

Attitudes of young people in Poland towards road safety

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Abstract:

Aim: In this paper, we investigate attitudes of young people in Poland to road safety. Unfortunately, Poland is one of the EU member states with the poorest road accidents performance. According to official statistics, the majority of road deaths and injuries are caused by young drivers. The goal of the paper is to identify the key elements of the behaviour of young drivers on the road in Poland based on survey research.

Design / Research methods: Primary source of data for this work were opinions of young people in the Opole region in Poland. The key instrument of data collection was a pilot survey carried out among people (both drivers and non-drivers) aged 18-24. The survey questionnaire was administrated on 200 respondents, who were selected using random sample technique. 173 correctly fulfilled questionnaires were retrieved.

Conclusions / findings: The research findings showed that the majority of respondents usually obeyed traffic rules, however sometimes respondents broke the basic road regulations. The main causes of incorrect road behaviour were the willingness to reach the destination as quick as possible, as well as the irritation caused by the behaviour of other road users.

Originality / value of the article: Due to the importance of the problem of road accidents caused by youth in Poland, there are many activities aimed at surveying the attitudes of young drivers towards road behaviour. In this study, we tried to examine road behaviour of both drivers and non-drivers. The assumption was that young people might change their correct road behaviour and attitudes after becoming drivers.

Implications of the research (if applicable): The research findings can be a helpful and useful source of information for preparing education programmes devoted to creating an appropriate road behaviour and attitudes not only of young drivers but of young people planning to get their driving license as well. Also, survey results can be helpful while creating tools aimed at addressing and preventing / eliminating key causes of incorrect behaviour of young drivers.

Limitations of the research (if applicable): The research was conducted by young scientists from the Students' Scientific Association Oikos Opole and was focused on randomly selected respondents from the Opole region. It can be a basis for a deeper and larger nation-wide research aimed at identifying more detailed aspects of young drivers' road behaviour.

Keywords: road safety, young drivers, road accidents, traffic regulations.

JEL: O18. R41

1. Introduction

Many institutions and organisations indicate that road accidents are one of the most important contemporary social problems [see e.g. UN Road Safety Collaboration 2011; García-Altés and Pérez 2007; European Transport Safety Council, Brussels 2007]. Socio-economic effects of road deaths and injuries include both direct and indirect costs, such as expenditures on medical services, emergency care and transportation, and other services such as police, fire service, insurance administration, property damage, costs of funerals or judicial proceedings, as well as production losses due to lost working days, early retirement or fatalities, the loss of quality of life experienced by injured and disabled people, and moral damages, pain and suffering experienced by family members and friends [Swedish Civil Contingencies Agency 2006; René 1986]. The significance of the problem of road accidents causes that there are multiple actions undertaken at different levels and by numerous institutions, organisations and agencies not only to create and to implement road safety measures but to identify reasons for incorrect drivers' behaviour as well.

Poland is still characterised by poor road safety statistics, though many measures and initiatives have been introduced in order to achieve the goal of halving the number of road fatalities set by the European Union in the White Paper "European transport policy for 2010: time to decide" [2001], and continued in the consecutive White Paper "Roadmap to a Single European Transport Area – Towards a competitive and resource efficient transport system" [2011]. Numerous tools within the Polish road safety policy were aimed at reducing the number of road accidents caused by young drivers, who are the significant group of perpetrators of road accidents [see e.g. Paradowska 2016].

The goal of this study is to identify the key elements of the behaviour of young drivers on the roads in Poland. Survey research was conducted among people aged 18-24 in the Opole region to learn their opinions on and attitudes towards basic rules of road safety and traffic regulations.

2. Young drivers and road safety in Poland

Road transport and individual motorisation are ones of the most developed and popular ways of travelling in Poland [EUROSTAT]. Admittedly, Poland faces the challenge of ageing society like many other European countries, but each year many young people try to get their driving licenses as soon as they can and are allowed according to existing legal regulations. What is important is that young people are very often sure that they know everything perfectly, that they are infallible and nothing wrong can happen. According to The National Police Headquarters [2016: 79], young drivers in Poland are aware that in many cases their road behaviour is dangerous. However, they often choose to behave unsafely which makes their driving style reckless and bodacious. This results in situations when traffic rules are not obeyed. And this, in turn, hinders road safety and increases the probability of road accidents. Road safety is one of the most important aspects of traffic and it is strictly dependent on obeying a set of rules which apply to safe movement on the roads [Ozdzyński 2008]. In other words, road safety can be considered an ability of the “human – vehicle – road” system to be safe based on no collision [Mała Encyklopedia PWN 1996], and can be measured with different indicators, such as the total number of road fatalities or road injuries, number of road fatalities or road injuries per capita / per passenger-km / per vehicle-km per year etc. Three rules of road safety can be considered fundamental [Thol 2013], namely:

- a) Rule of safe speed – it allows the driver to take appropriate and effective action to avoid a collision and / or an accident.
- b) Rule of carefulness – the car driver should be focused on the road, and he / she shouldn't be distracted by any factors or circumstances.
- c) Rule of limited trust towards other road users – it allows the driver to take appropriate and effective action in case of incorrect behaviour of pedestrians, cyclists, other car drivers etc. in order to avoid a collision and / or an accident.

Usually, the greater experience of a driver, the easier and more common abiding by these rules becomes. Unfortunately, young drivers are (not only stereotypically) associated with inexperienced, distracted and even drink and drug driving. Over-confidence, poor assessment of

hazards, risk-taking and speeding are other common contributory factors assigned to young drivers in road accidents [see e.g. Centers for Disease Control and Prevention 2017; National Research Council (US) et al. 2007, Symon 2017].

According to the National Police Headquarters [Symon 2017], in 2016 in Poland, vehicle drivers were responsible for 29 081 road accidents (86.4% of all accidents), what resulted in 2 284 fatalities and 36 150 injuries (75.5% and 88.7% of all road fatalities and injuries respectively). At the same time, the biggest share of road accidents (76.1%), fatalities (72.5%) and injuries (78.4%) was caused by car drivers. Young drivers (people aged 18-24) were perpetrators of 5 823 road accidents (17.3% of all road accidents and 20% of accidents caused by vehicle drivers), what made them responsible for 542 road deaths and 7790 injuries (17.9% and 19.1% of all road fatalities and injuries respectively). Moreover, people aged 18-24 were the second group of drivers responsible for the largest number of road accidents, just after people in the age group 25-39. These data are presented in more details in Table 1 for the period 2012-2016. What is significant to mention is that the number of accidents caused by drivers aged 18-24 per all people aged 18-24 was the highest for all age groups in each year, what makes young drivers the most dangerous road users.

Table 1. Vehicle drivers - perpetrators of road accidents according to age groups

Age	Number of accidents					Accidents rate per 10 000 people				
	2012	2013	2014	2015	2016	2012	2013	2014	2015	2016
0 - 6	28	24	17	12	14	-	0.1	0.06	0.04	0.05
7--14	431	410	362	312	334	-	1.4	1.2	1.05	1.1
15-17	480	475	433	340	312	-	3.7	3.6	2.88	2.7
18-24	6526	6233	5962	5583	5823	-	17.1	17.3	16.51	18.4
25-39	10192	9785	9481	8762	9491	-	10.5	10.2	9.48	10.4
40-59	7572	7437	7388	7040	7486	-	7.1	7.1	6.79	7.3
60 plus	3524	3548	3799	3913	4343	-	4.3	4.5	4.58	4.9
b/d	1433	1442	1408	1345	1278	-	-	-	-	-
TOTAL	30186	29354	28850	27307	29081	-	-	-	-	-

Source: Authors' own elaboration based on Symon 2017.

As indicated above, the biggest share of road accidents in Poland is being caused by car drivers. And year by year there are the same main causes for accidents, comprising: inappropriate

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speed for road conditions, non-compliance with vehicle right of way and incorrect behaviour towards the pedestrian (see Symon 2017).

Statistics regarding perpetrators of as well as causes for road accidents in Poland in the last few years signalise the necessity for changes needed for the transition towards better road safety, with great focus on changes in the road behaviour and attitudes of young drivers. For this reason, a survey was conducted among people aged 18-24 to examine the attitudes of youth towards road safety and the level of obeying traffic regulations. The survey design and results are presented in the next sections.

3. Methodology

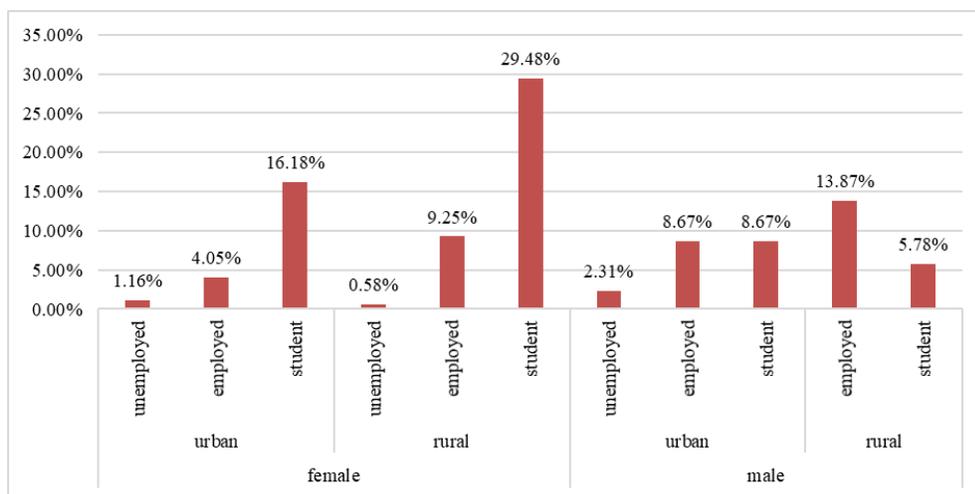
The study is based on survey research carried out among young people aged 18-24 in Spring 2016. There were 200 respondents selected in the Opole region, using random sample technique. In the final stage of the survey research, 173 appropriately fulfilled survey questionnaires were gathered. The Opole region was selected due to the easiness to conduct survey research with a high level of reliable answers to questions included in the questionnaire. The questionnaire contained 20 questions. The study was preliminary research aimed at investigating young people's road behaviour and attitudes towards road safety. The main purpose of the study was to understand the behaviour of young drivers, especially in terms of obeying traffic regulations and contributing to increased and / or decreased level of road safety. The authors adopted the hypothesis that young drivers often do not obey traffic regulations and cause dangerous situations on the road, what affects road safety. If these assumptions were to be correct, deeper research would be carried out on a larger group of people to investigate, what measures would lead to positive changes in young drivers' behaviour.

4. Respondents' contribution to road safety – the pilot survey among young people in the Opole region

The survey questionnaire, containing questions regarding different aspects of road behaviour, was correctly fulfilled by 173 respondents (61% female and 39% male). The majority of respondents (59%) lived in rural areas, while 41% lived in urban areas. The smallest group represented unemployed people (4%), 60% were students and 36% of respondents were employed. In general,

the three largest groups of respondents were female students from rural areas (51 (29.5%) of all respondents), female students from urban areas (28 (16.2%) of all respondents), and male employed from rural areas (24 (13.9%) of all respondents). Figure 1 presents basic characteristics of all respondents.

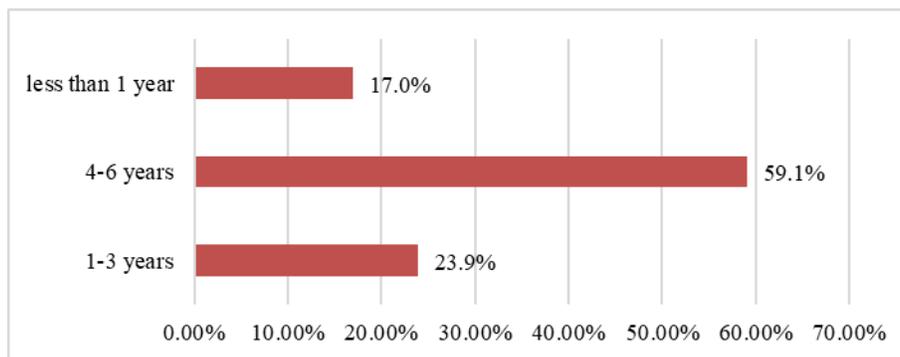
Figure 1. Characteristics of respondents



Source: Survey research 2016.

One of the assumptions of the study was to examine attitudes towards road safety of both young drivers and young non-drivers. 14 surveyed persons (8.1%) didn't have their driving licences. Among 92% respondents with a driving licence, 94 people (59.1% of surveyed drivers) had it for 4-6 years, 38 (23.9%) for 1-3 years, and 27 (17%) for less than a year (Figure 2). What is very important and denotes an appropriate behaviour of young people is that respondents, who didn't have their driving licences, never drove a car.

Figure 2. Years of having the driving licence by young drivers

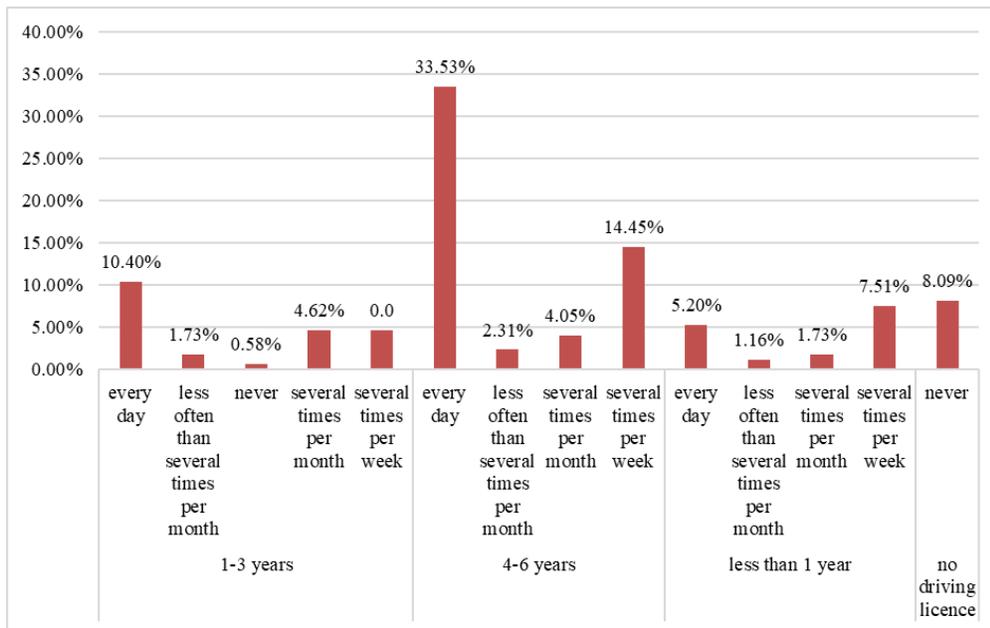


Source: survey research 2016.

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Almost half (49.1%) of the respondents used a car every day, 26.6% several times per week, 10.4% several times per month, and only 5.2% less often than several times per month. Only one person, who had a driving licence, never drove a car. The largest group of respondents were drivers, who had their driver's licences for 4-6 years and who drove every day (58 (33.5%) of all respondents) or several times per week (25 (14.5%) of all respondents) (see Figure 3). This is significant for analysing the results because it allows for drawing conclusion based on the behaviour of the most experienced young drivers who use their cars very often. However, as mentioned above, 8.1% of all respondents didn't have a driving licence. Moreover, 22% of respondents could improve their driving skills for only 1-3 years, and 15.6% for less than one year, while the frequency they used a car was relatively low. This could significantly influence their driving experience and the way they contributed to the level of road safety.

Figure 3. Frequency of driving and years of having a driving licence

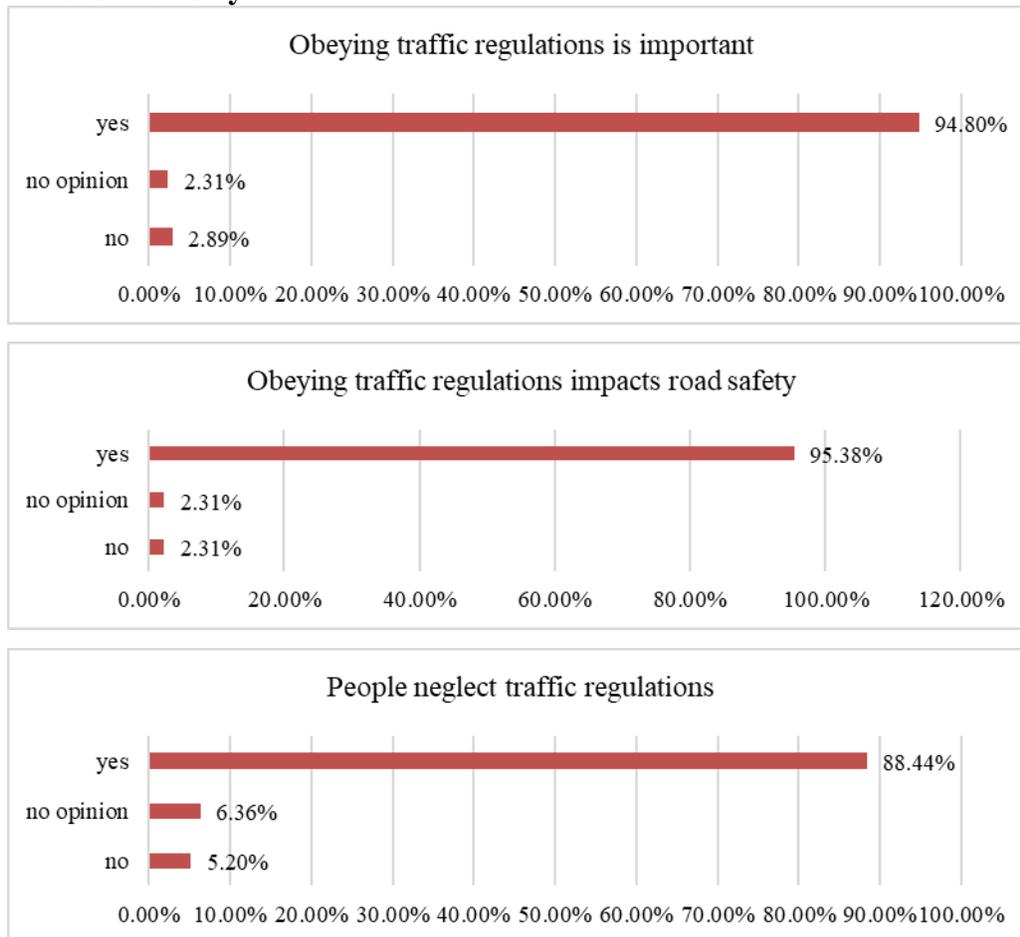


Source: survey research 2016.

Not surprisingly, almost all young people surveyed (172 (99.4%) of all respondents) stated, that each driver should know traffic regulations. Only one person didn't have any opinion about that. What is equally important is that almost all young people surveyed argued, that obeying traffic rules is significant (169 (97.7%) of all respondents). The same number of answers were given for the question about the impact of obeying traffic regulations on the level of road safety, though not

the same persons had such views. In contrast to these findings, the predominant number of respondents believed that traffic regulations are usually neglected by people (88.4% answers). Only 5.2% of respondents thought that people usually obey road regulations and 6.4% didn't have any opinion about that. Respondents' opinions about obeying traffic regulations and its effects on road safety are presented in Figure 4.

Figure 4. Respondents' opinions about the significance of obeying traffic regulations and about road safety



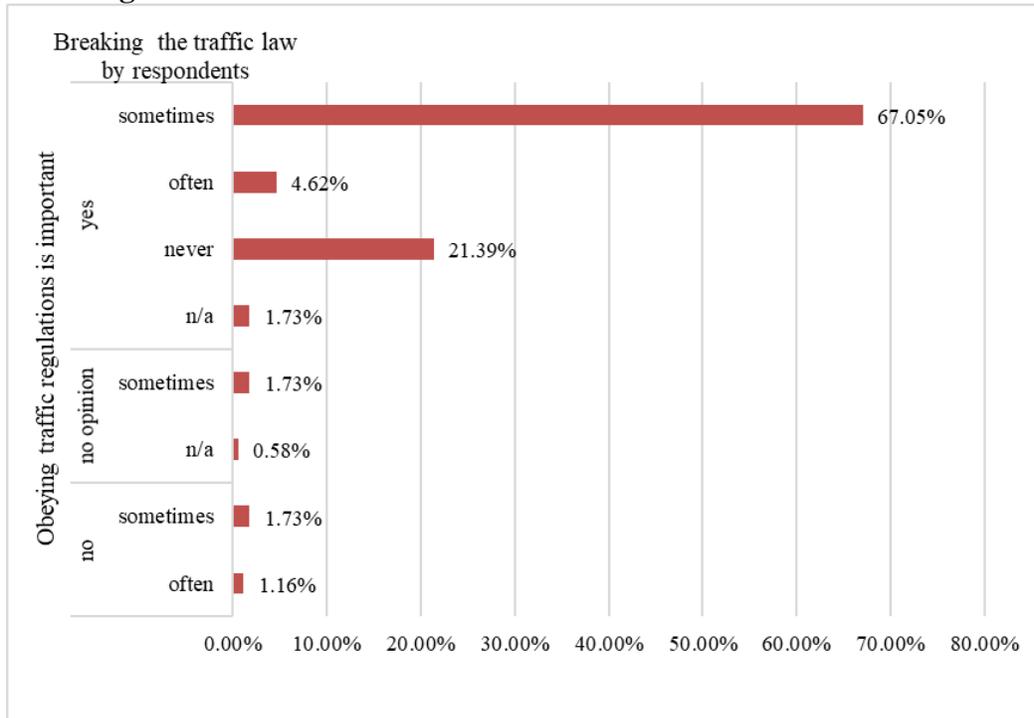
Source: survey research 2016.

Figure 5, in turn, shows the share of respondents, who violated the traffic law. Unfortunately, only every fifth respondent never broke traffic regulations. Among this group of young people (21.4%), everyone thought that obeying the traffic law is significant. On the whole, more than two-thirds of respondents (70.5%) sometimes violated traffic regulations, and 5.8% did it often. An

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alarming signal is that the majority of young drivers breaking road traffic rules believed that obeying these rules is important (see Figure 5).

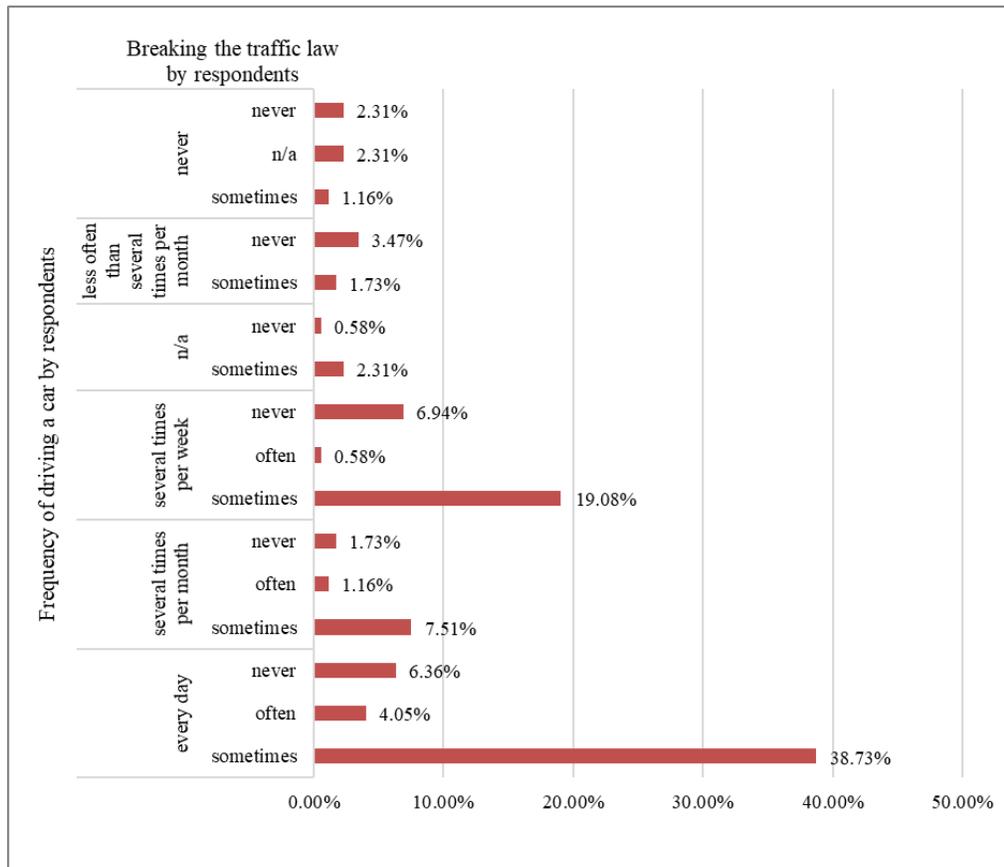
Figure 5. Share of respondents according to their opinion about the significance of obeying traffic regulations and behaviour on the road



Source: survey research 2016.

Figure 6 points out another significant fact about young drivers surveyed. Namely, the more often respondents drove a car, the more likely they were to break traffic regulations. 67 of all respondents (38.7%) used a car every day and sometimes broke the traffic law. Moreover, seven respondents (4.05% of all respondents) used a car every day and they often didn't follow traffic rules. From 45 respondents (26% of all people surveyed) driving a car several times per week, 33 young people (19.1% of all respondents) sometimes and only one respondent often violated traffic regulations. However, the behaviour of some respondents can be considered appropriate. In the group of drivers that used a car every day or several times per week, 23 respondents (13.3% of all people surveyed) always followed traffic rules.

Figure 6. Frequency of driving a car and violating traffic regulations by respondents

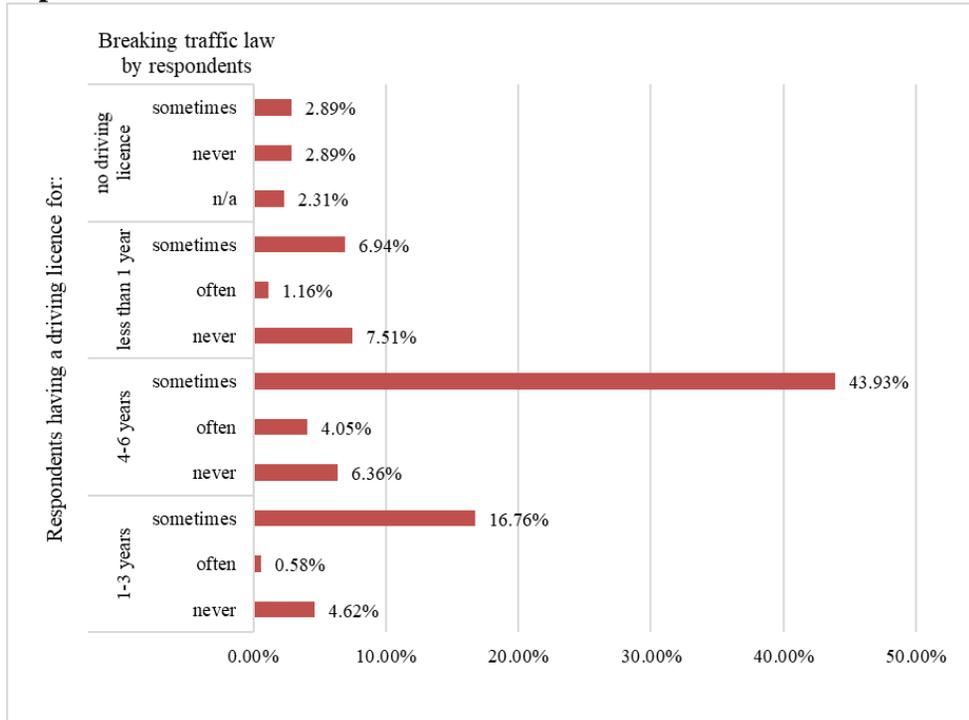


Source: survey research 2016.

Another worrying issue can be observed in data presented in Figure 7. It might seem that the longer a driver has a driving licence, the more experience he / she gains (provided that he / she drives a car regularly). However, this is not always followed by obeying traffic regulations more closely. The largest two groups of respondents, who sometimes broke traffic regulations, were young drivers having their driving licence for 4-6 years (76 (43.9%) of all respondents) and 1-3 years (29 (16.8%) of all respondents). Even in the group of the least experienced drivers, who had their driving licence for less than one year, the share of respondents violating traffic rules (8.1% of all respondents) prevailed over these who never broke any traffic regulation.

Both in Figure 6 and seven there are groups of respondents visible, who never drove a car and / or didn't have a driving licence, but though they sometimes violated the traffic law. It might be that they e.g. broke traffic regulations while being a pedestrian or a cyclist.

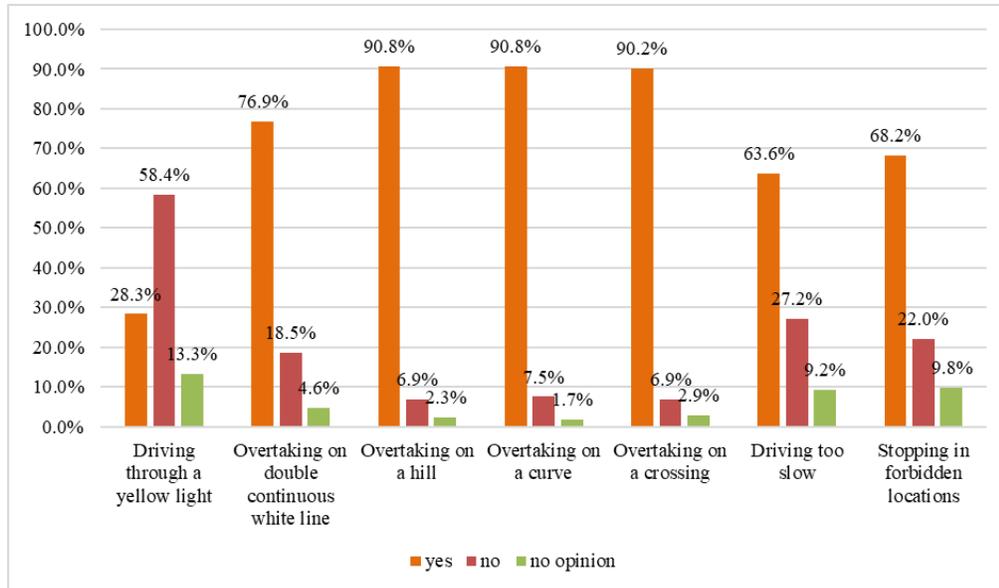
Figure 7. Period of having a driving licence and frequency of violating traffic regulations by respondents



Source: survey research 2016.

Based on findings presented above, a question can be asked, what types of road traffic offences are considered dangerous by respondents, and how often do respondents commit a given type of road traffic offence. Figure 8 shows that the most dangerous road traffic offences according to the respondents are overtaking on a hill, overtaking on a curve, and overtaking on a crossing (90.8%, 90.8% and 90.2% of all respondents respectively). The majority of young people surveyed thought that overtaking on double continuous white line, stopping in forbidden locations and driving too slow is dangerous as well (76.9%, 68.2% and 63.6% of all respondents respectively). The only type of road traffic offence that was considered not so risky was driving through a yellow light – 58.4% of respondents didn't include it in risky drivers' behaviour.

Figure 8. Respondents' opinions about what type of road traffic offence is dangerous

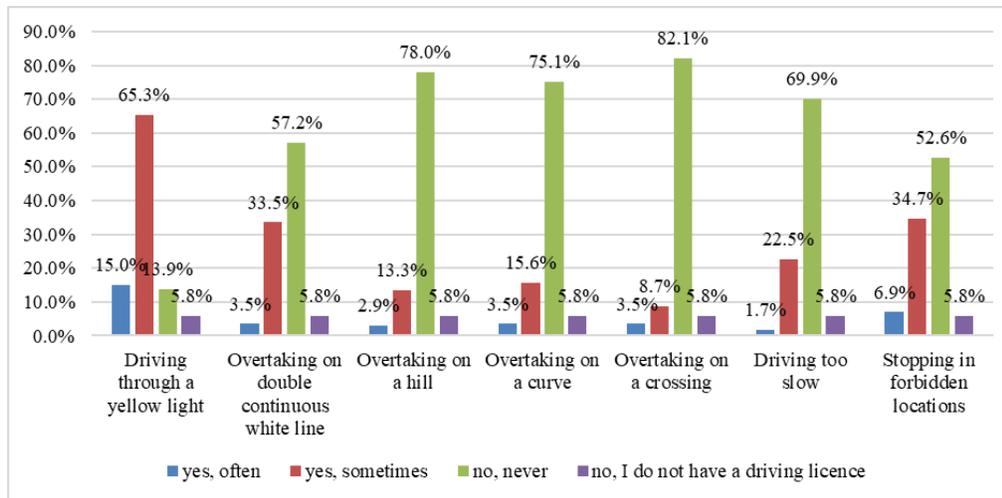


Source: survey research 2016.

Respondents' belief in what kind of road behaviour is dangerous or not finds its reflection in their real behaviour on the road, what is presented in Figure 9. The three types of road traffic offence, which were recognised the most dangerous, were hardly committed by young people surveyed. On the other hand, more than 65% (113) of all respondents sometimes drove through a yellow light, and 15% (26) of all respondents did it often. Unfortunately, there is still a smaller or bigger share of respondents who sometimes and / or often violate the traffic law by way of committing offences that were considered dangerous. Moreover, incorrect road behaviour pretty often refers to drivers who considered it unsafe (see Table 2).

Figure 9. Frequency of violating traffic regulations by respondents per type of road traffic offence

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Source: survey research 2016.

Table 2. Shares of respondents committing road traffic offences

Offence	Share of respondents			
	considering the road traffic offence dangerous (% of all respondents)	committing the offence sometimes (% of respondents considering the offence dangerous)	committing the offence often (% of respondents considering the offence dangerous)	committing the offence (% of all respondents)
Driving through a yellow light	28.3%	18.5%	2.3%	20.8%
Overtaking on double continuous white line	76.9%	19.1%	2.9%	22.0%
Overtaking on a hill	90.8%	12.7%	1.2%	13.9%
Overtaking on a curve	90.8%	12.7%	1.7%	14.5%
Overtaking on a crossing	90.2%	6.9%	1.7%	8.7%
Driving too slow	63.6%	9.2%	0.0%	9.2%
Stopping in forbidden locations	68.2%	23.1%	2.3%	25.4%

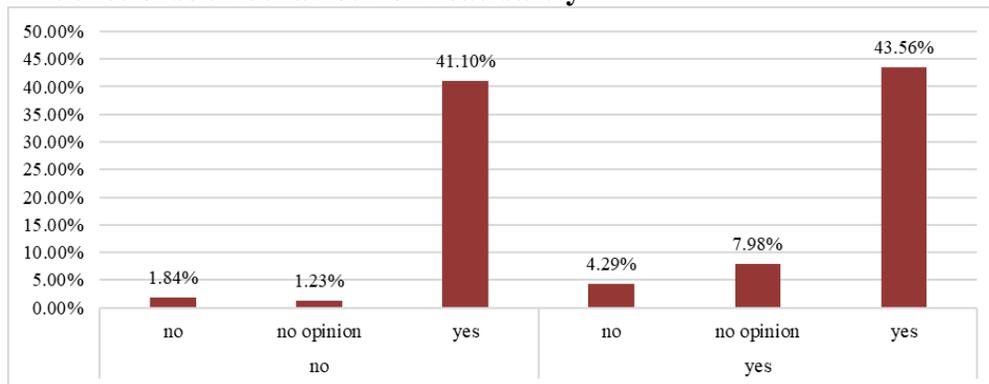
Legend: red – relatively high values, blue – relatively low values, black – medium values.

Source: survey research 2016.

According to data presented in Table 2, in three cases (driving through a yellow light, overtaking on double continuous white line and stopping in forbidden locations) there are relatively big shares (about one fifth) of respondents who violate the traffic rule though they recognise this rule important and they think that not obeying it is dangerous. What is important to mention is that the majority of respondents committing road traffic offences that were considered the most dangerous (overtaking on a hill, overtaking on a curve and overtaking on a crossing) belong to the group of young people surveyed who considered this offence dangerous. Such findings underline the difference between opinions, declarative attitudes and real drivers' behaviour. In fact, only in cases of driving through a yellow light and driving too slow, the share of respondents who committed the offence and at the same time considered this offence dangerous was relatively low (below 50% of all respondents that committed this offence). In other words – in most cases, young people surveyed knew they were wrong while committing the road traffic offences, but their attitudes, knowledge, and opinions didn't discourage them from incorrect road behaviour.

A similar difference between attitudes and the real behaviour refer to the use of a mobile phone while driving (see Figure 10). The majority of all respondents (84.66%) considered the use of a mobile phone (without the Bluetooth device) while driving dangerous. However, more than 55% of all young people surveyed talked by phone and / or sent an SMS while being a driver. Moreover, 78% drivers from this group (43.56% of all respondents) believed that using a mobile phone by drivers affects road safety negatively.

Figure 10. Shares of respondents using a mobile phone while driving and their opinions about influence of such behaviour on road safety



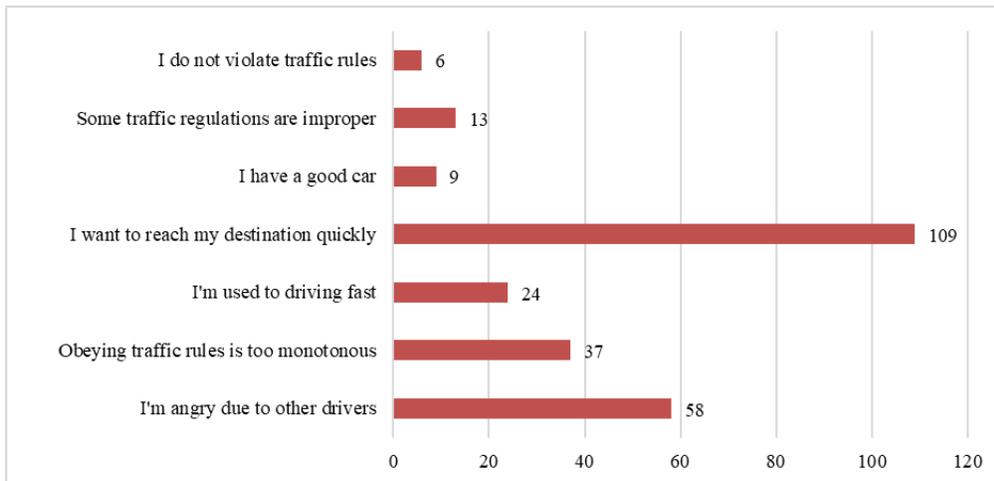
Source: survey research 2016.

The important question is, why young people broke traffic regulations, though they were convinced that these regulations were important and had a significant influence on road safety.

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Figure 11 shows the main reasons for violating the traffic law by respondents (respondents could give up to three main reasons). Young drivers surveyed mostly broke traffic regulations because they were in a hurry and wanted to reach their destination as quick as possible. Being angry because of incorrect and / or poor driving of other road users was in the second position. The next important reasons were being bored due to correct driving and obeying traffic rules, as well as bad driving habits and driving too fast.

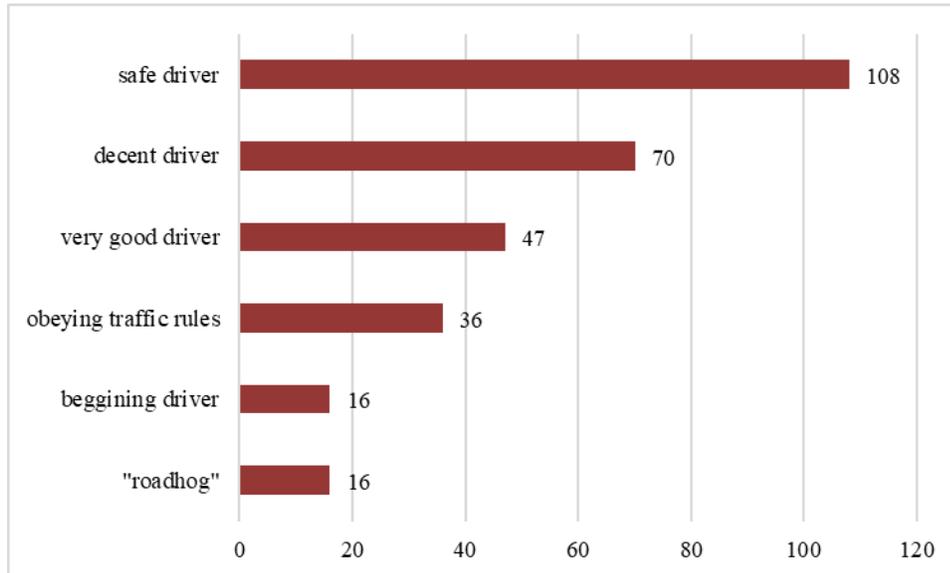
Figure 11. Reasons for breaking traffic regulations by respondents (number of answers)



Source: survey research 2016.

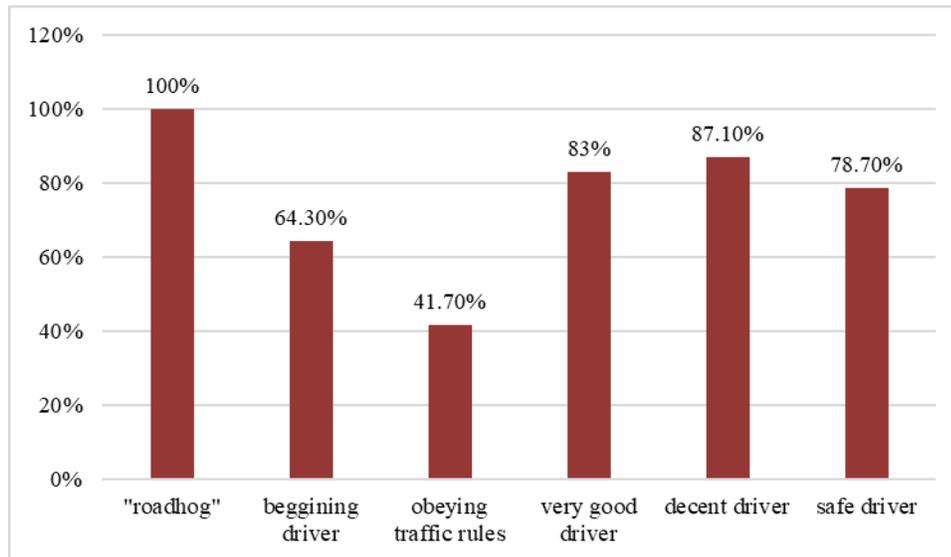
The last question in the survey questionnaire referred to the self-assessment of respondents, who were asked to give their own opinion about their driving style. Not surprisingly, positive opinions prevailed, what is presented in Figure 12. Respondents could give up to 3 answers that were the most appropriately describing their road behaviour. 62.4% (108) of young people surveyed considered they were safe drivers, 40.5% (70) – decent drivers, and 27.2% (47) – very good drivers. Only 20.8% (36) respondents claimed they obey traffic rules, but 9.2% (16) admitted they were “roadhogs”. What is significant to mention is that 37.5% of “roadhogs” (6 (3.5%) of all respondents) thought they were very good drivers and 56.3% (9 (5.2%) of all respondents) that they were safe drivers. Only one respondent said he is a roadhog and at the same time a beginning driver.

Figure 12. Respondents' opinions about their driving style (number of answers)



Source: survey research 2016.

However, respondents' opinions about their driving style do not correspond with their real behaviour on the roads. Comparison of answers on the frequency of obeying traffic rules and the driving style provides two different profiles of young drivers. As presented in Figure 13, the majority of very good drivers (83%), decent drivers (87.1%) and safe drivers (78.7%) broke the traffic law. Even 41.7% of respondents that thought they obeyed traffic rules broke traffic regulations. What is worrying is that 64.3% of young people, that admitted they were beginners behind the wheel, sometimes didn't obey traffic regulations.

Figure 13. Shares of respondents not obeying traffic regulations versus opinions about their driving style

Source: survey research 2016.

5. Discussion

As mentioned above, one of the most important conclusions resulting from the research findings is that opinions, knowledge and declarative attitudes of young people surveyed differed from their real road behaviour, negatively influencing the level of road safety. Though young people surveyed knew that obeying traffic regulations is important and impacts the road safety, the great share of all respondents drove pretty often – every day or several times per week – and sometimes broke traffic regulations. Moreover, respondents with higher driving experience, who had their driving licences for 1-3 or 4-6 years, were more likely to commit offences than beginning drivers. A relatively positive fact is that road traffic offences, that were considered the most dangerous, were committed by a comparatively smaller share of young drivers. On the other hand, the key reasons for breaking the traffic law by respondents could be signs of impulsive, inconsiderate and irresponsible road behaviour, which is likely to lower the levels of road safety. Especially breaking traffic regulations due to the feeling of being bored by correct driving may be considered consistent with some stereotypes of young people driving in a manner that is irresponsible and dangerous. Finally, the majority of young people surveyed had a positive and confident opinion about their driving styles, which were mostly assessed as safe, decent and very good. However, the predominant part of these respondents broke traffic regulations, through obeying the traffic law

was recognised as important for the road safety. Only very small shares of respondents admitted they were “roadhogs” or beginning drivers.

Based on the findings of the pilot survey research it can be stated, that in contrast to the declarative attitudes, in reality, young people surveyed didn't associate safe driving with obeying traffic regulations or simply didn't care much for the road safety. Though in the opinion of many respondents, obeying traffic regulations was important regarding the road safety, the real road behaviour of the majority of people surveyed showed that they were prone to break the traffic law, and at the same time they were convinced they were good drivers.

It may be concluded, that most of the respondents were not aware of possible consequences of their incorrect road behaviour. Not obeying traffic regulations and belief in own driving skills is usually assigned to perpetrators of road accidents. Such differences between attitudes and road behaviour of respondents can be a result of both, exaggerated belief in their driving skills, lack of experience, and lack of good knowledge about appropriate driving behaviour.

6. Concluding remarks

A change in the road behaviour of young drivers seems to be indisputable regarding the transition towards better road safety in Poland. The survey results presented in this paper show, that further actions and initiatives are required to eliminate the gap between young people's opinions about conditions for road safety and the real behaviour of young drivers. To achieve this goal, early education in schools could be improved, and computer simulations during driving lessons could be introduced to improve driving skills and experience by way of developing correct reactions to different situations on the road. Higher fines and penalty points for offences, as well as the requirements of additional training hours for incorrect driving behaviour, could positively influence young drivers' behaviour. Moreover, actions aimed at improving skills and changing the road behaviour of young drivers should be strictly interrelated with other activities aimed at improving the levels of road safety in Poland, such as further changes in legal rules, further modernisation of infrastructure, improved control of the mechanical state of vehicles, continued development of emergency services, and reorganisation of the national road safety management and control system.

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