat belt use, by region and age.

Results by age show that only in Europe22 and America8, significant age differences were found (p-value < 0.001, Cramer's V varying between 0.091 and 0.180 indicating small to medium effect sizes), see Figure 20. In Europe22, the age groups 25-34y and 35-44y reported the likelihood of being checked for speeding and wearing a seatbelt significantly more often than the 65-74y age group (p-value < 0.01). In America8, a higher percentage of drivers aged 35-44y considered a speeding check or a seatbelt check being likely than all the older age groups (p-value < 0.01). In Asia-Oceania, no significant differences between the age groups were found at the 0.01 level.

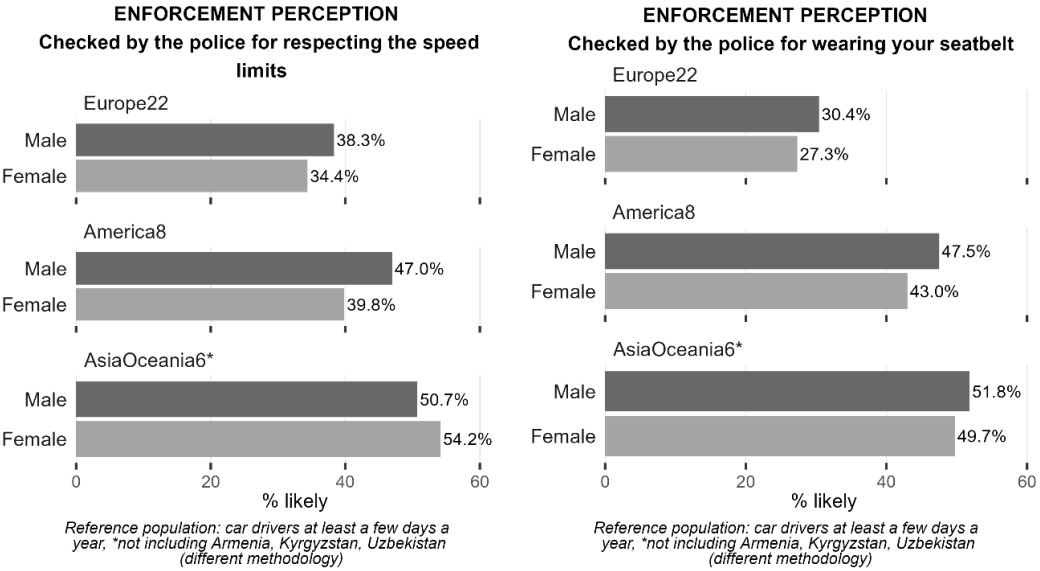


Figure 21: Car drivers' perceived likelihood of being checked by police for speeding and seat belt use, by region and gender.

Whereas more males experienced alcohol or drug checks and more males generally perceived these checks as being likely than females, similar gender differences were not always found for the perceived likelihood of speeding or seatbelt checks (see Figure 21). A significant gender difference was found for both police check types in Europe22 (p-value = 0.001 and p-value = 0.004, respectively Cramer's V 0.041 and 0.034 indicating very small effect sizes). In America8, a significant gender difference was found for the perceived likelihood of speeding checks (p-value < 0.001, Cramer's V of 0.072 indicating a very small strength of the association). For significant differences, more males in Europe22 and America8 reported checks for speeding and for seatbelt use as likely compared to females (p-value < 0.01).

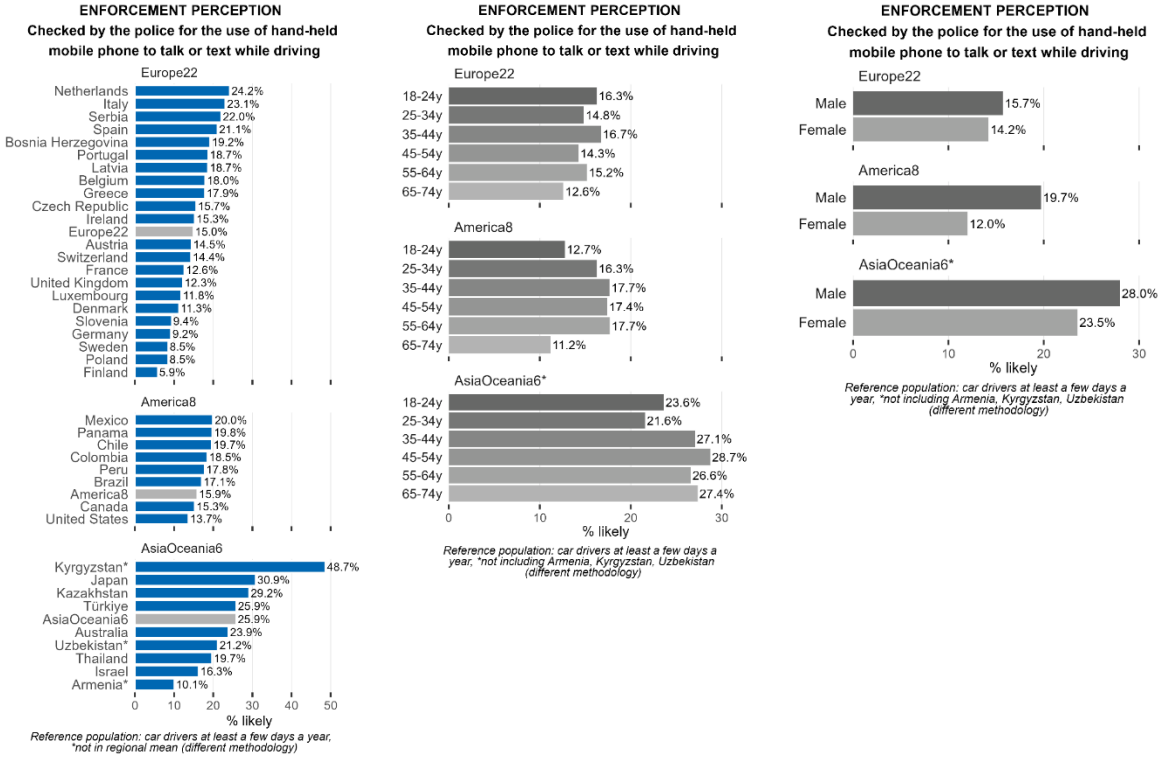


Figure 22: Car drivers' perceived likelihood of being checked by police for hand-held mobile phone use, by region, country, age group and gender.

Figure 22 presents the perceived likelihood of being checked by the police for hand-held phone use while driving. In all three regions the percentages of drivers who report a check on this violation to be likely tended to be low (AsiaOceania6: 25.9%; America8: 15.9%; Europe22: 15.0%). The difference between regions was significant (p-value < 0.001, Cramer's V= 0.102 indicating a small effect size), with more respondents indicating the checks on hand-held phone use being likely in AsiaOceania6 compared to Europe22 and America8.

For all three regions, no significant differences between age groups were found at the 0.01 level.

The only significant difference between genders was found for America8 (p-value < 0.001, Cramer's V 0.105 indicating a small effect size), with males perceiving the likelihood of being checked for hand-held phone use more often as likely than females (about one in five males compared indicating it as likely compared to one in eight females).

3.2 Advanced analyses

As mentioned in Introduction, support for policy measures was found to be associated with one's tendency to engage in risky behaviour. To test whether it is also the case for the policy measures included in ESRA3, a bivariate (Pearson) correlation analysis was performed between the level of support of policy measures concerning drivers (driving under the influence of alcohol, speeding, use of mobile

phone while driving) and cyclists (cycling under the influence of alcohol and helmet wearing) and one's engagement in risky or unsafe behaviours.

3.2.1 Support for policy measures and risky behaviour

The correlations are presented in Table 2. All correlations were negative, and about half of them were significant (displayed in bold). Negative correlations indicate that the higher the frequency of engagement in a specific risky behaviour, the lower the support for a policy measure related to this behaviour. The correlations between 0.3 to 0.5 are considered medium and the correlation of 0.5 and above are considered strong.

Table 2: Association between the level of support for policy measures and own risky/unsafe behaviour.

Support for a policy measure	Correlation (Pearson's *r*)	Risky behaviour (at least once last 30 days)
Zero tolerance alcohol for all drivers	- 0.250, p = 0.124	Driving while being above the legal limit for alcohol
Zero tolerance alcohol for all drivers	**- 0.381, p = 0.017**	**Driving after drinking alcohol**
Zero tolerance alcohol for novice drivers	- 0.216, p = 0.187	Driving while being above the legal limit for alcohol
Zero tolerance alcohol for novice drivers	- 0.165, p = 0.316	Driving after drinking alcohol
Alcohol interlock for recidivists	- 0.237, p = 0.158	Driving while being above the legal limit for alcohol
Alcohol interlock for recidivists	- 0.267, p = 0.111	Driving after drinking alcohol
Limiting speed limit to 30 km/h in all built-up areas (except on main thoroughfares)	**- 0.623, p < 0.001**	**Driving faster than the speed limit inside built-up areas**
Limiting the speed limit to a maximum of 80 km/h on all rural roads without a median strip	**- 0.678, p < 0.001**	**Driving faster than the speed limit outside built-up areas (except motorways/ freeways)**
Forbidding all drivers of motorized vehicles to use a hand-held mobile phone while driving	- 0.239, p = 0.149	Talking on a hand-held mobile phone while driving
Forbidding all drivers of motorized vehicles to use a hand-held mobile phone while driving	- 0.022, p = 0.898	Reading a message or checking social media/news while driving
Zero tolerance alcohol for cyclists	**- 0.661, p < 0.001**	**Cycling when you think you may have had too much to drink**
Requiring helmet all cyclists	**- 0.632, p < 0.001**	**Cycling without a helmet**
Requiring helmet cyclists under the age of 12	**- 0.336, p = 0.042**	**Cycling without a helmet**

Results show that the higher support for the measure 'zero tolerance for alcohol for all drivers', the lower the engagement in driving after drinking alcohol (see also Figure 23). This correlation was of a medium strength. For the other alcohol related measures ('alcohol interlock for recidivists' and 'zero tolerance for alcohol for novice drivers') no significant associations with drunk driving were found (neither with 'driving after drinking alcohol' nor with 'driving while being above the legal limit for alcohol'). As far as the speed limit related measures are concerned, support for those measures was strongly and negatively correlated with driving faster than the speed limit. The higher the support for

'limiting speed limit to 30 km/h in all built-up areas (except on main thoroughfares)', the lower the levels of 'driving faster than the speed limit inside built-up areas' (see also Figure 24). Similarly, the higher the support for 'limiting speed limit to a maximum of 80 km/h on all rural roads without a median strip', the lower the levels of 'driving faster than the speed limit outside built-up areas (except motorways/ freeways)' (see also Figure 25). For the distraction related measure i.e. 'forbidding all drivers of motorized vehicles to use a hand-held mobile phone while driving' no significant correlations were found with the engagement in 'talking on a held-held phone while driving' nor in 'reading a message or checking social media while driving'. Finally, for all policy measures concerning cyclists, significant associations with cycling behaviour were found. The correlations concerning 'zero tolerance for alcohol for cyclists' and 'requiring helmet for all cyclists' were especially strong. The higher the support for 'zero tolerance alcohol for cyclists', the lower the level of 'cycling when one may have had too much to drink' (see also Figure 26). The higher the level of opposition to 'requiring helmet for all cyclist' or 'cyclists under the age of 12', the higher level of cycling without a helmet (see also Figure 27 and Figure 28).

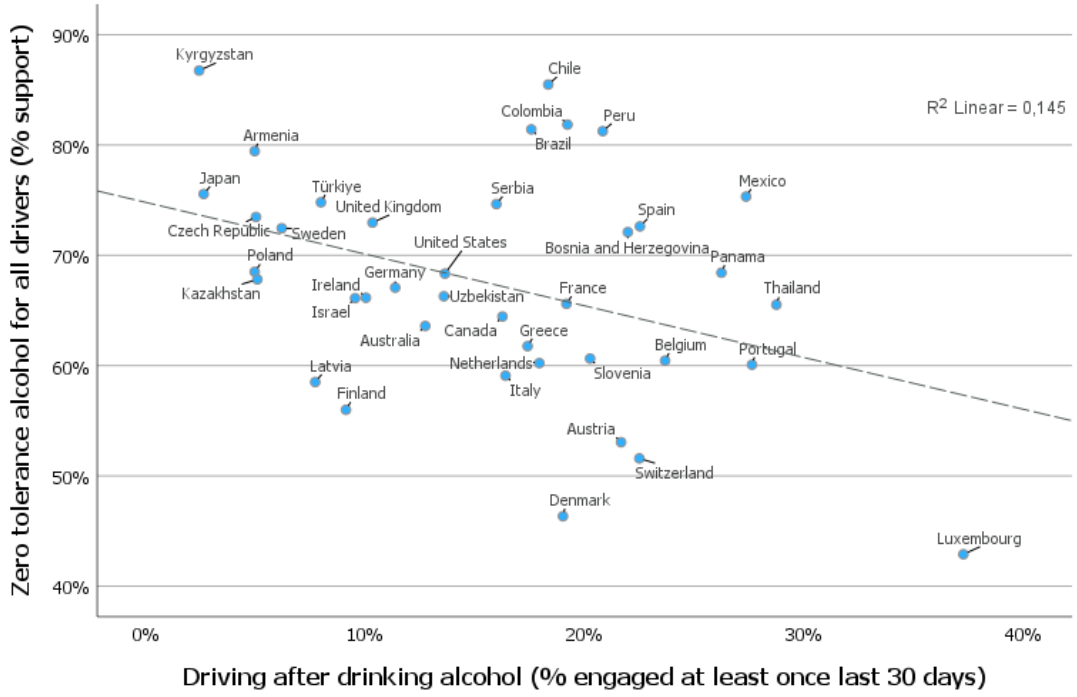


Figure 23: Association between the level of support for "Zero tolerance alcohol for all drivers" and the level of driving after drinking alcohol.

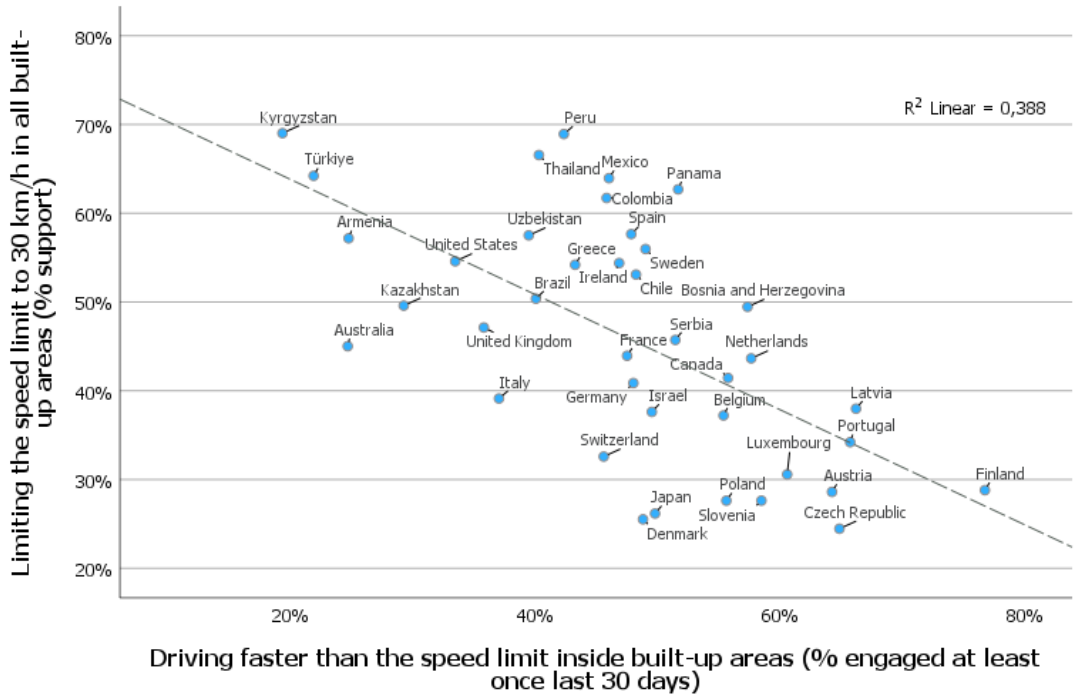


Figure 24: Association between the level of support for "Limiting the speed limit to 30 km/h in all built-in areas' and the level of driving faster than the speed limit inside built-up areas.

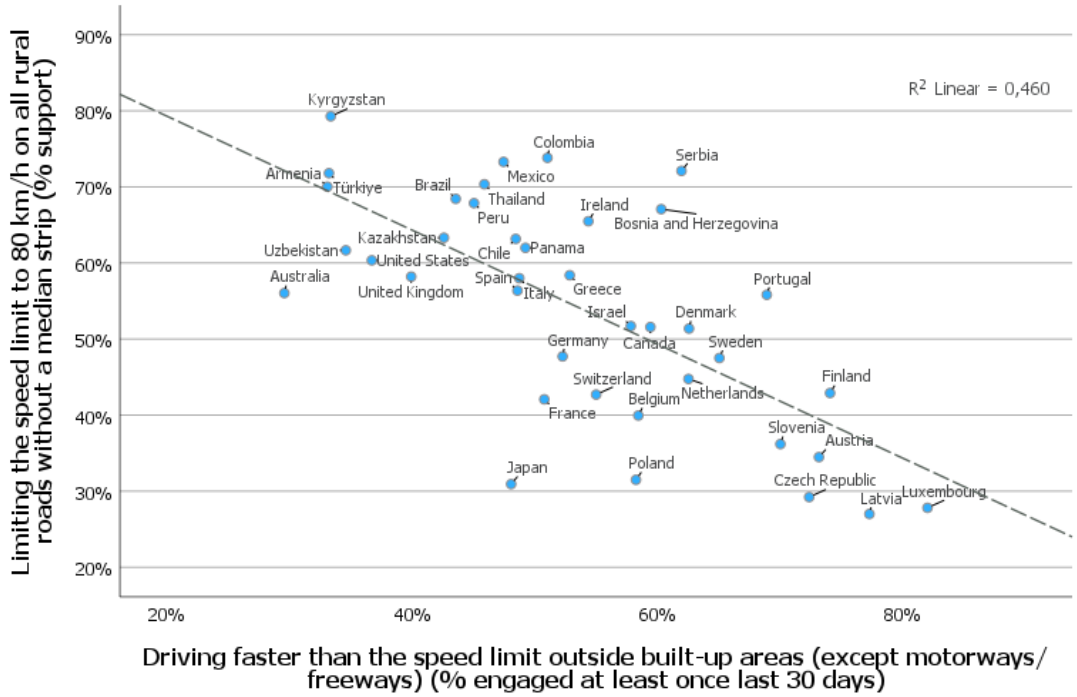


Figure 25: Association between the level of support for "Limiting the speed limit to 80 km/h in all rural roads without a median strip' and the level of driving faster than the speed limit outside built-up areas (except motorways).

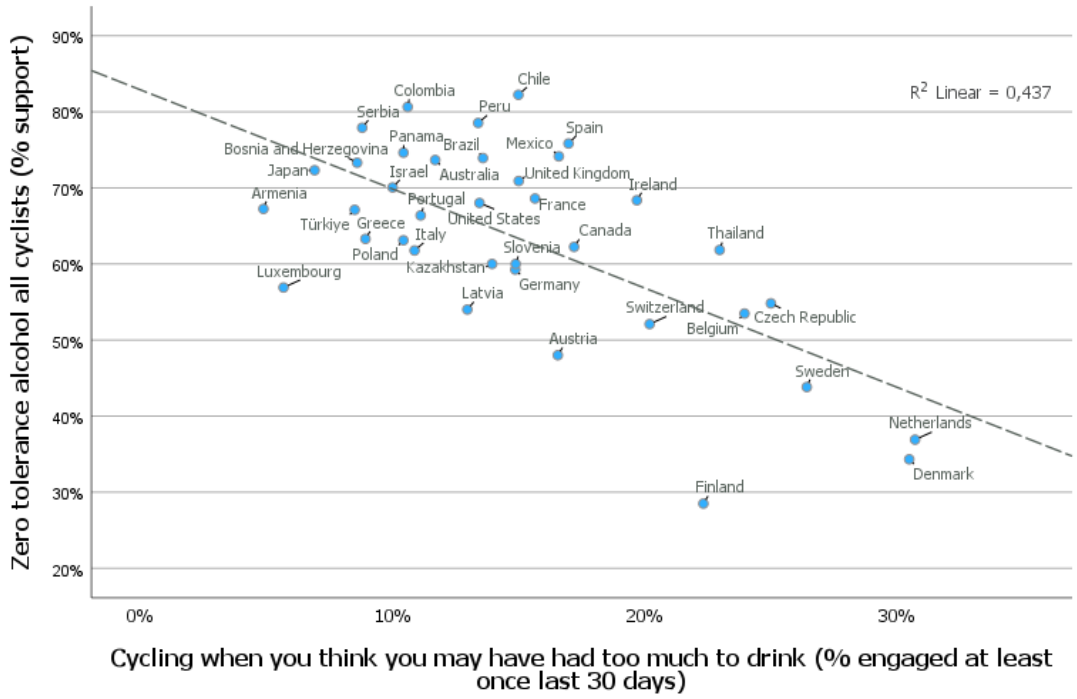


Figure 26: Association between the level of support for 'zero tolerance alcohol for all cyclists' and the level of 'cycling when you think you may have had too much to drink'.

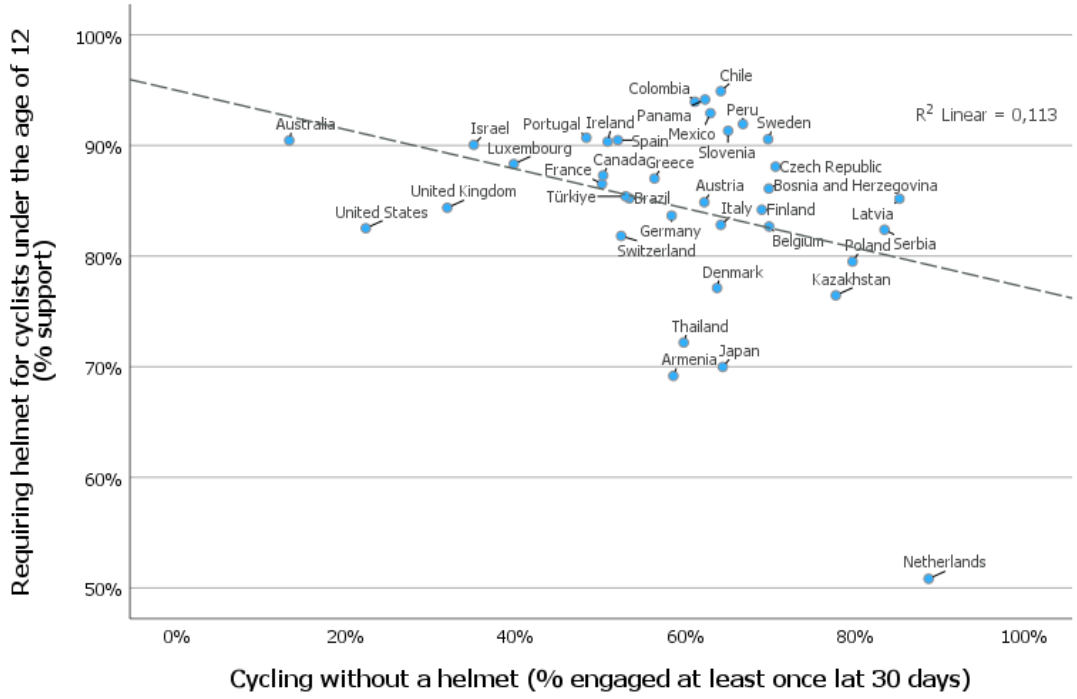


Figure 27: Association between the level of support for 'requiring helmet for cyclists under the age of 12' and the level of 'cycling without a helmet'.

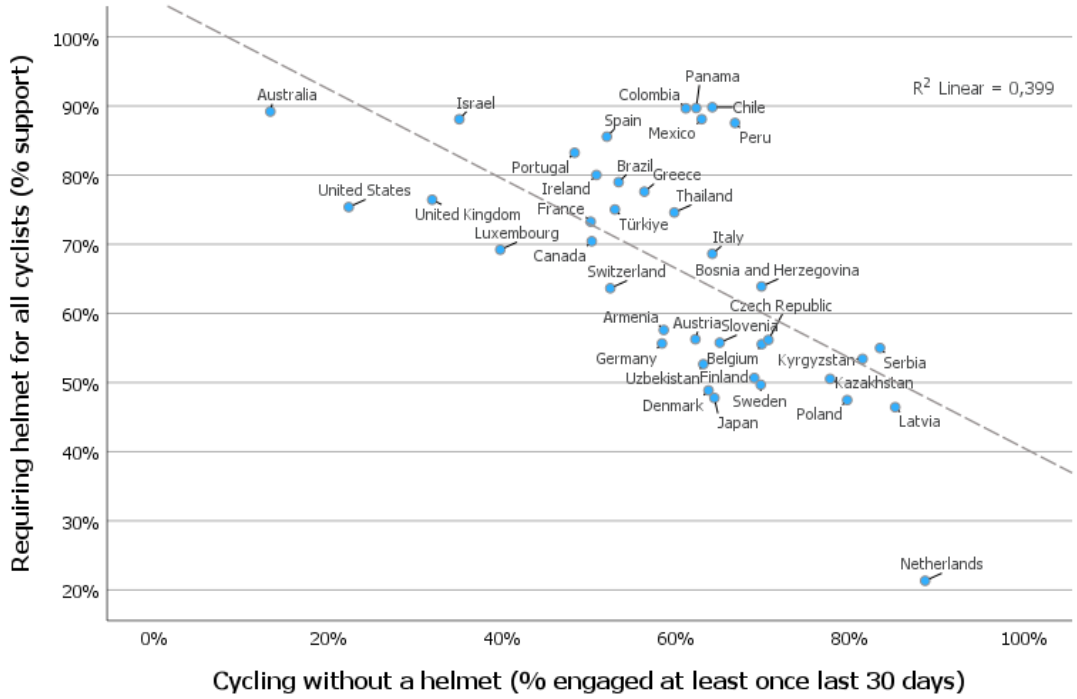


Figure 28: Association between the level of support for 'requiring helmet for all cyclists' and the level of 'cycling without a helmet'.

3.3 Comparisons over time (ESRA2 - ESRA3)

This section compares ESRA3 results with ESRA2 results. The ESRA2 results that are shown in this section are different from the results published in ESRA2 publications. Because of methodological differences, the ESRA2 results were recalculated in order to be comparable with the ESRA3 results. Between ESRA2 and ESRA3, there are differences on sample level and on question/item level. On sample level there is a difference in population between ESRA2 and ESRA3: in ESRA2 the population consisted out of adults aged 18 years and older, while in ESRA3 the population was adults between 18 and 74 years old. In ESRA3 we also applied a stricter data cleaning compared to ESRA2 (for more information see also the methodology reports (Meesmann et al., 2022; Meesmann & Wardenier, 2024). To take these two differences into account, ESRA2 results were reweighted and recalculated so that the population is the same as in ESRA3 and consequently the results are comparable. On question and item level there are also differences between ESRA2 and ESRA3. For some questions, there is a difference in reference population, e.g., in ESRA2 attitudes towards safe and unsafe traffic behaviour were surveyed for all road users while in ESRA3 they were only surveyed for car drivers. This means that the results do not have the same reference, for example 30% of all road users or 30% of all car drivers does not have the same meaning. Differences in reference populations can often be recalculated and so these were also taken into account in the recalculated ESRA2 results. Furthermore, some questions and/or items of questions have a different formulation between ESRA2 and ESRA3. For some questions/items we considered the formulation between the two editions too different to be compared, therefore these questions/items are not included in the comparisons. Lastly, comparisons only focus on country level as the countries included in the according regional means are also too different between ESRA2 and ESRA3 (e.g., in ESRA2 the region America includes three countries, while in ESRA3 this region includes eight countries).

Despite the efforts of the ESRA initiative to make the presented ESRA2 and ESRA3 results as comparable as possible, these comparisons have limitations and should be interpreted with caution. There can still be potential methodological effects that can explain differences in the results. It concerns elements on which we have little to no control due to various reasons. Examples of such kind of methodological differences are changes in the characteristics or composition of the sample (e.g., level of education, rural vs. urban population or number of moped riders in the mixed group of moped riders and motorcyclists) and changes in answer patters due to different presentation of the question (e.g., matrix questions with many items vs. single item questions). Secondly, when comparing the results between

ESRA2 and ESRA3, the presented confidence intervals should also be considered. A difference in the percentage between ESRA2 and ESRA3 can seem large, while in fact the confidence intervals overlap or are not far apart. Because of these reasons, differences between ESRA2 and ESRA3 should not always be interpreted as actual changes in the population.

In 2025 the ESRA initiative plans to publish a dedicated report on 10 years of ESRA. This report will offer deeper insights into the evolution of ESRA and compare results over time since its start in 2015.

3.3.1 Support for policy measures

In both ESRA2 and ESRA3, respondents were asked about their support for policy measures. The comparison between ESRA2 and ESRA3 was done at a country-level, this included 26 countries: Australia, Austria, Belgium, Canada, Colombia, Czech Republic, Denmark, Finland, France, Germany, Greece, Ireland, Israel, Italy, Japan, Netherlands, Poland, Portugal, Serbia, Slovenia, Spain, Sweden, Switzerland, Thailand, United Kingdom and the United States. Weighted sample sizes were relatively large, ranging from 767 (Greece) to 1953 (Australia) in ESRA2 and from 832 (Germany) to 1905 (Canada) in ESRA3. In the ESRA2 survey, respondents were asked to assess nine preventive measures. Five of these were formulated similar (or almost identical) as some of those in ESRA3, therefore it is possible to compare these results (Table 3). The formulation of the first part of each question was almost identical, and the answer scale was exactly the same between ESRA2 and ESRA3. The answer scale consisted of five options, ranging from 1 (oppose) to 5 (support). For each country the percentage indicates the proportion of respondents answering with option 4 or 5. The questions are listed in Table 3. Note that the questions on support for policy measures are formulated slightly different. In ESRA2, questions are formulated as a 'zero tolerance', while in ESRA3 this is formulated as 'forbidding to drive'.

Table 3: Comparison between the formulation of measures in ESRA2 and ESRA3

ESRA2	**ESRA3**
Do you oppose or support a legal obligation to …? (score 1-5, with 1= oppose and 5= support)	*Do you oppose or support a legal obligation …? (score 1-5, with 1= oppose and 5= support)*
Install an alcohol "interlock" for drivers who have been caught drunk driving on more than one occasion (technology that won't let the car start if the driver's alcohol level is over the legal limit)	*Installing an alcohol 'interlock' for drivers who have been caught drunk driving on more than one occasion (technology that won't let the car start if the driver's alcohol level is over a certain limit)*
Have zero tolerance for alcohol (0.0 ‰) for novice drivers (licence obtained less than 2 years)	*Forbidding all novice drivers of motorized vehicles (licence obtained less than 2 years ago) to drive with a blood alcohol concentration above 0.0 ‰ (zero tolerance)*
Have zero tolerance for alcohol (0.0 ‰) for all drivers	*Forbidding all drivers of motorized vehicles to drive with a blood alcohol concentration above 0.0 ‰ (zero tolerance)*
Require all cyclists to wear a helmet	*Requiring all cyclists to wear a helmet*
Require cyclists under the age of 12 to wear a helmet	*Requiring cyclists under the age of 12 to wear a helmet*

Table 4: Average difference between support for measures between ESRA2 and ESRA3

	Country average ESRA2	**Country average ESRA3**	**Difference**
Alcohol interlock for recidivists	82.2%	78.2%	-4.0%
Zero tolerance alcohol novice drivers	80.8%	77.4%	-3.4%
Zero tolerance alcohol all drivers	66.3%	64.7%	-1.6%
Require helmet all cyclists	68.5%	65.1%	-3.4%

Require helmet cyclists under the age of 12	85.9%	83.5%	-2.4%

The first three preventive measures can be grouped together, since they are all related to alcohol. The proportion of respondents who support the first preventive measure (installing an alcohol 'interlock') increased in one country, whereas this proportion decreased in the other 25 countries (Figure 29). It should be noted that for some countries, the confidence interval (CI) 95% overlaps when comparing ESRA2 with ESRA3. This indicates no statistically significant difference between the proportion of support in ESRA2 and ESRA3 in these countries. For example, Serbia, with a percentage of 86.4% (CI 95%: 84.0%-88.6%) supporting the measure in ESRA2, and 86.1% (CI 95%: 83.8%- 88.1%) in ESRA3. For other countries the CI 95% does not overlap, indicating a statistically significant difference between the proportion of support on ESRA2 compared to ESRA3 (Austria, Czech Republic, Denmark, Finland, Netherlands, Poland, Slovenia, Spain, and Thailand). All of these countries showed a significant decrease in support between ESRA2 and ESRA3. On average, the support for installing an alcohol 'interlock' in all 26 countries decreased by 4.0% (from 82.2% to 78.2%). However, these differences must be interpreted with caution, since they might be influenced by methodological differences in ESRA2 and ESRA3.

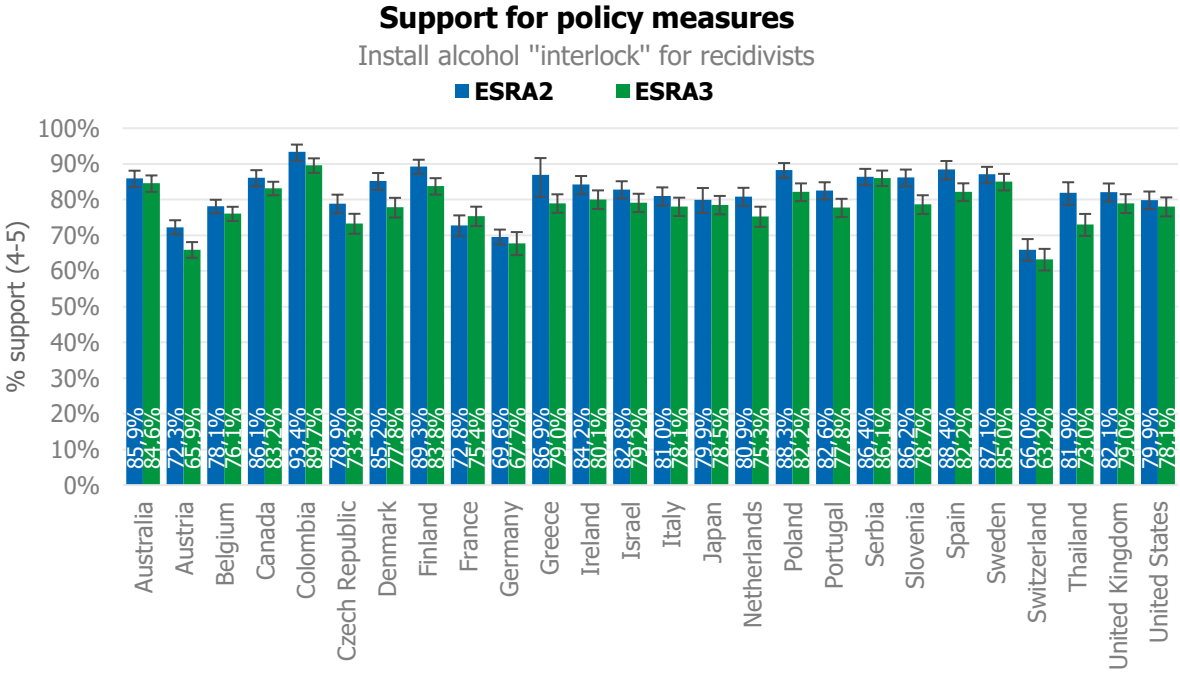


Figure 29: Support for installing alcohol interlock for recidivists, in ESRA2 and ESRA3, by country (% of support 4-5 +- 95% Confidence Intervals). ESRA2 results recalculated for comparability.

The proportion of respondents who support the second preventive measure (zero tolerance for alcohol for novice drivers) increased in two countries and decreased in the other 25 countries (Figure 30). For some countries, no overlap between CI 95% indicates statistically significant differences between ESRA2 and ESRA3, for example Italy the percentage of respondents who support a zero tolerance for alcohol for novice drivers was 53.6% (CI 95%: 50.3%-56.8%) in ESRA2 and 77.4% (CI 95%: 74.7%-79.9%) in ESRA3. Significant differences are also found for Belgium, Colombia, Czech Republic, Germany, Ireland, Israel, Netherlands, Portugal, Slovenia, Spain, and the United States. Italy was the only country with a significant increase in support for this measure. On average, the support for having a zero tolerance for alcohol for novice drivers in 26 countries decreased by 3.4% (from 80.8% to 77.4%). Again, differences should be interpreted with caution.

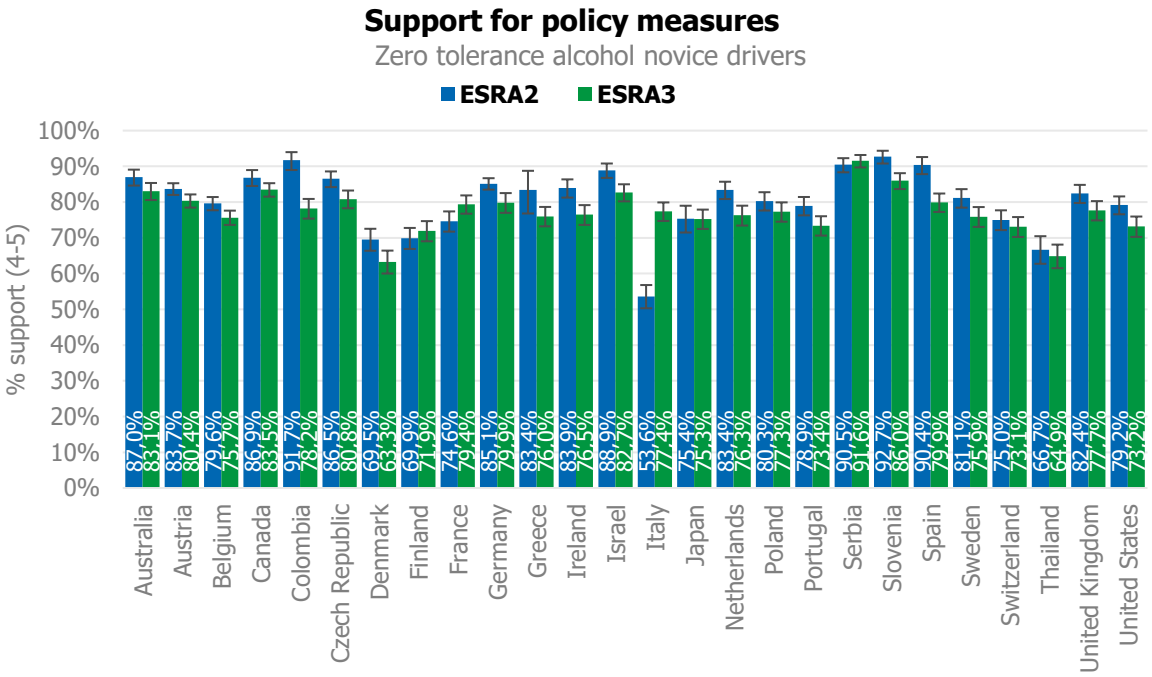


Figure 30: Support for having zero tolerance for alcohol for novice drivers, in ESRA2 and ESRA3, by country (% of support 4-5 +- 95% Confidence Intervals). ESRA2 results recalculated for comparability.

The average proportion of respondents from all countries who support the third preventive measure (zero tolerance for all drivers) was lower compared to the preventive measure on zero tolerance for novice drivers. The percentage supporting this measure increased in 13 countries and decreased in 13 countries (Figure 31). Differences were significant for Australia, Canada, Colombia, France, Ireland, Israel, Italy, Slovenia, and Spain. Of this selection, Australia, Canada and France were the only countries that showed a significant increase in support for this policy measure. For other counties, such as Sweden (71.4% on ESRA2 and 71.9% on ESRA3), confidence intervals had overlap and thus there might be no difference in the proportion supporting this measure. On average, the support for having a zero tolerance for alcohol for all drivers in 26 countries decreased by 1.6% (from 66.3% to 64.7%).

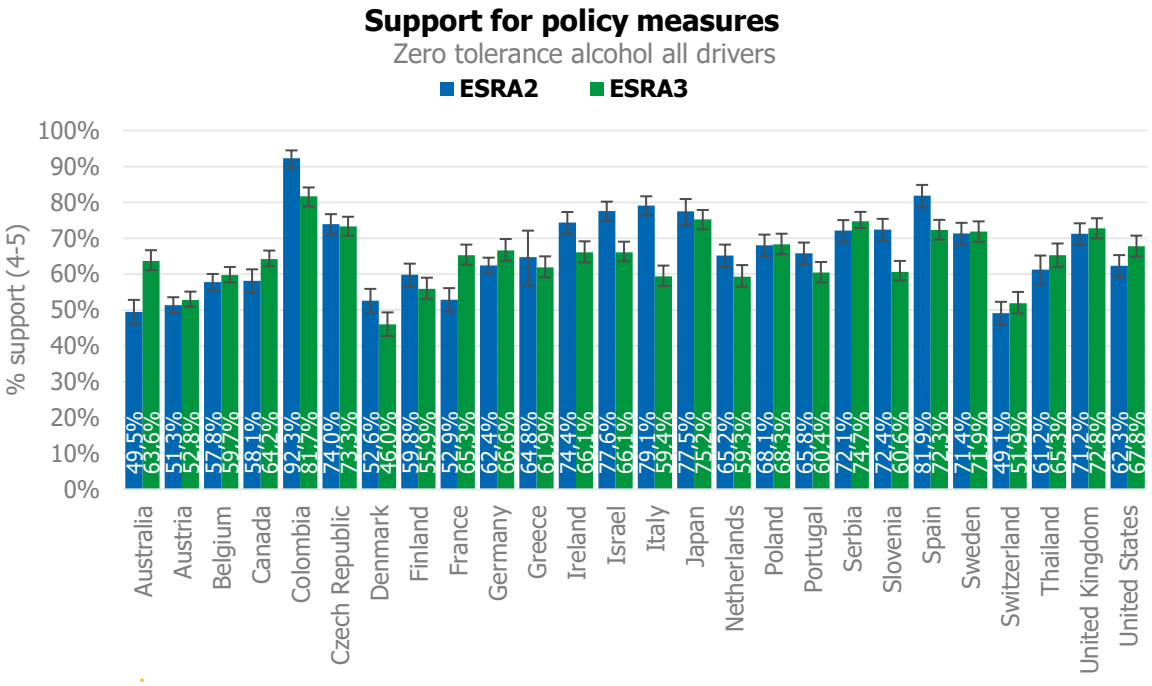


Figure 31: Support for having zero tolerance for alcohol for all drivers, in ESRA2 and ESRA3, by country (% of support 4-5 +- 95% Confidence Intervals). ESRA2 results recalculated for comparability.

Additionally, the two preventive measures about wearing a helmet can also be grouped together. The percentage of respondents who support the fourth preventive measure (helmet for all cyclists), increased in six countries and decreased in 20 countries (Figure 32). However, not all of these differences were statistically significant. Only in Colombia, Czech Republic, Finland, France, Ireland, Italy, Japan, Poland, Sweden, and the United Kingdom, the CI 95% between ESRA2 and ESRA3 did not overlap. Both France and Japan showed a significant increase in support. On average, the support for requiring all cyclists to wear a helmet decreased by 3.4% (from 68.5% to 65.1%). These differences must however be interpreted with caution, since they might be influenced by methodological differences.

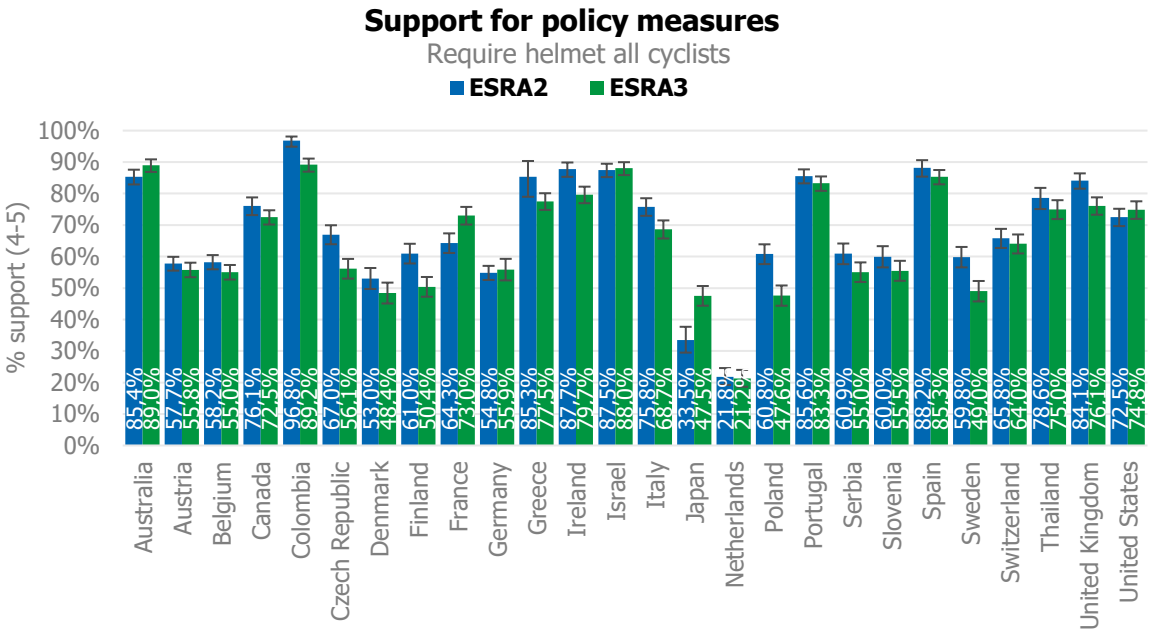


Figure 32: Support for requiring all cyclists to wear a helmet, in ESRA2 and ESRA3, by country (% of support 4-5 +- 95% Confidence Intervals). ESRA2 results recalculated for comparability.

Finally, the mean percentage of respondents from all countries who support the fifth preventive measure (helmet for cyclists under the age of 12), was higher than the mean percentage of respondents supporting the measure for helmets for all cyclists. The proportion supporting the measure for helmets for cyclists under the age of 12 increased in two countries and decreased in 24 countries from ESRA2 to ESRA3 (Figure 33). The differences were statistically significant for Canada, Czech Republic, Israel, Japan, Poland, Switzerland and the United Kingdom. Only Japan showed a significant increase in support for this measure. For the other counties, the CI 95% did overlap. On average, the support for requiring cyclists under the age of 12 to wear a helmet decreased by 2.4% (from 85.9% to 83.5%). On both measures, The Netherlands, and to a lesser extent Japan, deviate from the mean proportion of support across all countries on both surveys.

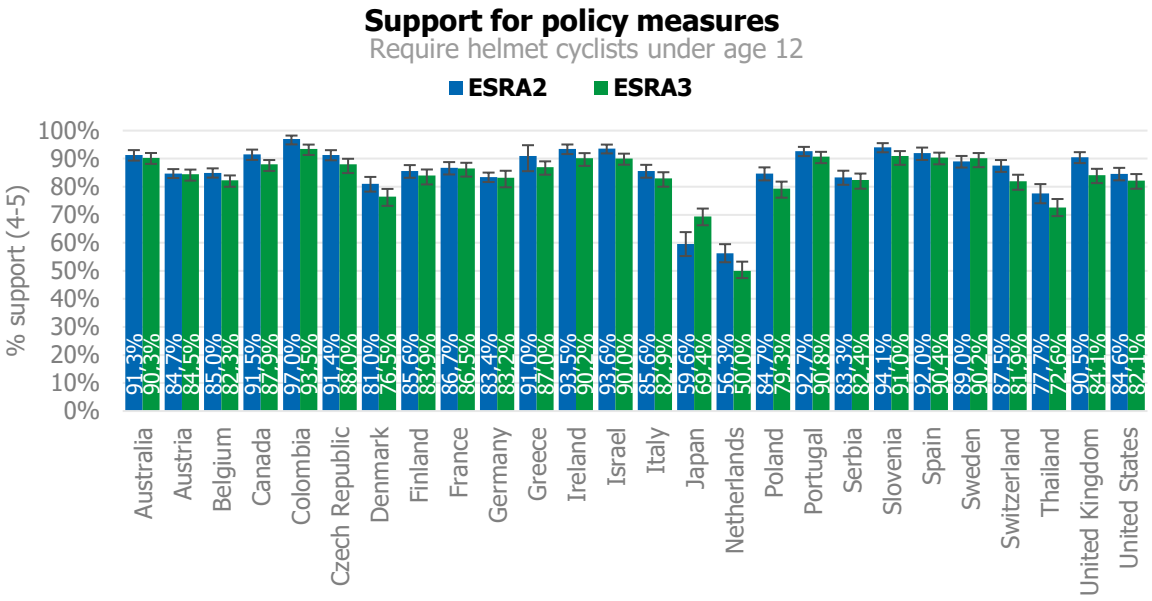


Figure 33: Support for requiring cyclists under the age of 12 to wear a helmet, in ESRA2 and ESRA3, by country (% of support 4-5 +- 95% Confidence Intervals). ESRA2 results recalculated for comparability.

3.3.2 Enforcement

In both ESRA2 and ESRA3, respondents were asked about their perception on enforcement, and about the experienced enforcement. The comparison between ESRA2 and ESRA3 was done at a country-level, this included 26 countries: Australia, Austria, Belgium, Canada, Colombia, Czech Republic, Denmark, Finland, France, Germany, Greece, Ireland, Israel, Italy, Japan, Netherlands, Poland, Portugal, Serbia, Slovenia, Spain, Sweden, Switzerland, Thailand, United Kingdom and the United States. Weighted sample sizes were relatively large, ranging from 546 (Japan) to 1,495 (Germany) in ESRA2 and from 557 (Colombia) to 1,506 (Austria) in ESRA3. On enforcement perception, five questions were formulated similar (or almost identical) as some of those in ESRA3, therefore it is possible to compare these results. On enforcement experience, two questions were formulated similar. The answer scale was exactly the same between ESRA2 and ESRA3 for enforcement perception. The answer scale consisted of seven options, ranging from 1 (very unlikely) to 7 (very likely). For enforcement experience, the four options ranged from 'never', 'one time', 'at least 2 times' and 'I prefer not to respond to this question'. The latter option was removed in ESRA3. For each country the percentage indicates the proportion of respondents answering with 5 to 7 (perception) or at least once (experience). The questions are listed in Table 5 and Table 6.

Table 5: Comparison between the formulation of questions in ESRA2 and ESRA3; enforcement perception

	ESRA2	**ESRA3**
	On a typical journey, how likely is it that you (as a car driver) will be checked by the police for… (scale from 1 to 7, where 1 is 'very unlikely' and 7 is 'very likely')	*On a typical journey, how likely is it that you (as a car driver) will be checked by the police (including cameras or radars) for…? (scale from 1 to 7, where 1 is 'very unlikely' and 7 is 'very likely')*
Driving under influence	*Alcohol, in other words, being subjected to a Breathalyser test*	*Alcohol, in other words, being subjected to a Breathalyser test*
	The use of illegal drugs	*The use of illegal drugs*
Speeding	*Respecting the speed limits (including checks by a police car with a camera, fixed cameras, mobile cameras, and section control systems)*	*Respecting the speed limits*
Seat belt/ CRS	*Wearing your seatbelt*	*Wearing your seatbelt*
Distraction	*The use of hand-held mobile phone to talk or text while driving*	*The use of hand-held mobile phone to talk or text while driving*

Table 6: Comparison between the formulation of questions in ESRA2 and ESRA3; enforcement experience.

	ESRA2	**ESRA3**
	3 options: 'never', '1 time', 'at least 2 times'	*4 options: 'never', '1 time', 'at least 2 times', 'I prefer not to respond to this question'*
Driving under influence	*In the past 12 months, how many times have you been checked by the police for using alcohol while driving a car (i.e., being subjected to a Breathalyser test)?*	*In the past 12 months, how many times have you been checked by the police for using alcohol while driving a car (i.e., being subjected to a Breathalyser test)?*
	In the past 12 months, how many times have you been checked by the police for using drugs (other than medication) while driving a car?	*In the past 12 months, how many times have you been checked by the police for using drugs (other than prescribed or over the counter medication) while driving a car?*

The first two enforcement perceptions and experiences can be grouped together, since they are both related to driving under influence. This way, the enforcement perception and experience can be compared by country. The proportion of respondents who perceive it as 'likely' to be checked by the police for alcohol use, increased in nine countries, whereas this proportion decreased in seventeen countries. It should be noted however that for some countries, the CI 95% overlaps when comparing ESRA2 with ESRA3. This indicates no statistically significant difference between the proportion in ESRA2 and ESRA3 in these countries. For example, Australia, with a percentage of 30.0% (95% CI: 26.8%-33.4%) in ESRA2, and 30.2% (CI 95%: 27.1%- 33.4%) in ESRA3. For other countries the CI 95% does not overlap, indicating a statistically significant difference between the proportion of respondents perceiving the enforcement as likely on ESRA2 compared to ESRA3 (Austria, Colombia, Czech Republic, Finland, Poland, Portugal, Serbia, Slovenia, Spain, and United States). All of these countries, except the United States (increase by 18.5%) showed a significant decrease in likelihood of enforcement between ESRA2 and ESRA3. Especially Poland showed a strong decrease (from 53.7% to 13.6%). However, these differences must be interpreted with caution, since they might be influenced by methodological differences in ESRA2 and ESRA3. On average, the perceived likelihood of this enforcement type in 26 countries decreased by 4.7% (from 23.5% to 18.8%).

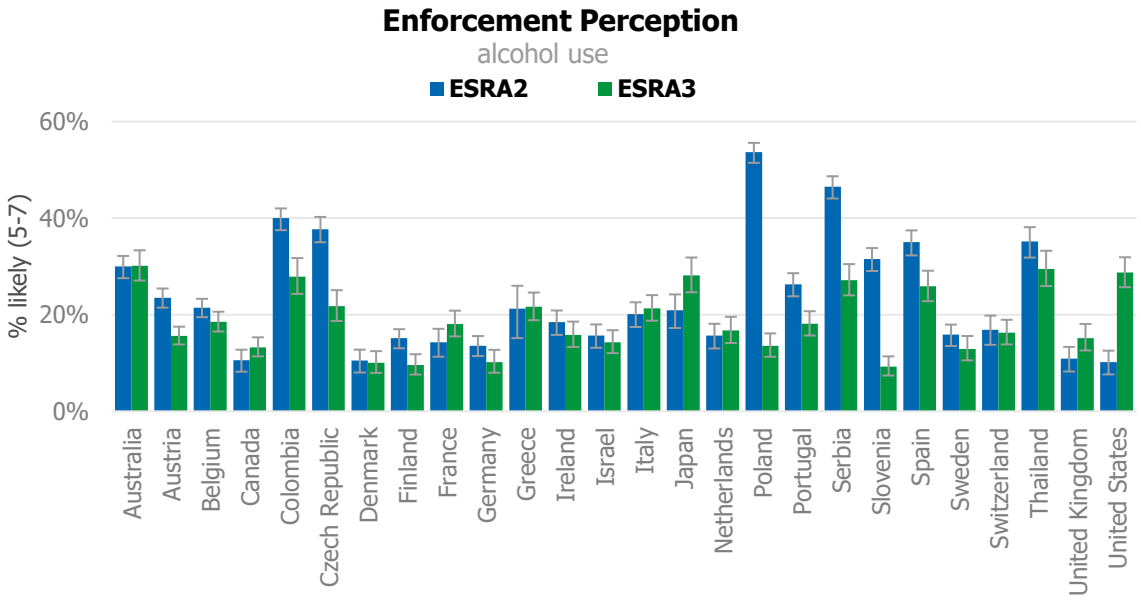


Figure 34: Enforcement perception of being checked by the police for alcohol use, in ESRA2 and ESRA3, by country (% likely 5-7 +- 95% Confidence Intervals). ESRA2 results recalculated for comparability.

The enforcement perception can be compared to the enforcement experience of being checked by the police for alcohol use. This proportion decreased by 1.3% in 26 countries (from 20.7% to 19.4%). This indicates an averagely lower proportion experiencing this type of enforcement compared to the proportion indicating it as likely that they will be checked for alcohol use. The proportion of respondents who experienced it at least once, increased in a half of the countries, whereas this proportion decreased in the other half countries (Figure 35). It should be noted however that for some countries, the CI 95% overlaps when comparing ESRA2 with ESRA3. This indicates no statistically significant difference between the proportion in ESRA2 and ESRA3 in these countries. However, for some countries the CI 95% does not overlap, indicating a statistically significant difference between the proportion of respondents experiencing the enforcement at least once on ESRA2 compared to ESRA3 (Australia, Finland, Germany, Italy, Japan, Poland, Switzerland, Thailand, and United States). Of these countries, Germany, Italy, Switzerland and the United States showed a significant increase in the proportion experiencing this type of enforcement between ESRA2 and ESRA3. However, these differences must be interpreted with caution, since they might be influenced by methodological differences in ESRA2 and ESRA3.

The United States is the only country in which both the perceived likelihood of this enforcement and the experience of this enforcement significantly increased.

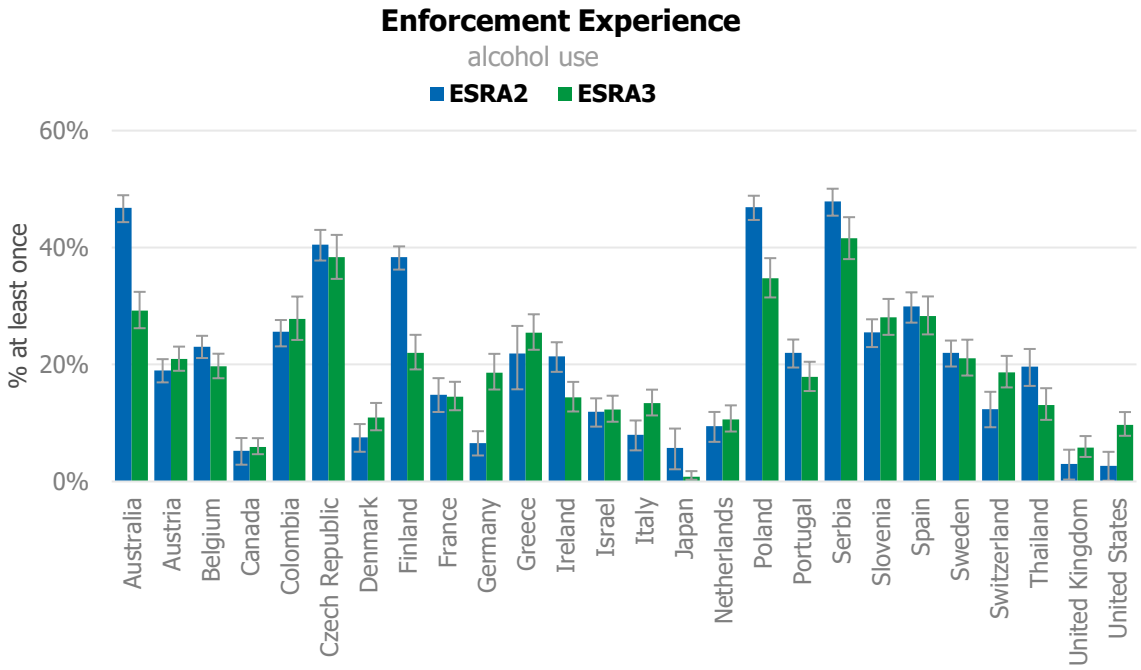


Figure 35: Enforcement experience of being checked by the police for alcohol use, in ESRA2 and ESRA3, by country (% at least once +- 95% Confidence Intervals). ESRA2 results recalculated for comparability.

The proportion of respondents who perceive it as 'likely' to be checked by the police for drug use, increased in 12 countries, whereas this proportion decreased in 14 countries (Figure 36). It should be noted however that for some countries, the CI 95% overlaps when comparing ESRA2 with ESRA3. This indicates no statistically significant difference between the proportion in ESRA2 and ESRA3 in these countries. For some of the countries the CI 95% does not overlap, indicating a statistically significant difference between the proportion of respondents perceiving the enforcement as likely on ESRA2 compared to ESRA3 (Czech Republic, Germany, Poland, Slovenia, and Thailand). All of these countries showed a significant decrease in likelihood of enforcement between ESRA2 and ESRA3. Poland showed the strongest decrease by 16.7%. However, these differences must be interpreted with caution, since they might be influenced by methodological differences in ESRA2 and ESRA3. On average, the perceived likelihood of this enforcement type in 26 countries decreased by 2.0% (from 13.2% to 11.2%).

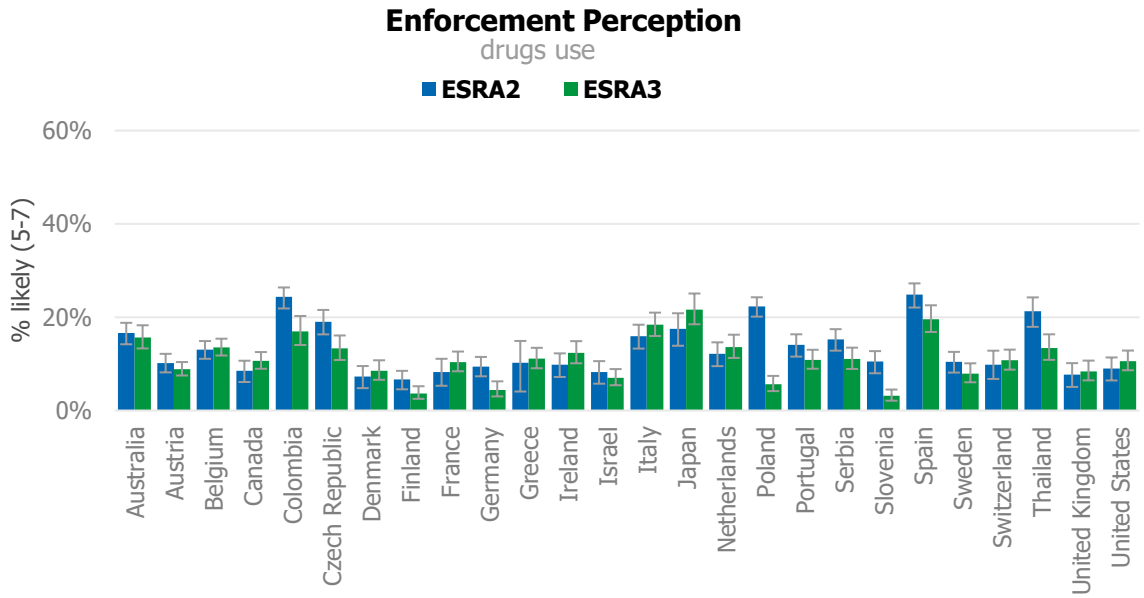


Figure 36: Enforcement perception of being checked by the police for drug use, in ESRA2 and ESRA3, by country (% likely 5-7 +- 95% Confidence Intervals). ESRA2 results recalculated for comparability.

The enforcement perception can be compared to the enforcement experience of being checked by the police for drug use. This proportion increased by 1.9% in 26 countries (from 3.3% to 5.3%). This indicates an averagely lower proportion experiencing this type of enforcement compared to the proportion indicating it as likely that they will be checked for drug use. The proportion of respondents who experienced it at least once, increased in 24 countries, whereas this proportion decreased in only two countries (Figure 37). It should be noted however that for most of countries, the CI 95% overlaps when comparing ESRA2 with ESRA3. This indicates no statistically significant difference between the proportion in ESRA2 and ESRA3 in these countries. For only eight countries the CI 95% does not overlap, indicating a statistically significant difference between the proportion of respondents experiencing the enforcement at least once on ESRA2 compared to ESRA3 (Belgium, Denmark, France, Germany, Israel, Sweden, United Kingdom, and United States). All of these countries showed a significant, but small, increase in the proportion experiencing this type of enforcement between ESRA2 and ESRA3. However, these differences must be interpreted with caution, since they might be influenced by methodological differences in ESRA2 and ESRA3.

Germany is the only country in which both the perceived likelihood of this enforcement and the experience of this enforcement increased.

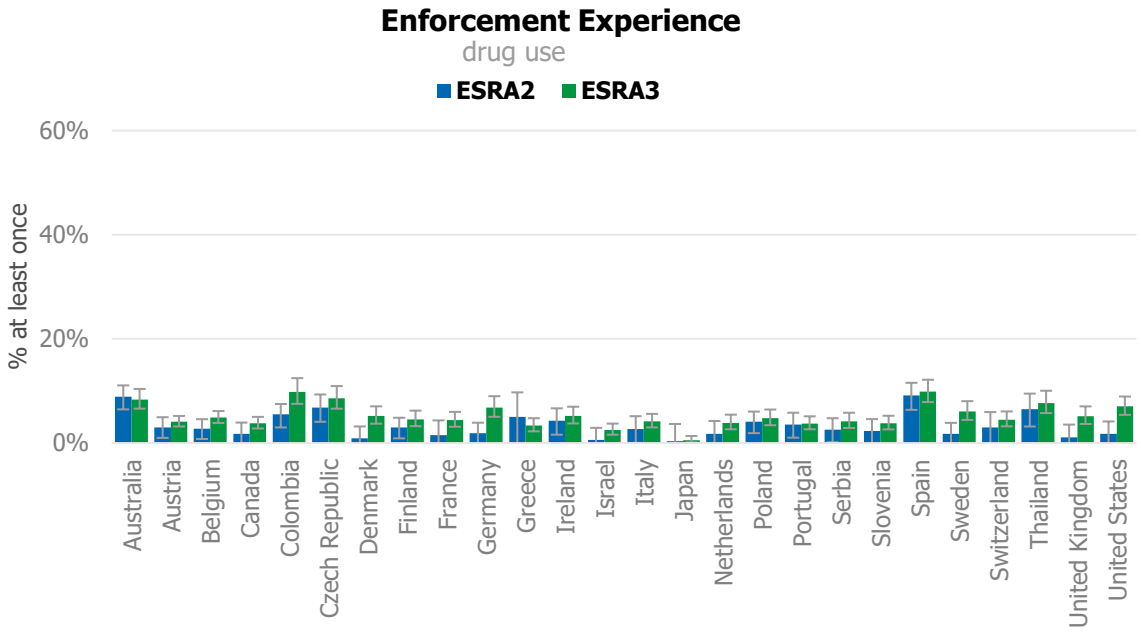


Figure 37: Enforcement experience of being checked by the police for drug use, in ESRA2 and ESRA3, by country (% at least once +- 95% Confidence Intervals). ESRA2 results recalculated for comparability.

The third enforcement type is being checked by the police for respecting the speed limits (Figure 38). On average for all countries, the proportion of respondents perceiving this enforcement as likely decreased by 0.6% (from 38.3% to 37.7%). Fourteen countries showed an increase between ESRA2 and ESRA3, whereas the other 12 countries showed a decrease. However, for some of the countries the 95% CI overlapped, indicating no significant differences. For Australia, Austria, Belgium, Canada, Czech Republic, Finland, Israel, Italy, Japan, Poland, Serbia, Slovenia, Sweden, Thailand, and the United States the 95% CI did not overlap. This indicates a significant increase or decrease in the proportion of respondents perceiving the enforcement as likely. Eight of the countries showed a significant decrease in proportion, whereas the other seven countries showed a significant increase in proportion. Slovenia had the largest decrease by 25.1%, whereas Thailand had the largest increase by 23.4%. However, these differences must be interpreted with caution, since they might be influenced by methodological differences in ESRA2 and ESRA3.

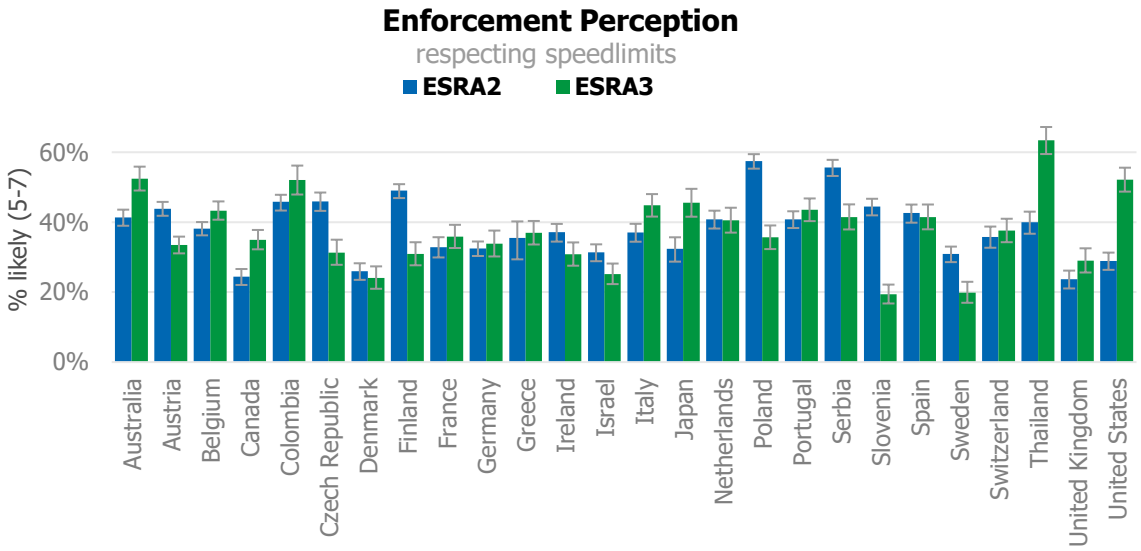


Figure 38: Enforcement perception of being checked by the police for respecting speed limits, in ESRA2 and ESRA3, by country (% likely 5-7 +- 95% Confidence Intervals). ESRA2 results recalculated for comparability.

The fourth enforcement type is being checked by the police for wearing your seatbelt (Figure 39). On average for all countries, the proportion of respondents perceiving this enforcement as likely increased by 3.5% (from 27.2% to 30.7%). Seventeen countries showed an increase between ESRA2 and ESRA3, whereas the other nine countries showed a decrease. However, for some of the countries the 95% CI overlapped, indicating no significant differences. For Australia, Belgium, Canada, Czech Republic, France, Japan, the Netherlands, Poland, Serbia, Slovenia, Thailand, the United Kingdom and the United States the 95% CI did not overlap. This indicates a significant increase or decrease in the proportion of respondents perceiving the enforcement as likely. Nine of the countries showed a significant increase in proportion, whereas the other four countries showed a significant decrease in proportion. Slovenia had the largest decrease by 25.2%, whereas the United States had the largest increase by 27.9%. However, these differences must be interpreted with caution, since they might be influenced by methodological differences in ESRA2 and ESRA3.

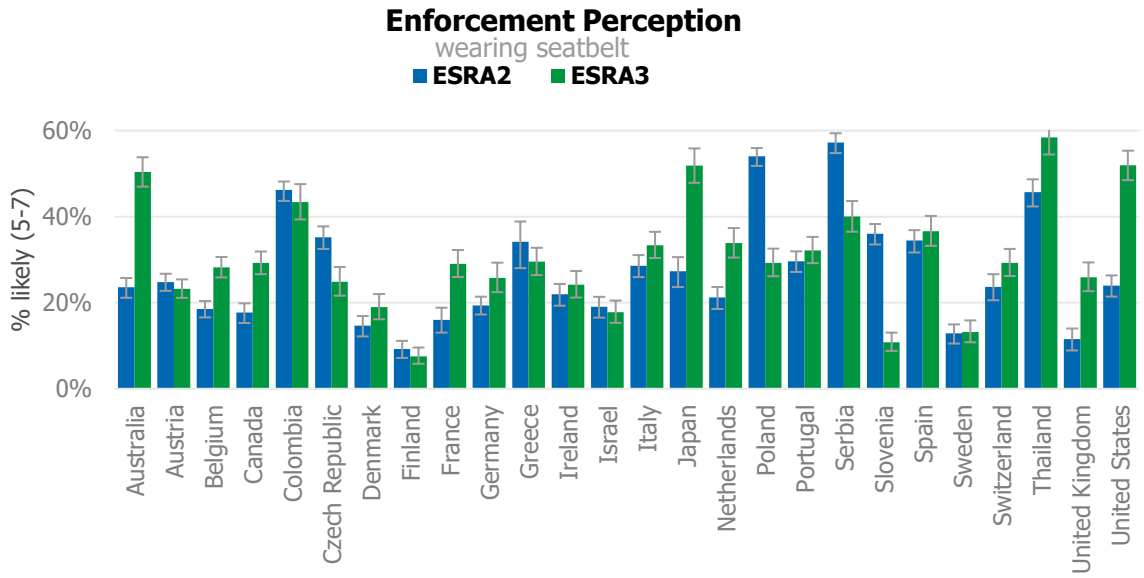


Figure 39: Enforcement perception of being checked by the police for wearing a seatbelt, in ESRA2 and ESRA3, by country (% likely 5-7 +- 95% Confidence Intervals). ESRA2 results recalculated for comparability.

The final enforcement type is being checked by the police for the use of hand-held mobile phone to talk or text while driving (Figure 40). On average for all countries, the proportion of respondents perceiving this enforcement as likely decreased by 2.8% (from 19.0% to 16.2%). Nine countries showed an increase between ESRA2 and ESRA3, whereas the other seventeen countries showed a decrease. However, for some of the countries the 95% CI overlapped, indicating no significant differences. For other countries, the 95% CI did not overlap (Austria, Colombia, Czech Republic, Germany, Israel, Japan, Poland, Portugal, Serbia, and Slovenia). This indicates a significant increase or decrease in the proportion of respondents perceiving the enforcement as likely. Only Japan showed a significant increase in proportion, whereas the other countries showed a significant decrease in proportion. Poland had the largest decrease by 17.6%, whereas the Japan had the largest increase by 11.1%. However, these differences must be interpreted with caution since they might be influenced by methodological differences in ESRA2 and ESRA3.

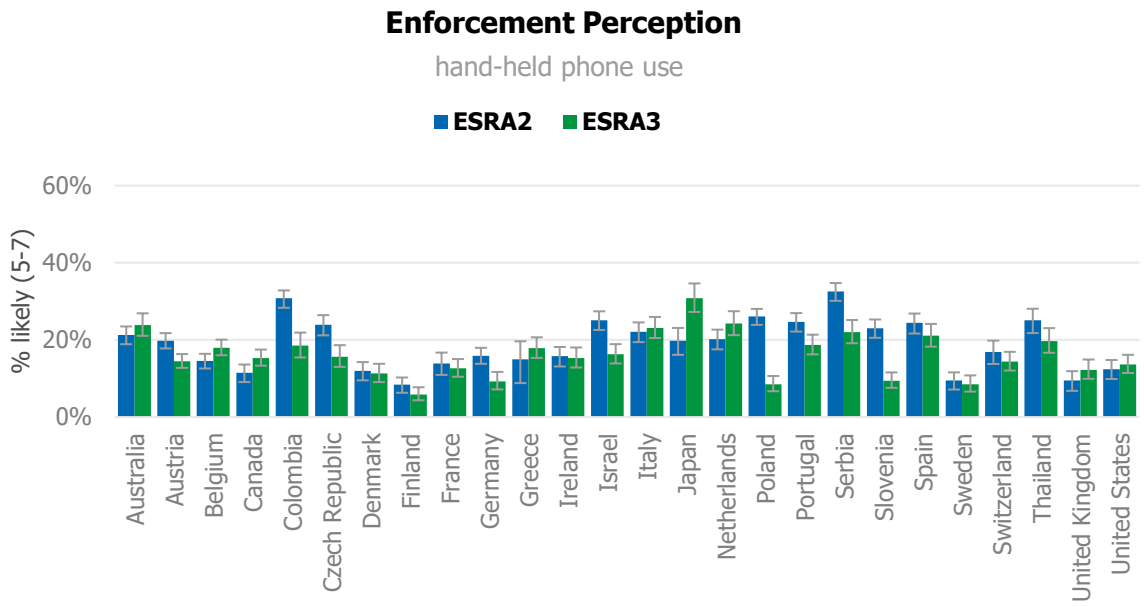


Figure 40: Enforcement perception of being checked by the police hand-held phone use, in ESRA2 and ESRA3, by country (% likely 5-7 +- 95% Confidence Intervals). ESRA2 results recalculated for comparability.

Generally, the perceived likelihood of encountering each enforcement type is low (Table 7). Overall, Czech Republic and Slovenia showed a significant decrease between ESRA2 and ESRA3 on all five enforcement perceptions, but not on enforcement experiences (driving under influence). Poland also showed a significant decrease on all five enforcement perceptions, and on enforcement experience about alcohol.

Table 7: Average difference between enforcement perception and experience between ESRA2 and ESRA3

		Country average ESRA2	Country average ESRA3	Difference
Enforcement Perception	*Alcohol use*	*23.5%*	*18.8%*	*-4.7%*
	Drug use	*13.2%*	*11.2%*	*-2.0%*
	Speed limits	*38.3%*	*37.7%*	*-0.6%*
	Seatbelt use	*27.2%*	*30.7%*	*+3.5%*
	Hand-held phone use	*19.0%*	*16.2%*	*-2.8%*
Enforcement Experience	*Alcohol use*	*20.7%*	*19.4%*	*-1.3%*
	Drug use	*3.3%*	*5.3%*	*+1.9%*

As stated above, the observed changes between ESRA2 and ESRA3 should be interpreted with caution, as they could be influenced by methodological differences in the surveys, or for example, by the COVID-19 pandemic (Lyon et al., 2024). Future measurements (ESRA4 in 2026) should be used to confirm changes over time (trends). If possible, other national monitoring data that assess the same (or similar) variables over time could also be used for external validation of the observed national trends/changes.

3.4 Limitations of the data

Biases related to self-reported data, i.e. social desirability, possible non-accurate recall, misunderstanding of questions or selective non-response bias form important limitations of the study (see also Meesmann & Wardenier, 2024; Pires et al., 2020). Social desirability concerns a tendency to answer questions in a way that will be viewed favourably by others, e.g. overreporting 'good' behaviour or underreporting 'bad' behaviour). Non-accurate recall due to memory errors may also bias the results, leading to unintentional faulty responses. The same is true for misunderstanding of questions, especially when complex or lengthy formulations are used. Selective non-response bias occurs when individuals who are unable or unwilling to participate in a study systematically differ from those who participate leading to erroneous conclusions. Specifically, the use of online panel survey excludes individuals without internet access, which may lead to biases especially in countries with low percentages of the population using the internet.

Summary and discussion

This ESRA3 thematic report focuses on two road safety issues: support for policy measures and enforcement experience.

Support for policy measures

Results show that the level of support for the policy measures considered differed significantly according to world region, age and gender. Generally, the majority was supportive of the measures. For some measures, some countries regions showed, however, a minority support. The policy measures related to speed limit (30 km/h limit and 80 km/h limit) received the lowest support compared to the other measures considered in ESRA3. The lowest support was found in Europe22, where only less than half of the respondents supported 30km/h and 80 km/h speed limit. Similarly, in AsiaOceania6 a minority support was also found for 30km/h speed limit. On average, in all regions the level of support for the 30 km/h speed limit was lower than for the 80 km/h speed limit.

The measures with the highest support (around 80%) were: requiring cyclists under 12 years old to wear a helmet (the support was especially high in Europe22 and America8), forbidding all drivers to use a held-held phone and alcohol 'interlock' for recidivists (the support was especially high in America8 and AsiaOceania).

Considering regional differences, the lowest level of support was often found in Europe22. Specifically, the level of support in Europe22 was significantly lower than in America8 or in AsiaOceania6 for: zero tolerance for alcohol for all drivers, alcohol 'interlock' for recidivists, zero tolerance for alcohol for cyclists and both speed limit measures (30km/h limit and 80km/h limit). The measures regarding obligatory helmet use by cyclists received the highest support in America8, significantly higher than the levels of support found in Europe22 and in AsiaOceania6. According to Van den Berghe (2022) regional differences reflect the variety of national circumstances, existing road safety measures, levels of enforcement and national cultures. The level of support for the measures included in ESRA1 and in ESRA2 was generally high (Buttler, 2016; Van den Berghe et al., 2022).

Results also showed that females were generally more supportive of the policy measures included in the survey than males. The only exception concerned the support for three policy measures in AsiaOceania6 where no differences between gender were found. Similar results concerning a higher support for measures by females have been found in previous ESRA editions (Buttler, 2016; Van den Berghe et al., 2022).

Besides gender, age was an important factor influencing the level of support for policy measures. Youngest individuals in all regions tended to be the least supportive of the measures. Additionally, in Europe22 the oldest individuals were the most in favour of the policy measures. In America8 and AsiaOceania6 this tendency (generally) did not apply. Interestingly, in both regions, the oldest age group was the least supportive of limiting the speed limit to 30km/h in built-up areas. The general trend - the older, the more in favour of the measures especially found in Europe – has also been found in previous ESRA editions (Buttler, 2016; Van den Berghe et al., 2022).

Furthermore, for about half of the policy measures we found that the lower the support for a measure the higher the frequency of engagement in a specific risky behaviour related to the measure. Significant associations were found for: zero tolerance for alcohol for all drivers and driving after drinking alcohol, for zero tolerance for alcohol for cyclists and cycling after drinking too much alcohol, for the measures concerning the speed limits and speeding behaviour and for the measures concerning obligatory helmet use for (young and all) and cycling without a helmet.

Similarly to the results obtained in ESRA3, the level of support for policy measures in ESRA1 and in ESRA2 was also generally high, although the measures included varied per edition. The comparison between ESRA2 and ESRA3 results concerning the five measures included in both editions suggest that on average, support for each of these measures decreased slightly in 26 countries. The level of support decreased on average by 1.6% to 4.0%, depending on the measure. The largest decrease was found for installing an alcohol 'interlock' for recidivists and the smallest decrease for zero tolerance for alcohol for all drivers.

Experienced and perceived enforcement

Results show that the level of experienced enforcement and expected likelihood of being checked by the police differed significantly according to country, world region, age and gender.

Driver's reported experience of being checked by the police on alcohol or drugs.

In all regions, drivers were more often being checked for alcohol than for drugs. The highest percentages of alcohol checks were reported in the America8 (20.7%), followed by Europe22 (18.8%) and AsiaOceania6 (17.5%). For drugs the highest occurrence of drug checks was reported in America8 (8.2%), followed by AsiaOceania6 (5.8%) and Europe22 (5.5%). Regarding age, younger drivers from America8 and Europe22 reported more often that they had experienced a check on alcohol or drugs compared to older drivers. This difference was not found for AsiaOceania6. Regarding gender, males from each region reported more experience with alcohol and drug checks by the police compared to females, however the difference found was small.

Driver's expected likelihood of being checked for alcohol and drugs, speeding, seatbelt use and mobile phone use while driving.

In all regions, drivers indicated that the likelihood of being checked by alcohol is around 1.5 to 2 times as great than being checked by drugs. The highest expectation for being checked for alcohol was found for AsiaOceania6 (30.1%) followed by America8 (25.6%) and Europe22 (17.1%). The highest expected likelihood for being checked for drugs was found in AsiaOceania6 (20.3%), followed by America8 (12.4%) and Europe22 (10.9%). There was very little difference between age groups for both alcohol and drugs. Regarding gender, in Europe22 and America8 males perceived likelihood of being checked for alcohol or drugs was slightly higher than for females. There was no gender difference in AsiaOceania6.

The expected likelihood of checks for speeding was highest for AsiaOceania6 (52.3%), followed by America8 (43.5%) and Europe22 (36.4%). In Europe22, the age groups 25-34y and 35-44y and in America8 the age group 35-44y reported a higher likelihood of being checked for speeding compared to the older age groups. There was no difference between age groups in AsiaOceania6. Additionally, males in Europa22 and America8 reported a higher perceived likelihood for being checked for speeding compared to females.

The expected likelihood of checks for seatbelt use was highest for AsiaOceania6 (50.7%), followed by America8 (45.3%) and Europe22 (28.9%). Similarly to the perceived checks on speeding, in Europe22 the age groups 25-34y and 35-44y and in America8 the age group 35-44y reported a higher likelihood of being checked for speeding compared to older age groups. There was no difference between age groups in AsiaOceania6. Additionally, males in Europa22 and America8 reported a higher perceived likelihood for being checked for seatbelt use.

Finally, in all three regions, the perceived likelihood of being checked for mobile phone use seemed rather small. The highest perceived likelihood was found in AsiaOceania6 (25.95), followed by America8 (15.9%) and Europe22 (15.0%). Additionally, there seemed to be large differences between countries. In Europe, the Netherlands is one of the few (only) countries that have smart camera that detect hand-held phone use. This probably explains why in Europe the expected likelihood of being detected hand-held phone use is highest for Dutch drivers (25.0%). There were no differences between age groups, and only in America8 males reported a slightly higher perceived likelihood of being checked for mobile phone use.

The comparison between ESRA2 and ESRA3 (**enforcement perception and experience**) suggested that on average, the perceived likelihood of encountering each enforcement type was low in both ESRA2 and ESRA3.

The perceived likelihood of being checked for alcohol showed an average (small) decrease across countries from ESRA2 to ESRA3. Poland deviates from other countries, as it shows a large decrease from ESRA2 to ESRA3, while the decrease for actual experience was smaller. In other words, in ESRA3 respondents underestimate the likelihood of being checked for alcohol use. The actual experience of

being checked for alcohol showed a very small decrease across all countries, with Australia having the largest decrease from ESRA2 to ESRA3. Especially perceived chances on being checked for drug use were low in ESRA2 and ESRA3, and they remained low in both ESRA2 and ESRA3. This is reflected in the actual experience, which is even lower (under 10%). On average, a slightly higher percentage of respondents experienced drug checks at least once in ESRA3 compared to ESRA2. The perceived likelihood of being checked for respecting speed limits remained approximately the same from ESRA2 to ESRA3. Additionally, the perceived likelihood of being checked for wearing a seatbelt slightly increased from ESRA2 to ESRA3. Finally, the perceived likelihood of being checked for hand-held phone use decreased slightly.

The initial aim of ESRA was to develop a system for gathering reliable and comparable information about people's attitudes towards road safety in several European countries. This objective has been achieved and the initial expectations have even been exceeded. ESRA has become a global initiative which already conducted surveys in more than 60 countries across six continents. The outputs of the ESRA project have become building blocks of national and international road safety monitoring systems.

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 countries. The intention is to repeat this survey every three to four years, retaining a core set of questions in every wave allowing the development of time series of road safety performance indicators.

Recommendations public support for policy measures:

- As earlier suggested by Van den Berghe et al. (2022), use the majority support for policy measures found in ESRA3 (and earlier in ESRA1 and ESRA2) as an argument to convince policymakers to implement new measures improving road safety despite the concerns whether the measures will be found popular.

- Improve the support for the speed limit measures, especially the 30 km/h speed limit which received the lowest support in ESRA3. To do so, it is essential to understand the type of resistance against these policy measures, and people's beliefs related to them. Incorrect or incomplete beliefs could then be corrected. Informing the public about the relevance of the measures and their anticipated benefits can contribute to a higher willingness to support the measures (see for example Van den Berghe, 2022).
- Monitor the level of public support for road safety policy measures to be aware of a possible decreasing trend, which consequently needs to be targetted. A decline in the support between ESRA2 and ESRA3, although slight is worrisome. If the decrease found reflect a real tendency, this can have negative effects on road safety. When a measure is opposed by a large group, there is the chance that this group will organize itself and will initiate a movement against the measure. Consequently, the positive effect of the measure can be undermined (Goldenbeld, 2002).

Recommendations enforcement experiences:

- Continue to prioritize traffic enforcement of driving under the influence of drugs and alcohol. In many countries, this remains a growing concern that requires targeted action. Although the frequency of experienced checks varies across regions, it is crucial to maintain a strong focus on tackling this problem. Enhancing enforcement efforts through increased roadside checks, couples with advancing innovative solutions will be key in effectively addressing and reducing drug- and alcohol-impaired driving.
- Regarding the perceived likelihood of checks for alcohol and drugs, seatbelt use, speeding and mobile phone use, a similar recommendation stands. Improve the perceived likelihood of being checked by police for alcohol and drugs, seatbelt use, speeding and distracted driving. A combination of increased visible enforcement, roadside checks combined with public awareness campaigns could achieve this. Additionally, (innovative) technology such as automated speed cameras or mobile phone detection cameras could create a higher sense of vigilance. These efforts will deter risky behaviour and reinforce the importance of safe driving habits.

- Investigate the legislation on alcohol and drugs checks in traffic across counties. It is currently unknown what legalisation countries have regarding traffic checks and how they compare. Specific legislations might lead to a difference in perceived and experienced police checks, and countries could learn from each other on that point. For example, random police checks are legally not possible in a number of countries, while this could be a method to increase objective and subjective probability of detection.

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Appendix 1: ESRA3 Questionnaire

Introduction

In this questionnaire, we ask you some questions about your experience with, and your attitudes towards traffic and road safety. When responding to a question, please answer in relation to the traffic and road safety situation in [COUNTRY]. There are no right or wrong answers; what matters is your own experience and perception.

Socio-demographic information

Q1) **In which country do you live? _____**

Q2) **Are you …** male – female - other

Q3) **How old are you (in years)?** [Drop down menu]

Q4_1) **Are you currently a student?** yes - no

Q4_2) **What is the highest qualification or educational certificate which you want to achieve?** primary education - secondary education - bachelor's degree or similar - master's degree or higher

Q4_3) **What is the highest qualification or educational certificate that you have obtained?** none - primary education - secondary education - bachelor's degree or similar - master's degree or higher

Q5) **Which of the descriptions comes closest to how you feel about your household's income nowadays?** living comfortably on present income - coping on present income - finding it difficult on present income - finding it very difficult on present income

Q6a) **Is the car you regularly drive equipped with seatbelts in the front seat?** yes – no
Only asked to LMIC countries.

Q6b) **Is the car you regularly drive equipped with seatbelts in the back seat?** yes - no
Only asked to LMIC countries.

Q7) **Are you using a carsharing organization (e.g., poppy or cambio[2])?** yes – no
Only asked to HIC/UMIC countries.

Q8) **Do you have to drive or ride a vehicle during your main professional activity?** yes, I transport mainly other person(s) (e.g., taxi, bus, rickshaw, …) - yes, I transport mainly goods (e.g., truck, courier, food delivery,…) - yes, I transport mainly myself (e.g., visiting patients, salesperson,…) - no, I drive or ride a vehicle only for commuting or private reasons

Q9) **Which phrase best describes the area where you live?** a farm or home in the countryside - a country village - a town or a small city - the suburbs or outskirts of a big city - a big city

Q10) **In which region do you live?** [List of regions per country]

Q11a) **How far do you live from the nearest stop of public transport?** less than 500 metres - between 500 metres and 1 kilometre - more than 1 kilometre

Q11b) **What is the frequency of your nearest public transport?** at least 3 times per hour - 1 or 2 times per hour - less than 1 time per hour

Mobility & exposure

[2] *The examples in brackets were adapted to national context.*

Q12) **During the past 12 months, how often did you use each of the following transport modes in [country]? How often did you ...?** at least 4 days a week - 1 to 3 days a week - a few days a month - a few days a year - never

Items_(random order): take the train - take the bus or minibus - take the tram/streetcar - take the subway, underground, metro - take a plane - take a ship/boat or ferry - be a passenger on non-motorized individual public transport mode (e.g., bike taxi, animal carriages,…) - be a passenger on motorized individual public transport mode (e.g., car-taxi, moto-taxi, tuk-tuk, auto rickshaw, songthaew,…) - walk or run minimum 200m down the street - cycle (non-electric) - cycle on an electric bicycle / e-bike / pedelec - drive a moped (≤ 50 cc or ≤ 4 kW) - drive a motorcycle (> 50 cc or > 4kW) - ride an e-scooter (electric-kick style scooter) - drive a car (non-electric or non-hybrid) - drive a hybrid or electric car - be a passenger in a car - be a passenger on a moped or motorcycle - use another transport mode

Q13) **Over the last 30 days, have you transported a child (<18 years of age) in a car?** yes - no

Items (random order): under 150cm - above 150cm[3]

Self-declared safe and unsafe behaviour in traffic

Q14_1a) **Over the last 30 days, how often did you as a CAR DRIVER ...?** 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.

Binary variable for most items: at least once (2-5) - never (1); only exception: items on protective systems: always wear/transport (1) – not always wear/transport (2-5)

Items (random order):

- drive when you may have been over the legal limit for drinking and driving
- drive after drinking alcohol
- drive within 1 hour after taking drugs (other than prescribed or over the counter medication)
- drive within 2 hours after taking medication that may affect your driving ability
- drive faster than the speed limit inside built-up areas
- drive faster than the speed limit outside built-up areas (except motorways/freeways)
- drive too fast for the road/traffic conditions at the time (e.g., poor visibility, dense traffic, presence of vulnerable road users)
- drive faster than the speed limit on motorways/freeways
- drive without wearing your seatbelt
- transport children under 150cm[4] without using child restraint systems (e.g., child safety seat, cushion)
- transport children above 150cm[5] without wearing their seat belt
- talk on a hand-held mobile phone while driving
- talk on a hands-free mobile phone while driving
- read a message or check social media/news while driving
- drive when you were so sleepy that you had trouble keeping your eyes open

Q14_1b_1) **You said that you have driven a car when you may have been over the legal limit for drinking and driving. Was this ...?** **You can indicate multiple answers:** in the week during daytime - in the week during night-time - in the weekend during daytime - in the weekend during night-time - on motorways - on urban roads - on rural roads

Only asked to HIC/UMIC countries.

Q14_1b_2) **You said that you have driven a car within 1 hour after taking drugs (other than prescribed or over the counter medication). Was this ...?** **You can indicate multiple answers:** cannabis - cocaine - amphetamines (e.g., speed, extasy) - illicit opiates (e.g., morphine, codeine; not prescribed as medication) - other

Q14_1b_3) **You said that you have driven a car within 2 hours after taking medication that may affect your driving ability. Was this ...?** **You can indicate multiple answers[6]:** antihistamines and/or cough medicines (such as Claritin, Allegra, Benadryl) - antidepressants (such as Prozac, Zoloft, Wellbutrin) - prescription pain medicines (such as Tylenol with codeine, OxyContin, Percocet, Vicodin/ hydrocodone) - muscle relaxants (such as Soma, Flexeril) - sleep aids, Barbiturates, or Benzodiazapines

[3] *This question was adapted to national legal regulation.*
[4] *This question was adapted to national legal regulation.*
[5] *This question was adapted to national legal regulation.*
[6] *The examples in brackets were adapted to national context.*

(such as Ambien, Lunesta, phenobarbital, Xanax, Valium, Ativan) - amphetamines (such as Adderall, Dexedrine, phentermine) - other

Q14_2) **Over the last 30 days, how often did you as a CAR PASSENGER …? 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.**

Binary variable for most items: always wear/transport (1) – not always wear/transport (2-5)
Items (random order):

- travel without wearing your seatbelt in the back seat
- travel without wearing your seatbelt in the front seat

Q14_3) **Over the last 30 days, how often did you as a MOPED RIDER or MOTORCYCLIST …?** 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.

Binary variable for most items: at least once (2-5) - never (1); only exception: items on protective systems: always wear/transport (1) – not always wear/transport (2-5)
Items (random order):

- ride when you may have been over the legal limit for drinking and driving
- ride faster than the speed limit outside built-up areas (except motorways/freeways)
- not wear a helmet on a moped or motorcycle
- read a message or check social media/news while riding
- ride within 1 hour after taking drugs (other than prescribed or over the counter medication)
- ride too fast for the road/traffic conditions at the time (e.g., poor visibility, dense traffic, presence of vulnerable road users) - Only asked to LMIC countries.
- ride a motorcycle with more than 1 passenger

Q14_4) **Over the last 30 days, how often did you as a CYCLIST …?** 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.

Binary variable for most items: at least once (2-5) - never (1); only exception: items on protective systems: always wear/transport (1) – not always wear/transport (2-5)
Items (random order):

- cycle when you think you may have had too much to drink
- cycle without a helmet
- cycle while listening to music through headphones
- read a message or check social media/news while cycling
- cycle within 1 hour after taking drugs (other than prescribed or over the counter medication)
- cross the road when a traffic light is red

Q14_5) **Over the last 30 days, how often did you as a PEDESTRIAN …?** 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.

Binary variable for most items: at least once (2-5) - never (1); only exception: items on protective systems: always wear/transport (1) – not always wear/transport (2-5)
Items (random order):

- listen to music through headphones while walking down the street
- walk down the street when you think you may have had too much to drink
- read a message or check social media/news while walking down the street
- text a message while walking down the street
- cross the road when a pedestrian light is red
- cross the road at places other than at a nearby (distance less than 30m[7]) pedestrian crossing

Q14_6) **Over the last 30 days, how often did you as RIDER OF AN E-SCOOTER (electric-kick style scooter) …?** 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.

Binary variable for most items: at least once (2-5) - never (1); only exception: items on protective systems: always wear/transport (1) – not always wear/transport (2-5)
Only asked to HIC/UMIC countries.

[7] *This question was adapted to national legal regulation.*

Items (random order):

- ride with more than 1 person on board
- ride when you think you may have had too much to drink
- cross the road when a traffic light is red
- ride on pedestrian pavement/sidewalk
- ride without a helmet

Acceptability of safe and unsafe traffic behaviour

Q15) **Where you live, how acceptable would most other people say it is for a CAR 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/neutral (1-3)
Items (random order):

- drive when he/she may be over the legal limit for drinking and driving
- drive faster than the speed limit outside built-up areas (except motorways/freeways)
- drive without wearing the seatbelt
- talk on a hand-held mobile phone while driving
- read a message or check social media/news while driving

Q16_1) **How acceptable do you, personally, feel it is for a CAR 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/neutral (1-3)
Items (random order; instructed response item (trick item) as last item):

- drive when he/she may be over the legal limit for drinking and driving
- drive within 1 hour after taking drugs (other than prescribed or over the counter medication)
- drive within 2 hours after taking a medication that may affect the driving ability
- drive faster than the speed limit inside built-up areas
- drive faster than the speed limit outside built-up areas (except motorways/freeways)
- drive too fast for the road/traffic conditions at the time (e.g., poor visibility, dense traffic, presence of vulnerable road users)
- drive faster than the speed limit on motorways/freeways
- drive without wearing the seatbelt
- transport children in the car without securing them (child's car seat, seatbelt, etc.)
- talk on a hand-held mobile phone while driving
- talk on a hands-free mobile phone while driving
- read a message or check social media/news while driving
- drive when he/she is so sleepy that he/she has trouble keeping their eyes open
- Please, select the answer option number 5 "acceptable". (Instructed response item (trick item))

Q16_2) **How acceptable do you, personally, feel it is for a MOPED RIDER or MOTORCYCLIST 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/neutral (1-3)
Items (random order):

- ride when he/she may have been over the legal limit for drinking and driving
- ride faster than the speed limit outside built-up areas (except motorways/freeways)
- not wear a helmet on a moped or motorcycle
- read a message or check social media/news while riding
- ride a motorcycle with more than 1 passenger – Only asked to LMIC countries.

Q16_3) **How acceptable do you, personally, feel it is for a CYCLIST 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/neutral (1-3)
Items (random order):

- cycle when he/she may have had too much to drink
- cycle without a helmet
- read a message or check social media/news while cycling
- cross the road when a traffic light is red

Q16_4) **How acceptable do you, personally, feel it is for a PEDESTRIAN 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/neutral (1-3)
Items (random order):

- walk down the street when he/she may have had too much to drink
- read a message or check social media/news while walking down the street
- cross the road when a pedestrian light is red

Attitudes towards safe and unsafe behaviour in traffic

Q17) **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/neutral (1-3)
Items (random order):
Behaviour believes & attitudes

- For short trips, one can risk driving under the influence of alcohol.
- I have to drive fast; otherwise, I have the impression of losing time.
- Respecting speed limits is boring or dull.
- Motorized vehicles should always give way to pedestrians or cyclists.
- I use a mobile phone while driving, because I always want to be available.
- To save time, I often use a mobile phone while driving.

Perceived behaviour control = self-efficacy

- I trust myself to drive after drinking a small amount of alcohol (e.g., one glass of wine or one pint of beer).
- I have the ability to drive when I am a little drunk after a party.
- I am able to drive after drinking a large amount of alcohol (e.g., a bottle of wine).
- I trust myself when I drive significantly faster than the speed limit.
- I have the ability to drive significantly faster than the speed limit.
- I am able to drive fast through a sharp curve.
- I trust myself when I check messages on the mobile phone while driving.
- I have the ability to write a message on the mobile phone while driving.
- I am able to talk on a hand-held mobile phone while driving.

Habits

- I often drive after drinking alcohol.
- I often drive faster than the speed limit.
- I often use my mobile phone while driving.

Intention

- I intend not to drive after drinking alcohol in the next 30 days.
- I intend to respect speed limits in the next 30 days.
- I intend not to use my mobile phone while driving in the next 30 days.

Subjective safety & risk perception

Q18) **How safe or unsafe 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) = Items indicated by the respondent in Q12 are displayed.

Q19) **How often do you think each of the following factors is the cause of a road crash involving a car**? You can indicate your answer on a scale from 1 to 6, where 1 is "never" and 6 is "(almost) always". The numbers in between can be used to refine your response.

Binary variable: often/frequently (4-6) – not that often/not frequently (1-3)
Items (random order):

- driving after drinking alcohol
- driving within 1 hour after taking drugs (other than prescribed or over the counter medication)
- driving faster than the speed limit
- using a hand-held mobile phone while driving
- using a hands-free mobile phone while driving
- inattentiveness or daydreaming while driving
- driving while tired

Support for policy measures

Q20) **Do you oppose or support a legal obligation …?** You can indicate your answer on a scale from 1 to 5, where 1 is "oppose" and 5 is "support". The numbers in between can be used to refine your response.

Binary variable: support (4-5) – oppose/neutral (1-3)
Items for all countries (random order):

- forbidding all drivers of motorized vehicles to drive with a blood alcohol concentration above 0.0 ‰ (zero tolerance)
- forbidding all drivers of motorized vehicles to use a hand-held mobile phone while driving
- limiting the speed limit to 30 km/h in all built-up areas (except on main thoroughfares)
- requiring all cyclists to wear a helmet
- limiting the speed limit to a maximum of 80 km/h on all rural roads without a median strip
- forbidding all novice drivers of motorized vehicles (license obtained less than 2 years ago) to drive with a blood alcohol concentration above 0.0 ‰ (zero tolerance)

Items only for HIC/UMIC countries (random order):

- installing an alcohol 'interlock' for drivers who have been caught drunk driving on more than one occasion (technology that won't let the car start if the driver's alcohol level is over a certain limit)
- requiring cyclists under the age of 12 to wear a helmet
- forbidding all cyclists to ride with a blood alcohol concentration above 0,0‰ (zero tolerance)

Items only for LMIC countries (random order):

- forbidding all professional drivers of motorized vehicles (e.g., taxis, vans, trucks, buses, …) to drive with a blood alcohol concentration above 0.0 ‰ (zero tolerance)
- requiring all moped and motorcycle riders and passengers to wear a helmet
- requiring all car drivers and passengers (front- and back seat) to wear a seatbelt
- making liability insurance mandatory for owners of cars

Q21) **Please think of the policy measure: "…" and indicate if you agree or disagree with the following statements about it. This policy measure would …?** Disagree – agree

Random selection of one of the first 4 items in Q20 per respondent. All first 4 items in Q20 are be asked equally often in each country.
Items (random order):

- reduce the number of road crashes and injuries
- increase the safety feeling on the streets
- have negative side effects
- restrict people's individual freedom
- reduce the privacy of people
- limit people's mobility
- lead to discrimination
- be fair
- be expensive for people
- be easy to implement
- be difficult to enforce by the police
- be a burden for people
- be an unjustifiable intervention by the state
- be supported by many of my friends

Enforcement

Q22) **On a typical journey, how likely is it that you (as a car driver) will be checked by the police (including cameras or radars) for …?** You can indicate your answer on a scale from 1 to 7, where 1 is "very unlikely" and 7 is "very likely". The numbers in between can be used to refine your response.

Binary variable: likely (5-7) – unlikely/neutral (1-4)
Items (random order):

- alcohol, in other words, being subjected to a Breathalyser test
- the use of illegal drugs
- respecting the speed limits
- wearing your seatbelt
- the use of hand-held mobile phone to talk or text while driving

Q23_1) **In the past 12 months, how many times have you been checked by the police for using alcohol while driving a car (i.e., being subjected to a Breathalyser test)?** Never – 1 time – at least 2 times – Binary variable: at least once – never

Q23_2) **In the past 12 months, how many times have you been checked by the police for using drugs (other than prescribed or over the counter medication) while driving a car?** Never – 1 time – at least 2 times – Binary variable: at least once – never

Involvement in road crashes

The following questions focus on road crashes. With road crashes, we mean any collision involving at least one road vehicle (e.g., car, motorcycle, or bicycle) in motion on a public or private road to which the public has right of access. Furthermore, these crashes result in material damage, injury, or death. Collisions include those between road vehicles, road vehicles and pedestrians, road vehicles and animals or fixed obstacles, road and rail vehicles, and one road vehicle alone.

Q24a) **In the past 12 months, have you personally been involved in a road crash where at least one person was injured (light, severe or fatal crashes)?** Yes – no

Q24b) **Please indicate the transport mode(s) YOU were using at the time of these crashes.** **You can indicate multiple answers:** as a car driver – as a car passenger – as a moped or motorcycle rider – as a moped or motorcycle passenger – as a cyclist – as a pedestrian – as a rider of an e-scooter (electric-kick style scooter) – other

Infrastructure

Q25_1_a) **As a CAR DRIVER, what type of roads do you regularly use in [country]?** You can indicate multiple answers: inter-city motorways – thoroughfares and high-speed roads within cities – rural roads and roads connecting towns and villages – other streets and roads in urban areas

Q25_1_b) **As a CAR DRIVER, how would you rate the roads that you regularly use in terms of safety?** You can indicate your answer on a scale from 1 to 7, where 1 is "very unsafe" and 7 is "very safe". The numbers in between can be used to refine your response.

Binary variable: safe (5-7) – unsafe/neutral (1-4)
Items (random order):

- inter-city motorways
- thoroughfares and high-speed roads within cities
- rural roads and roads connecting towns and villages
- other streets and roads in urban areas

Q25_2_a) **As a MOPED RIDER or MOTORCYCLIST, what type of roads do you regularly use in [country]?** You can indicate multiple answers: thoroughfares and high-speed roads within cities – rural roads and roads connecting towns and villages – other streets and roads in urban areas

Q25_2_b) **As a MOPED RIDER or MOTORCYCLIST, how would you rate the roads that you regularly use in terms of safety?** You can indicate your answer on a scale from 1 to 7, where 1 is "very unsafe" and 7 is "very safe". The numbers in between can be used to refine your response.

Binary variable: safe (5-7) – unsafe/neutral (1-4)
Items (random order):

- thoroughfares and high-speed roads within cities
- rural roads and roads connecting towns and villages
- other streets and roads in urban areas

Q25_3_a) **As a CYCLIST, what type of roads/cycle lanes do you regularly use in [country]?** You can indicate multiple answers: rural roads and roads connecting towns and villages with cycle lanes – rural roads and roads connecting towns and villages without cycle lanes – streets and roads in urban areas with cycle lanes – streets and roads in urban areas without cycle lanes

Q25_3_b) **As a CYCLIST, how would you rate the roads/cycle lanes that you regularly use in terms of safety?** You can indicate your answer on a scale from 1 to 7, where 1 is "very unsafe" and 7 is "very safe". The numbers in between can be used to refine your response.

Binary variable: safe (5-7) – unsafe/neutral (1-4)
Items (random order):

- rural roads and roads connecting towns and villages with cycle lanes
- rural roads and roads connecting towns and villages without cycle lanes

- streets and roads in urban areas with cycle lanes
- streets and roads in urban areas without cycle lanes

Q25_4_a) **As a PEDESTRIAN, what type of roads/sidewalks do you regularly use in [country]?** You can indicate multiple answers: rural roads and roads connecting towns and villages with sidewalks – rural roads and roads connecting towns and villages without sidewalks – streets and roads in urban areas with sidewalks – streets and roads in urban areas without sidewalks

Q25_4_b) **As a PEDESTRIAN, how would you rate the roads/sidewalks that you regularly use in terms of safety?** You can indicate your answer on a scale from 1 to 7, where 1 is "very unsafe" and 7 is "very safe". The numbers in between can be used to refine your response.

Binary variable: safe (5-7) – unsafe/neutral (1-4)
Items (random order):

- rural roads and roads connecting towns and villages with sidewalks
- rural roads and roads connecting towns and villages without sidewalks
- streets and roads in urban areas with sidewalks
- streets and roads in urban areas without sidewalks

Social desirability scale

Introduction: The survey is almost finished. Some of the following questions[8] have nothing to do with road safety, but they are important background information. There are no good or bad answers.

Q26) **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.

Items (random order; instructed response item (trick item) as last item):

- In an argument, I always remain objective and stick to the facts.
- Even if I am feeling stressed, I am always friendly and polite to others.
- When talking to someone, I always listen carefully to what the other person says.
- It has happened that I have taken advantage of someone in the past.
- I have occasionally thrown litter away in the countryside or on to the road.
- Sometimes I only help people if I expect to get something in return.
- Please, select the answer option number 5 "agree". (Instructed response item (trick item))

Closing comment: Thank you for your contribution!

[8] *Q26 is asked together with some last questions on sociodemographic information, which have already been listed in the beginning of the questionnaire.*

Appendix 2: ESRA3 weights

The following weights were used to calculate representative means on national and regional level. They are based on UN population statistics (United Nations Statistics Division, 2023). The weighting took into account small corrections with respect to national representativeness of the sample based on gender and six age groups (18-24y, 25-34y, 35-44y, 45-54y, 55-64y, 65-74y). For the regions, the weighting also took into account the population size of each country in the total set of countries from this region.

Individual country weight	Individual country weight is a weighting factor based on the gender*6 age groups (18-24y, 25-34y, 35-44y, 45-54y, 55-64y, 65-74y) distribution in a country as retrieved from the UN population statistics.
Europe22 weight	European weighting factor based on all 22 European countries participating in ESRA3, considering individual country weight and population size of the country as retrieved from the UN population statistics.
America8 weight	American weighting factor based on all 8 North and Latin American countries participating in ESRA3, considering individual country weight and population size of the country as retrieved from the UN population statistics.
AsiaOceania6 weight	Asian and Oceanian weighting factor based on the 6 Asian and Oceanian countries participating in ESRA3 with data collected through online panel (Australia, Israel, Japan, Kazakhstan, Thailand, Türkiye - Armenia, Kyrgyzstan, and Uzbekistan were not included due to different methodology in data collection – face-to-face CAPI), considering individual country weight and population size of the country as retrieved from the UN population statistics.

Appendix 3: Sample size

Table 8: Weighted sample size by region and country.

Country	All road users	car drivers, at least a few days a year	car drivers, at least a few days a month	motorcyclists/ moped riders, at least a few days a month	cyclists, at least a few days a month	pedestrians, at least a few days a month
Armenia	467	140	122	8	41	441
Australia	953	828	809	280	392	757
Austria	1804	1506	1420	194	876	1682
Belgium	1795	1391	1346	222	852	1583
Bosnia and Herzegovina	914	644	597	96	369	716
Brazil	947	721	657	299	508	788
Canada	1904	1464	1385	221	611	1429
Chile	923	635	576	105	401	793
Colombia	909	557	472	284	510	805
Czech Republic	965	641	597	75	406	845
Denmark	874	689	647	115	520	729
Finland	993	769	683	97	554	889
France	965	801	769	190	409	768
Germany	832	649	618	133	457	678
Greece	978	814	754	200	325	843
Ireland	901	736	706	62	259	744
Israel	965	836	796	33	120	764
Italy	1007	921	906	266	549	885
Japan	986	603	570	84	365	740
Kazakhstan	845	336	250	49	245	707
Kyrgyzstan	468	176	166	7	69	429
Latvia	911	674	621	43	378	777
Luxembourg	471	433	424	44	141	411
Mexico	932	692	647	196	437	789
Netherlands	905	740	700	145	744	856
Panama	855	606	542	84	318	705
Peru	843	475	401	216	434	765
Poland	927	772	723	94	584	864
Portugal	1032	902	844	91	260	917
Serbia	982	724	676	72	488	893
Slovenia	945	824	805	146	464	849
Spain	935	748	710	159	381	865
Sweden	922	690	633	88	446	727
Switzerland	979	803	776	200	522	910
Thailand	870	620	586	632	482	592
Türkiye	897	738	692	264	405	830
United Kingdom	921	668	644	179	327	823
United States	938	823	782	407	468	644
Uzbekistan	433	103	82	30	86	287
Europe22	22000	17710	16900	3732	10650	19119
America8	8000	6331	5894	2650	3967	6187
AsiaOceania6*	6000	4180	3931	1708	2524	4705

** Not including Armenia, Kyrgyzstan, Uzbekistan (different methodology).*

Appendix 4: Detailed Statistical Results

Support for policy measures

Do you oppose or support a legal obligation …?

a. Forbidding all drivers of motorized vehicles to drive with a blood alcohol concentration above 0.0 ‰ (zero tolerance)

Region

	Europe22	America8	AsiaOceania6
oppose/neutral (1-3)	34.2%a	26.4%b	28.8%b
support (4-5)	**65.8%a**	**73.6%b**	**71.2%b**
	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*
Chi-Square	80.71	2	<0.001
Cramer's V	0.073		

Each subscript letter denotes a region whose column proportions do not differ significantly from each other at the 0.01 level.

Gender

Europe22	**male**	**female**	
oppose/neutral (1-3)	39.6%a	28.8%b	
support (4-5)	**60.4%a**	**71.2%b**	
	100.0%	100.0%	
Tests	*Value*	*df*	*p-value*
Chi-Square	113.49	1	<0.001
Cramer's V	0.114		
America8	**male**	**female**	
oppose/neutral (1-3)	32.0%a	20.9%b	
support (4-5)	**68.0%a**	**79.1%b**	
	100.0%	100.0%	
Tests	*Value*	*df*	*p-value*
Chi-Square	53.27	1	<0.001
Cramer's V	0.126		
AsiaOceania6	**male**	**female**	
oppose/neutral (1-3)	32.6%a	24.7%b	
support (4-5)	**67.4%a**	**75.3%b**	
	100.0%	100.0%	
Tests	*Value*	*df*	*p-value*
Chi-Square	25.49	1	<0.001
Cramer's V	0.087		

Each subscript letter denotes a subset of gender / age categories whose column proportions do not differ significantly from each other at the 0.01 level.

Age group

Europe22	**18-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65-74**
oppose/neutral (1-3)	42.6%$_{a}$	38.6%$_{a,b}$	33.8%$_{b,d}$	33.1%$_{b,c,d,e}$	32.0%$_{d,e}$	27.6%$_{e}$
support (4-5)	**57.4%**$_{a}$	**61.4%**$_{a,b}$	**66.2%**$_{b,d}$	**66.9%**$_{b,c,d,e}$	**68.0%**$_{d,e}$	**72.4%**$_{e}$
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*			
Chi-Square	72.51	5	<0.001			
Cramer's V	0.091					
America8	**18-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65-74**
oppose/neutral (1-3)	31.8%$_{a}$	21.8%$_{b}$	21.2%$_{b}$	29.2%$_{a,b}$	27.8%$_{a,b}$	30.8%$_{a,b}$
support (4-5)	**68.2%**$_{a}$	**78.2%**$_{b}$	**78.8%**$_{b}$	**70.8%**$_{a,b}$	**72.2%**$_{a,b}$	**69.2%**$_{a,b}$
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*			
Chi-Square	31.63	5	<0.001			
Cramer's V	0.097					
AsiaOceania6	**18-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65-74**
oppose/neutral (1-3)	33.3%$_{a,b}$	28.7%$_{a,b}$	34.4%$_{a}$	24.7%$_{b}$	25.4%$_{b,c}$	25.7%$_{a,b}$
support (4-5)	**66.7%**$_{a,b}$	**71.3%**$_{a,b}$	**65.6%**$_{a}$	**75.3%**$_{b}$	**74.6%**$_{b,c}$	**74.3%**$_{a,b}$
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*			
Chi-Square	24.90	5	<0.001			
Cramer's V	0.086					

Each subscript letter denotes a subset of gender / age categories whose column proportions do not differ significantly from each other at the 0.01 level.

b. Forbidding all novice drivers of motorized vehicles (license obtained less than 2 years ago) to drive with a blood alcohol concentration above 0.0 ‰ (zero tolerance)

Region

	Europe22	**America8**	**AsiaOceania6**
oppose/neutral (1-3)	21.7%$_{a}$	22.3%$_{a}$	26.6%$_{b}$
support (4-5)	**78.3%**$_{a}$	**77.7%**$_{a}$	**73.4%**$_{b}$
	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*
Chi-Square	27.59	2	<0.001
Cramer's V	0.043		

Each subscript letter denotes a region whose column proportions do not differ significantly from each other at the 0.01 level.

Gender

Europe22	**male**	**female**	
oppose/neutral (1-3)	25.4%$_{a}$	18.0%$_{b}$	
support (4-5)	**74.6%**$_{a}$	**82.0%**$_{b}$	
	100.0%	100.0%	
Tests	*Value*	*df*	*p-value*
Chi-Square	69.80	1	<0.001
Cramer's V	0.090		

America8	male	female	
oppose/neutral (1-3)	26.4%a	18.4%b	
support (4-5)	**73.6%a**	**81.6%b**	
	100.0%	100.0%	
Tests	*Value*	*df*	*p-value*
Chi-Square	30.76	1	<0.001
Cramer's V	0.096		
AsiaOceania6	**male**	**female**	
oppose/neutral (1-3)	29.2%a	23.9%b	
support (4-5)	**70.8%a**	**76.1%b**	
	100.0%	100.0%	
Tests	*Value*	*df*	*p-value*
Chi-Square	12.03	1	0.001
Cramer's V	0.060		

Each subscript letter denotes a subset of gender / age categories whose column proportions do not differ significantly from each other at the 0.01 level.

Age group

Europe22	18-24	25-34	35-44	45-54	55-64	65-74
oppose/neutral (1-3)	34.0%a	30.5%a	21.3%b	17.9%b,c	17.4%b,c	14.0%c
support (4-5)	**66.0%a**	**69.5%a**	**78.7%b**	**82.1%b,c**	**82.6%b,c**	**86.0%c**
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*			
Chi-Square	229.90	5	<0.001			
Cramer's V	0.163					
America8	**18-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65-74**
oppose/neutral (1-3)	32.9%a	20.0%b,c	17.2%b	25.3%a,c,d,e	19.9%b,d	19.9%b,e
support (4-5)	**67.1%a**	**80.0%b,c**	**82.8%b**	**74.7%a,c,d,e**	**80.1%b,d**	**80.1%b,e**
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*			
Chi-Square	51.81	5	<0.001			
Cramer's V	0.124					
AsiaOceania6	**18-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65-74**
oppose/neutral (1-3)	34.4%a	30.0%a,b	31.5%a,d	22.6%b,c	19.2%c	21.1%b,c,d
support (4-5)	**65.6%a**	**70.0%a,b**	**68.5%a,d**	**77.4%b,c**	**80.8%c**	**78.9%b,c,d**
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*			
Chi-Square	52.20	5	<0.001			
Cramer's V	0.124					

Each subscript letter denotes a subset of gender / age categories whose column proportions do not differ significantly from each other at the 0.01 level.

c. Installing an alcohol 'interlock' for drivers who have been caught drunk driving on more than one occasion (technology that won't let the car start if the driver's alcohol level is over a certain limit)

Region

	Europe22	America8	AsiaOceania6
oppose/neutral (1-3)	23.6%$_a$	17.6%$_b$	20.0%$_b$
support (4-5)	**76.4%**$_a$	**82.4%**$_b$	**80.0%**$_b$
	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*
Chi-Square	57.67	2	<0.001
Cramer's V	0.062		

Each subscript letter denotes a region whose column proportions do not differ significantly from each other at the 0.01 level.

Gender

Europe22	**male**	**female**	
oppose/neutral (1-3)	27.8%$_a$	19.4%$_b$	
support (4-5)	**72.2%**$_a$	**80.6%**$_b$	
	100.0%	100.0%	
Tests	*Value*	*df*	*p-value*
Chi-Square	86.56	1	<0.001
Cramer's V	0.100		
America8	**male**	**female**	
oppose/neutral (1-3)	22.3%$_a$	13.0%$_b$	
support (4-5)	**77.7%**$_a$	**87.0%**$_b$	
	100.0%	100.0%	
Tests	*Value*	*df*	*p-value*
Chi-Square	49.61	1	<0.001
Cramer's V	0.121		
AsiaOceania6	**male**	**female**	
oppose/neutral (1-3)	21.7%$_a$	18.1%$_a$	
support (4-5)	**78.3%**$_a$	**81.9%**$_a$	
	100.0%	100.0%	
Tests	*Value*	*df*	*p-value*
Chi-Square	6.63	1	0.010
Cramer's V	0.044		

Each subscript letter denotes a subset of gender / age categories whose column proportions do not differ significantly from each other at the 0.01 level.

Age group

Europe22	**18-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65-74**
oppose/neutral (1-3)	32.1%$_a$	28.2%$_{a,b}$	24.6%$_{b,c}$	22.0%$_c$	20.4%$_{c,d,e}$	17.1%$_e$
support (4-5)	**67.9%**$_a$	**71.8%**$_{a,b}$	**75.4%**$_{b,c}$	**78.0%**$_c$	**79.6%**$_{c,d,e}$	**82.9%**$_e$
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*			
Chi-Square	97.69	5	<0.001			
Cramer's V	0.106					

America8	18-24	25-34	35-44	45-54	55-64	65-74
oppose/neutral (1-3)	27.7%a	17.2%b	14.5%b	18.3%b	12.8%b	14.8%b
support (4-5)	**72.3%a**	**82.8%b**	**85.5%b**	**81.7%b**	**87.2%b**	**85.2%b**
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*			
Chi-Square	51.29	5	<0.001			
Cramer's V	0.123					

AsiaOceania6	18-24	25-34	35-44	45-54	55-64	65-74
oppose/neutral (1-3)	27.0%a	20.8%a,b	23.2%a,b	16.9%b	15.8%b,c	16.4%b,d
support (4-5)	**73.0%a**	**79.2%a,b**	**76.8%a,b**	**83.1%b**	**84.2%b,c**	**83.6%b,d**
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*			
Chi-Square	30.87	5	<0.001			
Cramer's V	0.095					

Each subscript letter denotes a subset of gender / age categories whose column proportions do not differ significantly from each other at the 0.01 level.

d. Limiting the speed limit to 30 km/h in all built-up areas (except on main thoroughfares)

Region

	Europe22	America8	AsiaOceania6
oppose/neutral (1-3)	57.9%a	45.2%b	53.5%c
support (4-5)	**42.1%a**	**54.8%b**	**46.5%c**
	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*
Chi-Square	163.39	2	<0.001
Cramer's V	0.104		

Each subscript letter denotes a region whose column proportions do not differ significantly from each other at the 0.01 level.

Gender

Europe22	male	female	
oppose/neutral (1-3)	61.4%a	54.5%b	
support (4-5)	**38.6%a**	**45.5%b**	
	100.0%	100.0%	
Tests	*Value*	*df*	*p-value*
Chi-Square	41.97	1	<0.001
Cramer's V	0.070		

America8	male	female	
oppose/neutral (1-3)	50.3%a	40.1%b	
support (4-5)	**49.7%a**	**59.9%b**	
	100.0%	100.0%	
Tests	*Value*	*df*	*p-value*
Chi-Square	35.03	1	<0.001
Cramer's V	0.102		

AsiaOceania6	male	female
oppose/neutral (1-3)	56.6%a	50.3%b

support (4-5)	**43.4%**$_{a}$	**49.7%**$_{b}$	
	100.0%	100.0%	
Tests	*Value*	*df*	*p-value*
Chi-Square	13.27	1	<0.001
Cramer's V	0.063		

Each subscript letter denotes a subset of gender / age categories whose column proportions do not differ significantly from each other at the 0.01 level.

Age group

Europe22	**18-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65-74**
oppose/neutral (1-3)	65.9%$_{a}$	58.9%$_{a,b}$	56.4%$_{b,d}$	61.0%$_{a,b}$	57.1%$_{b,c}$	50.2%$_{d}$
support (4-5)	**34.1%**$_{a}$	**41.1%**$_{a,b}$	**43.6%**$_{b,d}$	**39.0%**$_{a,b}$	**42.9%**$_{b,c}$	**49.8%**$_{d}$
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*			
Chi-Square	65.83	5	<0.001			
Cramer's V	0.087					
America8	**18-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65-74**
oppose/neutral (1-3)	50.9%$_{a}$	36.5%$_{b}$	34.8%$_{b}$	48.8%$_{a}$	53.5%$_{a}$	55.9%$_{a}$
support (4-5)	**49.1%**$_{a}$	**63.5%**$_{b}$	**65.2%**$_{b}$	**51.2%**$_{a}$	**46.5%**$_{a}$	**44.1%**$_{a}$
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*			
Chi-Square	92.46	5	<0.001			
Cramer's V	0.166					
AsiaOceania6	**18-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65-74**
oppose/neutral (1-3)	53.8%$_{a,b,c}$	44.9%$_{a}$	52.3%$_{a,b}$	57.3%$_{b,c}$	51.9%$_{a,b}$	64.0%$_{c}$
support (4-5)	**46.2%**$_{a,b,c}$	**55.1%**$_{a}$	**47.7%**$_{a,b}$	**42.7%**$_{b,c}$	**48.1%**$_{a,b}$	**36.0%**$_{c}$
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*			
Chi-Square	44.58	5	<0.001			
Cramer's V	0.115					

Each subscript letter denotes a subset of gender / age categories whose column proportions do not differ significantly from each other at the 0.01 level.

e. Limiting the speed limit to a maximum of 80 km/h on all rural roads without a median strip

Region

	Europe22	**America8**	**AsiaOceania6**
oppose/neutral (1-3)	51.2%$_{a}$	35.4%$_{b}$	47.0%$_{c}$
support (4-5)	**48.8%**$_{a}$	**64.6%**$_{b}$	**53.0%**$_{c}$
	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*
Chi-Square	248.58	2	<0.001
Cramer's V	0.128		

Each subscript letter denotes a region whose column proportions do not differ significantly from each other at the 0.01 level.

Gender

Europe22	**male**	**female**	
oppose/neutral (1-3)	56.0%a	46.4%b	
support (4-5)	**44.0%**a	**53.6%**b	
	100.0%	100.0%	
Tests	*Value*	*df*	*p-value*
Chi-Square	81.22	1	<0.001
Cramer's V	0.097		
America8	**male**	**female**	
oppose/neutral (1-3)	39.0%a	32.0%b	
support (4-5)	**61.0%**a	**68.0%**b	
	100.0%	100.0%	
Tests	*Value*	*df*	*p-value*
Chi-Square	18.05	1	<0.001
Cramer's V	0.073		
AsiaOceania6	**male**	**female**	
oppose/neutral (1-3)	49.1%a	44.8%a	
support (4-5)	**50.9%**a	**55.2%**a	
	100.0%	100.0%	
Tests	*Value*	*df*	*p-value*
Chi-Square	6.15	1	0.013
Cramer's V	0.043		

Each subscript letter denotes a subset of gender / age categories whose column proportions do not differ significantly from each other at the 0.01 level.

Age group

Europe22	**18-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65-74**
oppose/neutral (1-3)	62.0%a	56.0%a,b	52.0%b,d	51.2%b,c,d	48.0%d	41.0%e
support (4-5)	**38.0%**a	**44.0%**a,b	**48.0%**b,d	**48.8%**b,c,d	**52.0%**d	**59.0%**e
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*			
Chi-Square	119.50	5	<0.001			
Cramer's V	0.117					
America8	**18-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65-74**
oppose/neutral (1-3)	43.6%a	29.0%b	25.0%b	41.8%a	38.7%a	40.4%a
support (4-5)	**56.4%**a	**71.0%**b	**75.0%**b	**58.2%**a	**61.3%**a	**59.6%**a
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*			
Chi-Square	76.09	5	<0.001			
Cramer's V	0.150					
AsiaOceania6	**18-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65-74**
oppose/neutral (1-3)	52.2%a	39.9%b	46.9%a,b	47.4%a,b	47.4%a,b	51.5%a,b
support (4-5)	**47.8%**a	**60.1%**b	**53.1%**a,b	**52.6%**a,b	**52.6%**a,b	**48.5%**a,b
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*			
Chi-Square	21.79	5	0.001			

Cramer's V	0.080

Each subscript letter denotes a subset of gender / age categories whose column proportions do not differ significantly from each other at the 0.01 level.

f. Forbidding all drivers of motorized vehicles to use a hand-held mobile phone while driving

Region

	Europe22	America8	AsiaOceania6
oppose/neutral (1-3)	20.7%a	18.7%a	20.8%a
support (4-5)	**79.3%a**	**81.3%a**	**79.2%a**
	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*
Chi-Square	6.46	2	0.040
Cramer's V	0.021		

Each subscript letter denotes a region whose column proportions do not differ significantly from each other at the 0.01 level.

Gender

Europe22	**male**	**female**	
oppose/neutral (1-3)	22.3%a	19.1%b	
support (4-5)	**77.7%a**	**80.9%b**	
	100.0%	100.0%	
Tests	*Value*	*df*	*p-value*
Chi-Square	13.78	1	<0.001
Cramer's V	0.040		
America8	**male**	**female**	
oppose/neutral (1-3)	22.0%a	15.6%b	
support (4-5)	**78.0%a**	**84.4%b**	
	100.0%	100.0%	
Tests	*Value*	*df*	*p-value*
Chi-Square	22.40	1	<0.001
Cramer's V	0.082		
AsiaOceania6	**male**	**female**	
oppose/neutral (1-3)	22.1%a	19.3%a	
support (4-5)	**77.9%a**	**80.7%a**	
	100.0%	100.0%	
Tests	*Value*	*df*	*p-value*
Chi-Square	3.95	1	0.047
Cramer's V	0.034		

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Age group

Europe22	**18-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65-74**
oppose/neutral (1-3)	33.8%a	30.3%a	22.0%b	18.7%b	13.3%c	10.5%c
support (4-5)	**66.2%a**	**69.7%a**	**78.0%b**	**81.3%b**	**86.7%c**	**89.5%c**
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Tests	*Value*	*df*	*p-value*			
Chi-Square	324.20	5	<0.001			
Cramer's V	0.193					
America8	**18-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65-74**
oppose/neutral (1-3)	26.7%$_{a}$	18.8%$_{a,b}$	15.4%$_{b}$	17.5%$_{b,c}$	15.8%$_{b,d}$	19.5%$_{a,b}$
support (4-5)	**73.3%**$_{a}$	**81.2%**$_{a,b}$	**84.6%**$_{b}$	**82.5%**$_{b,c}$	**84.2%**$_{b,d}$	**80.5%**$_{a,b}$
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*			
Chi-Square	30.11	5	<0.001			
Cramer's V	0.095					
AsiaOceania6	**18-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65-74**
oppose/neutral (1-3)	29.2%$_{a}$	24.2%$_{a,b}$	24.4%$_{a,b}$	18.1%$_{b,c}$	13.6%$_{c}$	14.5%$_{c,d}$
support (4-5)	**70.8%**$_{a}$	**75.8%**$_{a,b}$	**75.6%**$_{a,b}$	**81.9%**$_{b,c}$	**86.4%**$_{c}$	**85.5%**$_{c,d}$
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*			
Chi-Square	57.81	5	<0.001			
Cramer's V	0.131					

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g. Requiring all cyclists to wear a helmet

Region

	Europe22	**America8**	**AsiaOceania6**
oppose/neutral (1-3)	35.3%$_{a}$	20.7%$_{b}$	35.7%$_{a}$
support (4-5)	**64.7%**$_{a}$	**79.3%**$_{b}$	**64.3%**$_{a}$
	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*
Chi-Square	262.18	2	<0.001
Cramer's V	0.131		

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Gender

Europe22	**male**	**female**	
oppose/neutral (1-3)	39.6%$_{a}$	31.1%$_{b}$	
support (4-5)	**60.4%**$_{a}$	**68.9%**$_{b}$	
	100.0%	100.0%	
Tests	*Value*	*df*	*p-value*
Chi-Square	69.52	1	<0.001
Cramer's V	0.089		
America8	**male**	**female**	
oppose/neutral (1-3)	26.9%$_{a}$	14.7%$_{b}$	
support (4-5)	**73.1%**$_{a}$	**85.3%**$_{b}$	
	100.0%	100.0%	
Tests	*Value*	*df*	*p-value*
Chi-Square	75.68	1	<0.001

Cramer's V	0.150		
AsiaOceania6	**male**	**female**	
oppose/neutral (1-3)	37.9%a	33.5%b	
support (4-5)	**62.1%**a	**66.5%**b	
	100.0%	100.0%	
Tests	*Value*	*df*	*p-value*
Chi-Square	7.10	1	0.008
Cramer's V	0.046		

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Age group

Europe22	**18-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65-74**
oppose/neutral (1-3)	49.8%a	37.3%b	34.5%b	35.1%b	33.4%b	26.5%c
support (4-5)	**50.2%**a	**62.7%**b	**65.5%**b	**64.9%**b	**66.6%**b	**73.5%**c
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*			
Chi-Square	136.03	5	<0.001			
Cramer's V	0.125					
America8	**18-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65-74**
oppose/neutral (1-3)	31.7%a	20.1%b	16.6%b	20.1%b	17.0%b	19.5%b
support (4-5)	**68.3%**a	**79.9%**b	**83.4%**b	**79.9%**b	**83.0%**b	**80.5%**b
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*			
Chi-Square	49.80	5	<0.001			
Cramer's V	0.122					
AsiaOceania6	**18-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65-74**
oppose/neutral (1-3)	42.8%a	35.3%a,b	37.8%a,b	37.6%a,b	30.7%b	29.0%b,c
support (4-5)	**57.2%**a	**64.7%**a,b	**62.2%**a,b	**62.4%**a,b	**69.3%**b	**71.0%**b,c
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*			
Chi-Square	26.09	5	<0.001			
Cramer's V	0.088					

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h. Requiring cyclists under the age of 12 to wear a helmet

Region

	Europe22	America8	AsiaOceania6
oppose/neutral (1-3)	16.6%a	13.9%b	23.8%c
support (4-5)	**83.4%a**	**86.1%b**	**76.2%c**
	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*
Chi-Square	105.23	2	<0.001
Cramer's V	0.083		

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Gender

Europe22	**male**	**female**	
oppose/neutral (1-3)	19.5%a	13.7%b	
support (4-5)	**80.5%a**	**86.3%b**	
	100.0%	100.0%	
Tests	*Value*	*df*	*p-value*
Chi-Square	51.53	1	<0.001
Cramer's V	0.077		
America8	**male**	**female**	
oppose/neutral (1-3)	18.3%a	9.8%b	
support (4-5)	**81.7%a**	**90.2%b**	
	100.0%	100.0%	
Tests	*Value*	*df*	*p-value*
Chi-Square	50.64	1	<0.001
Cramer's V	0.123		
AsiaOceania6	**male**	**female**	
oppose/neutral (1-3)	27.9%a	19.5%b	
support (4-5)	**72.1%a**	**80.5%b**	
	100.0%	100.0%	
Tests	*Value*	*df*	*p-value*
Chi-Square	33.06	1	<0.001
Cramer's V	0.099		

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Age group

Europe22	**18-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65-74**
oppose/neutral (1-3)	24.8%a	20.9%a,b	18.4%b,c	15.1%c,d	12.9%d,e	9.9%e
support (4-5)	**75.2%a**	**79.1%a,b**	**81.6%b,c**	**84.9%c,d**	**87.1%d,e**	**90.1%e**
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*			
Chi-Square	130.32	5	<0.001			
Cramer's V	0.122					
America8	**18-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65-74**

oppose/neutral (1-3)	19.8%a	14.8%a	12.9%a,b	14.3%a,b	7.9%b	13.7%a,b
support (4-5)	**80.2%a**	**85.2%a**	**87.1%a,b**	**85.7%a,b**	**92.1%b**	**86.3%a,b**
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*			
Chi-Square	31.43	5	<0.001			
Cramer's V	0.097					
AsiaOceania6	**18-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65-74**
oppose/neutral (1-3)	28.6%a	25.2%a,b	27.5%a	24.7%a,b	18.2%b	16.1%b,c
support (4-5)	**71.4%a**	**74.8%a,b**	**72.5%a**	**75.3%a,b**	**81.8%b**	**83.9%b,c**
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*			
Chi-Square	34.50	5	<0.001			
Cramer's V	0.101					

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i. Forbidding all cyclists to ride with a blood alcohol concentration above 0.0‰ (zero tolerance)

Region

	Europe22	America8	AsiaOceania6
oppose/neutral (1-3)	37.5%a	28.9%b	32.0%b
support (4-5)	**62.5%a**	**71.1%b**	**68.0%b**
	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*
Chi-Square	90.31	2	<0.001
Cramer's V	0.077		

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Gender

Europe22	**male**	**female**	
oppose/neutral (1-3)	41.9%a	33.1%b	
support (4-5)	**58.1%a**	**66.9%b**	
	100.0%	100.0%	
Tests	*Value*	*df*	*p-value*
Chi-Square	72.67	1	<0.001
Cramer's V	0.092		
America8	**male**	**female**	
oppose/neutral (1-3)	33.7%a	24.4%b	
support (4-5)	**66.3%a**	**75.6%b**	
	100.0%	100.0%	
Tests	*Value*	*df*	*p-value*
Chi-Square	35.65	1	<0.001
Cramer's V	0.103		
AsiaOceania6	**male**	**female**	
oppose/neutral (1-3)	36.8%a	27.1%b	

support (4-5)	**63.2%**$_{a}$	**72.9%**$_{b}$	
	100.0%	100.0%	
Tests	*Value*	*df*	*p-value*
Chi-Square	36.36	1	<0.001
Cramer's V	0.104		

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Age group

Europe22	**18-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65-74**
oppose/neutral (1-3)	51.1%$_{a}$	43.4%$_{b}$	37.1%$_{c}$	36.6%$_{c}$	33.3%$_{c,d}$	28.1%$_{d}$
support (4-5)	**48.9%**$_{a}$	**56.6%**$_{b}$	**62.9%**$_{c}$	**63.4%**$_{c}$	**66.7%**$_{c,d}$	**71.9%**$_{d}$
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*			
Chi-Square	159.20	5	<0.001			
Cramer's V	0.135					
America8	**18-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65-74**
oppose/neutral (1-3)	37.2%$_{a}$	26.4%$_{b}$	24.2%$_{b}$	30.5%$_{a,b}$	25.5%$_{b}$	33.3%$_{a,b}$
support (4-5)	**62.8%**$_{a}$	**73.6%**$_{b}$	**75.8%**$_{b}$	**69.5%**$_{a,b}$	**74.5%**$_{b}$	**66.7%**$_{a,b}$
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*			
Chi-Square	33.39	5	<0.001			
Cramer's V	0.100					
AsiaOceania6	**18-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65-74**
oppose/neutral (1-3)	39.7%$_{a}$	33.1%$_{a,b}$	38.3%$_{a}$	26.6%$_{b}$	27.4%$_{b,c}$	26.5%$_{b,d}$
support (4-5)	**60.3%**$_{a}$	**66.9%**$_{a,b}$	**61.7%**$_{a}$	**73.4%**$_{b}$	**72.6%**$_{b,c}$	**73.5%**$_{b,d}$
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*			
Chi-Square	44.80	5	<0.001			
Cramer's V	0.115					

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Experienced enforcement

In the past 12 months, how many times have you been checked by the police for ...?

j. Using alcohol while driving a car (i.e., being subjected to a Breathalyser test)

Region

	Europe22	**America8**	**AsiaOceania6**
never	81.2%$_{a}$	79.3%$_{a}$	82.5%$_{a}$
at least once	**18.8%**$_{a}$	**20.7%**$_{a}$	**17.5%**$_{a}$
	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*
Chi-Square	7.55	2	0.023
Cramer's V	0.025		

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Gender

Europe22	**male**	**female**	
never	76.5%$_{a}$	86.3%$_{b}$	
at least once	**23.5%**$_{a}$	**13.7%**$_{b}$	
	100.0%	100.0%	
Tests	*Value*	*df*	*p-value*
Chi-Square	110.19	1	<0.001
Cramer's V	0.125		
America8	**male**	**female**	
never	75.4%$_{a}$	83.3%$_{b}$	
at least once	**24.6%**$_{a}$	**16.7%**$_{b}$	
	100.0%	100.0%	
Tests	*Value*	*df*	*p-value*
Chi-Square	24.01	1	<0.001
Cramer's V	0.097		
AsiaOceania6	**male**	**female**	
never	79.1%$_{a}$	86.3%$_{b}$	
at least once	**20.9%**$_{a}$	**13.7%**$_{b}$	
	100.0%	100.0%	
Tests	*Value*	*df*	*p-value*
Chi-Square	21.90	1	<0.001
Cramer's V	0.094		

Each subscript letter denotes a subset of gender / age categories whose column proportions do not differ significantly from each other at the 0.01 level.

Age group

Europe22	**18-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65-74**
never	75.3%$_{a,b}$	70.7%$_{a}$	78.3%$_{b}$	85.3%$_{c}$	87.2%$_{c}$	89.6%$_{c}$
at least once	**24.7%**$_{a,b}$	**29.3%**$_{a}$	**21.7%**$_{b}$	**14.7%**$_{c}$	**12.8%**$_{c}$	**10.4%**$_{c}$
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*			
Chi-Square	209.12	5	<0.001			
Cramer's V	0.173					
America8	**18-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65-74**
never	74.8%$_{a}$	73.9%$_{a}$	75.7%$_{a}$	78.1%$_{a}$	88.3%$_{b}$	94.5%$_{b}$
at least once	**25.2%**$_{a}$	**26.1%**$_{a}$	**24.3%**$_{a}$	**21.9%**$_{a}$	**11.7%**$_{b}$	**5.5%**$_{b}$
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*			
Chi-Square	74.38	5	<0.001			
Cramer's V	0.171					
AsiaOceania6	**18-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65-74**
never	76.7%$_{a,c}$	74.9%$_{a}$	82.3%$_{a,b}$	86.3%$_{b}$	85.5%$_{b,c}$	90.9%$_{b,d}$
at least once	**23.3%**$_{a,c}$	**25.1%**$_{a}$	**17.7%**$_{a,b}$	**13.7%**$_{b}$	**14.5%**$_{b,c}$	**9.1%**$_{b,d}$
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Tests	*Value*	*df*	*p-value*
Chi-Square	48.63	5	<0.001
Cramer's V	0.140		

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k. Using drugs (other than prescribed or over the counter medication) while driving a car

Region

	Europe22	**America8**	**AsiaOceania6**
never	94.5%$_a$	91.8%$_b$	94.2%$_a$
at least once	**5.5%**$_a$	**8.2%**$_b$	**5.8%**$_a$
	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*
Chi-Square	25.40	2	<0.001
Cramer's V	0.046		

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Gender

Europe22	**male**	**female**	
never	93.4%$_a$	95.7%$_b$	
at least once	**6.6%**$_a$	**4.3%**$_b$	
	100.0%	100.0%	
Tests	*Value*	*df*	*p-value*
Chi-Square	17.65	1	<0.001
Cramer's V	0.050		
America8	**male**	**female**	
never	89.4%$_a$	94.2%$_b$	
at least once	**10.6%**$_a$	**5.8%**$_b$	
	100.0%	100.0%	
Tests	*Value*	*df*	*p-value*
Chi-Square	18.86	1	<0.001
Cramer's V	0.086		
AsiaOceania6	**male**	**female**	
never	93.0%$_a$	95.5%$_b$	
at least once	**7.0%**$_a$	**4.5%**$_b$	
	100.0%	100.0%	
Tests	*Value*	*df*	*p-value*
Chi-Square	7.14	1	0.008
Cramer's V	0.054		

Each subscript letter denotes a subset of gender / age categories whose column proportions do not differ significantly from each other at the 0.01 level.

Age group

Europe22	**18-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65-74**
never	91.6%a	90.0%a	92.1%a	96.8%b	98.0%b	98.1%b
at least once	**8.4%**a	**10.0%**a	**7.9%**a	**3.2%**b	**2.0%**b	**1.9%**b
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*			
Chi-Square	146.26	5	<0.001			
Cramer's V	0.144					
America8	**18-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65-74**
never	88.8%a,b	89.7%a,b	89.1%a	92.9%a,b,c	95.7%b,c	98.6%c
at least once	**11.2%**a,b	**10.3%**a,b	**10.9%**a	**7.1%**a,b,c	**4.3%**b,c	**1.4%**c
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*			
Chi-Square	36.74	5	<0.001			
Cramer's V	0.120					
AsiaOceania6	**18-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65-74**
never	92.6%a,b	91.0%a	93.5%a,b	96.5%b	95.2%a,b	97.2%a,b
at least once	**7.4%**a,b	**9.0%**a	**6.5%**a,b	**3.5%**b	**4.8%**a,b	**2.8%**a,b
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*			
Chi-Square	21.94	5	0.001			
Cramer's V	0.094					

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Enforcement perception

On a typical journey, how likely is it that you (as a car driver) will be checked by the police (including cameras or radars) for …?

I. Alcohol, in other words, being subjected to a Breathalyser test

Region

	Europe22	**America8**	**AsiaOceania6**
unlikely/neutral (1-4)	82.9%a	74.4%b	69.9%c
likely (5-7)	**17.1%**a	**25.6%**b	**30.1%**c
	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*
Chi-Square	188.92	2	<0.001
Cramer's V	0.127		

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Gender

Europe22	**male**	**female**
unlikely/neutral (1-4)	81.3%a	84.6%b
likely (5-7)	**18.7%**a	**15.4%**b
	100.0%	100.0%

Tests	*Value*	*df*	*p-value*
Chi-Square	13.44	1	<0.001
Cramer's V	0.044		

America8	**male**	**female**
unlikely/neutral (1-4)	71.1%a	77.8%b
likely (5-7)	**28.9%a**	**22.2%b**
	100.0%	100.0%

Tests	*Value*	*df*	*p-value*
Chi-Square	14.77	1	<0.001
Cramer's V	0.076		

AsiaOceania6	**male**	**female**
unlikely/neutral (1-4)	68.1%a	72.0%a
likely (5-7)	**31.9%a**	**28.0%a**
	100.0%	100.0%

Tests	*Value*	*df*	*p-value*
Chi-Square	4.31	1	0.038
Cramer's V	0.042		

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Age group

Europe22	**18-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65-74**
unlikely/neutral (1-4)	82.0%a,b,c	79.3%a	80.5%a,b	85.1%b,c	84.2%a,b,c	86.7%c
likely (5-7)	**18.0%a,b,c**	**20.7%a**	**19.5%a,b**	**14.9%b,c**	**15.8%a,b,c**	**13.3%c**
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Tests	*Value*	*df*	*p-value*
Chi-Square	34.20	5	<0.001
Cramer's V	0.070		

America8	**18-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65-74**
unlikely/neutral (1-4)	80.6%a,c	66.6%b	62.4%b	79.2%a	81.9%a,c	90.1%c
likely (5-7)	**19.4%a,c**	**33.4%b**	**37.6%b**	**20.8%a**	**18.1%a,c**	**9.9%c**
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Tests	*Value*	*df*	*p-value*
Chi-Square	116.79	5	<0.001
Cramer's V	0.214		

AsiaOceania6	**18-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65-74**
unlikely/neutral (1-4)	73.1%a	68.9%a	67.8%a	69.7%a	70.1%a	72.5%a
likely (5-7)	**26.9%a**	**31.1%a**	**32.2%a**	**30.3%a**	**29.9%a**	**27.5%a**
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Tests	*Value*	*df*	*p-value*
Chi-Square	3.67	5	0.598
Cramer's V	0.039		

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m. The use of illegal drugs

Region

	Europe22	America8	AsiaOceania6
unlikely/neutral (1-4)	89.1%a	87.6%a	79.7%b
likely (5-7)	**10.9%a**	**12.4%a**	**20.3%b**
	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*
Chi-Square	113.15	2	<0.001
Cramer's V	0.098		

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Gender

Europe22	**male**	**female**	
unlikely/neutral (1-4)	88.1%a	90.2%b	
likely (5-7)	**11.9%a**	**9.8%b**	
	100.0%	100.0%	
Tests	*Value*	*df*	*p-value*
Chi-Square	7.75	1	0.005
Cramer's V	0.033		
America8	**male**	**female**	
unlikely/neutral (1-4)	85.3%a	90.2%b	
likely (5-7)	**14.7%a**	**9.8%b**	
	100.0%	100.0%	
Tests	*Value*	*df*	*p-value*
Chi-Square	14.07	1	<0.001
Cramer's V	0.074		
AsiaOceania6	**male**	**female**	
unlikely/neutral (1-4)	79.1%a	80.3%a	
likely (5-7)	**20.9%a**	**19.7%a**	
	100.0%	100.0%	
Tests	*Value*	*df*	*p-value*
Chi-Square	0.55	1	0.457
Cramer's V	0.015		

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Age group

Europe22	**18-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65-74**
unlikely/neutral (1-4)	88.1%a	89.2%a	87.5%a	90.0%a	88.6%a	91.3%a
likely (5-7)	**11.9%a**	**10.8%a**	**12.5%a**	**10.0%a**	**11.4%a**	**8.7%a**
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*			
Chi-Square	10.36	5	0.066			
Cramer's V	0.038					
America8	**18-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65-74**

unlikely/neutral (1-4)	88.1%a	86.9%a	86.9%a	86.9%a	88.1%a	90.9%a
likely (5-7)	**11.9%a**	**13.1%a**	**13.1%a**	**13.1%a**	**11.9%a**	**9.1%a**
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*			
Chi-Square	3.47	5	0.628			
Cramer's V	0.037					
AsiaOceania6	**18-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65-74**
unlikely/neutral (1-4)	80.8%a	78.3%a	81.5%a	79.6%a	79.5%a	78.3%a
likely (5-7)	**19.2%a**	**21.7%a**	**18.5%a**	**20.4%a**	**20.5%a**	**21.7%a**
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*			
Chi-Square	2.16	5	0.827			
Cramer's V	0.030					

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n. Respecting the speed limits

Region

	Europe22	America8	AsiaOceania6
unlikely/neutral (1-4)	63.6%a	56.5%b	47.7%c
likely (5-7)	**36.4%a**	**43.5%b**	**52.3%c**
	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*
Chi-Square	161.36	2	<0.001
Cramer's V	0.117		

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Gender

Europe22	**male**	**female**	
unlikely/neutral (1-4)	61.7%a	65.6%b	
likely (5-7)	**38.3%a**	**34.4%b**	
	100.0%	100.0%	
Tests	*Value*	*df*	*p-value*
Chi-Square	11.73	1	0.001
Cramer's V	0.041		
America8	**male**	**female**	
unlikely/neutral (1-4)	53.0%a	60.2%b	
likely (5-7)	**47.0%a**	**39.8%b**	
	100.0%	100.0%	
Tests	*Value*	*df*	*p-value*
Chi-Square	13.17	1	<0.001
Cramer's V	0.072		
AsiaOceania6	**male**	**female**	
unlikely/neutral (1-4)	49.3%a	45.8%a	
likely (5-7)	**50.7%a**	**54.2%a**	

	100.0%	100.0%	
Tests	*Value*	*df*	*p-value*
Chi-Square	2.98	1	0.084
Cramer's V	0.035		

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Age group

Europe22	**18-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65-74**
unlikely/neutral (1-4)	65.7%$_{a,c}$	56.6%$_{b}$	60.3%$_{a,b}$	65.6%$_{a,c}$	66.2%$_{a,c}$	69.8%$_{c}$
likely (5-7)	**34.3%**$_{a,c}$	**43.4%**$_{b}$	**39.7%**$_{a,b}$	**34.4%**$_{a,c}$	**33.8%**$_{a,c}$	**30.2%**$_{c}$
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*			
Chi-Square	58.17	5	<0.001			
Cramer's V	0.091					
America8	**18-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65-74**
unlikely/neutral (1-4)	57.5%$_{a,b,d}$	51.9%$_{a,b}$	47.3%$_{a}$	60.5%$_{b,d}$	62.6%$_{b,c,d}$	69.4%$_{d}$
likely (5-7)	**42.5%**$_{a,b,d}$	**48.1%**$_{a,b}$	**52.7%**$_{a}$	**39.5%**$_{b,d}$	**37.4%**$_{b,c,d}$	**30.6%**$_{d}$
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*			
Chi-Square	49.74	5	<0.001			
Cramer's V	0.140					
AsiaOceania6	**18-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65-74**
unlikely/neutral (1-4)	48.7%$_{a}$	46.5%$_{a}$	46.5%$_{a}$	47.0%$_{a}$	47.0%$_{a}$	53.2%$_{a}$
likely (5-7)	**51.3%**$_{a}$	**53.5%**$_{a}$	**53.5%**$_{a}$	**53.0%**$_{a}$	**53.0%**$_{a}$	**46.8%**$_{a}$
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*			
Chi-Square	4.40	5	0.493			
Cramer's V	0.042					

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o. Wearing your seatbelt

Region

	Europe22	**America8**	**AsiaOceania6**
unlikely/neutral (1-4)	71.1%$_{a}$	54.7%$_{b}$	49.3%$_{c}$
likely (5-7)	**28.9%**$_{a}$	**45.3%**$_{b}$	**50.7%**$_{c}$
	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*
Chi-Square	425.05	2	<0.001
Cramer's V	0.190		

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Gender

Europe22	**male**	**female**
unlikely/neutral (1-4)	69.6%$_{a}$	72.7%$_{b}$

likely (5-7)	**30.4%**$_{a}$	**27.3%**$_{b}$	
	100.0%	100.0%	
Tests	*Value*	*df*	*p-value*
Chi-Square	8.13	1	.004*
Cramer's V	0.034		
America8	**male**	**female**	
unlikely/neutral (1-4)	52.5%$_{a}$	57.0%$_{a}$	
likely (5-7)	**47.5%**$_{a}$	**43.0%**$_{a}$	
	100.0%	100.0%	
Tests	*Value*	*df*	*p-value*
Chi-Square	5.21	1	0.023
Cramer's V	0.045		
AsiaOceania6	**male**	**female**	
unlikely/neutral (1-4)	48.2%$_{a}$	50.3%$_{a}$	
likely (5-7)	**51.8%**$_{a}$	**49.7%**$_{a}$	
	100.0%	100.0%	
Tests	*Value*	*df*	*p-value*
Chi-Square	1.08	1	0.298
Cramer's V	0.021		

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Age group

Europe22	**18-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65-74**
unlikely/neutral (1-4)	70.3%$_{a,c}$	61.2%$_{b}$	67.1%$_{a,b}$	76.8%$_{c,e}$	74.3%$_{c,d,e}$	77.9%$_{e}$
likely (5-7)	**29.7%**$_{a,c}$	**38.8%**$_{b}$	**32.9%**$_{a,b}$	**23.2%**$_{c,e}$	**25.7%**$_{c,d,e}$	**22.1%**$_{e}$
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*			
Chi-Square	123.08	5	<0.001			
Cramer's V	0.133					
America8	**18-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65-74**
unlikely/neutral (1-4)	54.8%$_{a,b}$	47.6%$_{a}$	44.6%$_{a}$	58.8%$_{b}$	63.4%$_{b,c,d}$	72.6%$_{d}$
likely (5-7)	**45.2%**$_{a,b}$	**52.4%**$_{a}$	**55.4%**$_{a}$	**41.2%**$_{b}$	**36.6%**$_{b,c,d}$	**27.4%**$_{d}$
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*			
Chi-Square	82.44	5	<0.001			
Cramer's V	0.180					
AsiaOceania6	**18-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65-74**
unlikely/neutral (1-4)	54.3%$_{a}$	48.2%$_{a}$	46.2%$_{a}$	49.1%$_{a}$	48.5%$_{a}$	52.8%$_{a}$
likely (5-7)	**45.7%**$_{a}$	**51.8%**$_{a}$	**53.8%**$_{a}$	**50.9%**$_{a}$	**51.5%**$_{a}$	**47.2%**$_{a}$
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*			
Chi-Square	6.64	5	0.249			
Cramer's V	0.052					

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p. The use of hand-held mobile phone to talk or text while driving

Region

	Europe22	America8	AsiaOceania6
unlikely/neutral (1-4)	85.0%a	84.1%a	74.1%b
likely (5-7)	**15.0%a**	**15.9%a**	**25.9%b**
	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*
Chi-Square	121.59	2	<0.001
Cramer's V	0.102		

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Gender

Europe22	**male**	**female**	
unlikely/neutral (1-4)	84.3%a	85.8%a	
likely (5-7)	**15.7%a**	**14.2%a**	
	100.0%	100.0%	
Tests	*Value*	*df*	*p-value*
Chi-Square	3.15	1	0.076
Cramer's V	0.021		
America8	**male**	**female**	
unlikely/neutral (1-4)	80.3%a	88.0%b	
likely (5-7)	**19.7%a**	**12.0%b**	
	100.0%	100.0%	
Tests	*Value*	*df*	*p-value*
Chi-Square	28.09	1	<0.001
Cramer's V	0.105		
AsiaOceania6	**male**	**female**	
unlikely/neutral (1-4)	72.0%a	76.5%a	
likely (5-7)	**28.0%a**	**23.5%a**	
	100.0%	100.0%	
Tests	*Value*	*df*	*p-value*
Chi-Square	6.36	1	0.012
Cramer's V	0.051		

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Europe22	**18-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65-74**
unlikely/neutral (1-4)	83.7%a	85.2%a	83.3%a	85.7%a	84.8%a	87.4%a
likely (5-7)	**16.3%a**	**14.8%a**	**16.7%a**	**14.3%a**	**15.2%a**	**12.6%a**
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*			
Chi-Square	9.22	5	0.101			
Cramer's V	0.036					
America8	**18-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65-74**
unlikely/neutral (1-4)	87.3%a	83.7%a	82.3%a	82.6%a	82.3%a	88.8%a

likely (5-7)	**12.7%**a	**16.3%**a	**17.7%**a	**17.4%**a	**17.7%**a	**11.2%**a
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*			
Chi-Square	9.90	5	0.078			
Cramer's V	0.062					
AsiaOceania6	**18-24**	**25-34**	**35-44**	**45-54**	**55-64**	**65-74**
unlikely/neutral (1-4)	76.4%a	78.4%a	72.9%a	71.3%a	73.4%a	72.6%a
likely (5-7)	**23.6%**a	**21.6%**a	**27.1%**a	**28.7%**a	**26.6%**a	**27.4%**a
	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Tests	*Value*	*df*	*p-value*			
Chi-Square	8.58	5	0.127			
Cramer's V	0.059					

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