

COMPARISON BETWEEN TRAFFIC INJURIES RELATED DEATHS AMONG CHILDREN IN CROATIA AND SERBIA

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Objective – To compare trends in traffic injury-related deaths among children in Croatia and Serbia from 1995 to 2010. **Participants and methods** – We used vital statistics mortality data from the Republic of Croatia Central Bureau of Statistics prepared by the Croatian National Institute of Public Health. Population estimates were provided by the Republic of Croatia Central Bureau of Statistics, which is responsible for 10-year census counts and inter census annual estimates. For Serbia we used the data from the Statistical office of the Republic of Serbia, including population estimates. **Results** – Significant decrease in child traffic injuries mortality rates was achieved in both countries in the analyzed period, Serbia generally having lower rates in the whole period. In both countries the age group between 15 and 19 years was recognized as the most vulnerable population, especially males. **Conclusions** – Because many actions were launched after the analyzed period the further decrease could be expected that could additionally narrow the gap in mortality rates between Croatia and Serbia, and the most developed countries.

Introduction

According to the UNICEF World report on child injury prevention, child injuries are a growing health problem, with hundreds of thousands of children dying each year from injuries and violence, and millions of others suffering the consequences of non-fatal injuries (1). Injuries are also the leading cause of death in the European Union in the age group between 1 and 14, responsible for 38% of all deaths in this age group (2). In high and in the middle income countries unintentional injuries are the leading cause of mortality for all children and youth over the age of 1 (3, 4). Injuries are the secondary leading cause of childhood medical expenditure after live birth and pregnancy (5).

The World Health Statistics 2008 report predicted that the road traffic injuries will be one of the most rapidly growing public health concerns over the next 25 years (6). Deaths due to road traffic crashes were predicted to rise from 1.3 million in 2004 to 2.4 million by the year 2030 and increase from the 9th cause of death in 2004 to the 5th cause of death in 2030. Violence was predicted to move up from 22nd to 16th place, and suicide from 16th to 12th place. Six years later, The World Health Statistics report (2014) concluded that global life years lost due to suicide decreased for 12% and for 23% due to drowning, but increased for 14% due to road injury death between 2000 and 2014 (7). Every day more than 500 children lose

their lives in traffic crashes globally. Thousands of them are injured.

According to the European Report on Child Injury Prevention from 2008 Croatia was on the fourth worst place regarding the average standardized mortality rates due to transport injuries in children aged 0-19 years. Serbia was not included in that report. Similarly to other high and middle-income countries, data from Croatia (8, 9) and Serbia (10, 11) have shown substantial progress in regard to lowering general childhood mortality. In these countries, the childhood death rate due to infection and illness has decreased steadily and is the leading contributor to overall decreases in child mortality rates (4, 12). Although childhood mortality from injuries has also decreased, injuries remain the leading cause of death among children after infancy in Croatia and Serbia (10, 13). Among the 39 countries in the WHO European region for that data were available, Croatia had the 12th and Serbia 20th highest age-standardized death rates due to external causes (14). According to the World Bank the gross national income per capita in 2014 for Croatia was 13,020 USD and for Serbia 5,820 USD (15).

Croatia and Serbia were republics belonging to same country for several decades and were mostly exposed to similar preventive measures. In that period all data were collected on the same way and the both countries after splitting apart continue to collect similar data regarding mortality which makes comparison between them easier.

The aim of this retrospective study was to compare trends in traffic injury-related deaths among children in Croatia and Serbia looking at overall difference in death rates due to external causes between the two countries in perspective with their economic situation.

Materials and methods

We analyzed deaths of children and adolescents aged from birth through 19 years

who died because of traffic injuries, ICD codes V01-V99, from 1995 until 2010. Police identified the traffic injuries. All deaths among Croatian and Serbian citizens were included in the database. The nonresidents were excluded from the data. Vital statistics mortality data from the Republic of Croatia Central Bureau of Statistics prepared by the Croatian National Institute of Public Health were used. Population estimates were provided by the Republic of Croatia Central Bureau of Statistics, which is responsible for 10-year census counts and inter census annual estimates. For the Republic of Serbia we used the data from Statistical office of the Republic of Serbia, including population estimates.

Annual population estimates were calculated according to a standard procedure that interpolates inter year population estimates from birth, death, and immigration data.

The age-adjusted death rate was calculated to compare death rates between countries. We used the direct method to age-adjust: the age specific rates were calculated per 100 000 populations for the defined age groups (e.g. <5, 5-9, 10-14 and 15-19 years). Deaths of those of unknown age were not included.

Statistical analyses

Chi-square tests with corresponding 95% confidence intervals were used to assess differences between countries looking at percentage of traffic accidents of the total number of accidents. All p values below 0.05 were considered significant. Statistical software StatsDirect, version 3.0.150 was used in all statistical procedures.

Ethical considerations

This study used secondary data with no personal identifiers and received an exempt status from the Human Subject Protection Committee.

Results

Crude death rates per 100 000 population by transport-related external cause by year are shown in Table 1.

Trends and countries' differences are graphically shown in Figs. 1-4.

Overall, the highest crude death rates are among the population between the age of 15

and 19 in both countries. Serbian data shows lower values compared to Croatian data in all reports for this age group under highest risk from death due to transport-related external cause. Croatia had the highest death rate (24.37/100 000) in 2004, while in 2010 significant ($p < 0.001$) decrease occurred (death rate 9.42/100 000). The highest death rate

Table 1 Death rates (crude rates per 100 000 population) by transport-related external cause by year

Year	<5 years		5-9 years		10-14 years		15-19 years		Total	
	Croatia	Serbia	Croatia	Serbia	Croatia	Serbia	Croatia	Serbia	Croatia	Serbia
1995	5.74	3.18	8.7	5.36	3.31	3.2	22.05	9.08	10.14	5.33
1996	4.77	2.96	3.94	5.69	3.16	3.44	19.56	12.42	7.91	6.37
1997	4.68	2.26	2.9	4.18	4.04	5.54	20.5	16.63	8.1	7.61
1998	1.46	3.6	3.93	4.5	5.05	3.54	19.52	14.55	7.65	6.89
1999	3.33	1.32	2.26	4.8	2.18	2.56	18.95	12.19	6.77	5.59
2000	3.86	2.18	4.72	3.38	2.92	0.26	20.42	8.49	7.91	4.41
2001	3.77	2.22	5.21	0.83	3.71	3.34	20.67	12.75	8.89	6.45
2002	1.33	2.48	2.38	3.24	3.77	2.49	18.34	6.43	7.04	3.82
2003	2.78	2.17	3.96	1.53	4.22	2.78	21.1	5.71	8.64	3.21
2004	6.2	1.86	4.42	3.14	3.49	1.88	24.37	6.89	10.2	3.61
2005	4.37	0.52	2.02	2.7	1.57	1.43	24.32	8.98	8.65	3.6
2006	3.9	1.84	4.17	4.66	3.17	2.42	16.53	10.53	7.32	5.02
2007	3.9	1.61	3.49	2.74	2.35	3.45	20.17	14.01	7.94	5.73
2008	1.91	2.21	1.37	2.97	2.35	1.77	17.49	10.11	6.23	4.41
2009	2.82	1.7	1.89	3.17	1.97	3.12	18.95	8.42	6.83	4.28
2010	2.81	2.6	0.96	1.57	2.82	1.34	9.42	8.27	4.22	3.61

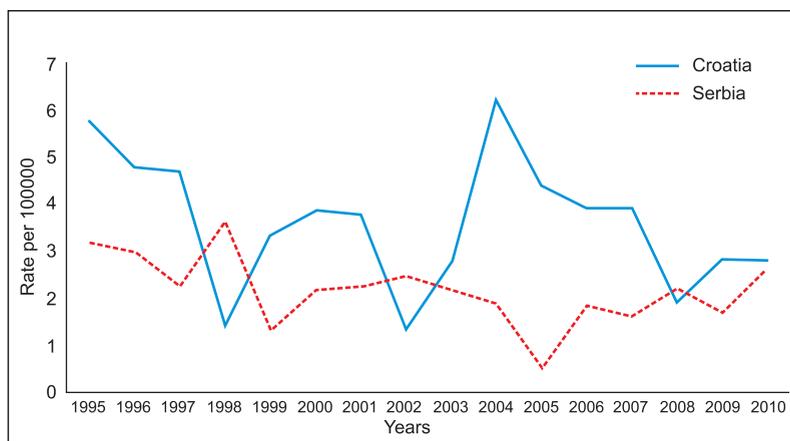


Fig. 1 Death rates (crude rates per 100 000 population) by transport-related external cause by year (age < 5).

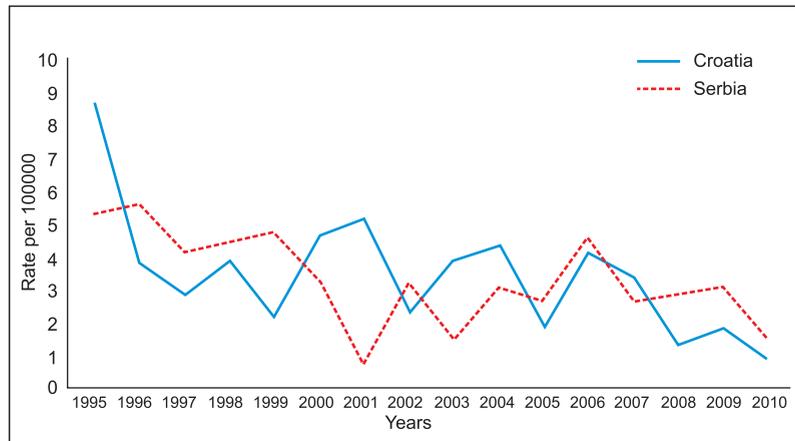


Fig. 2 Death rates (crude rates per 100000 population) by transport-related external cause by year (age 5-9).

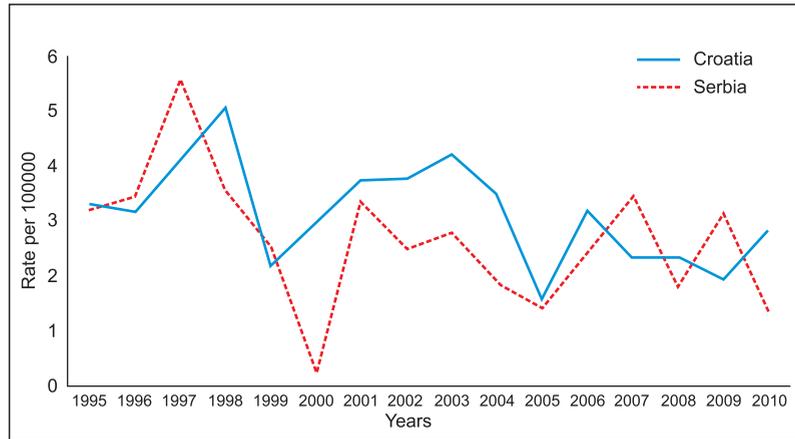


Fig. 3 Death rates (crude rates per 100 000 population) by transport-related external cause by year (age 10-14).

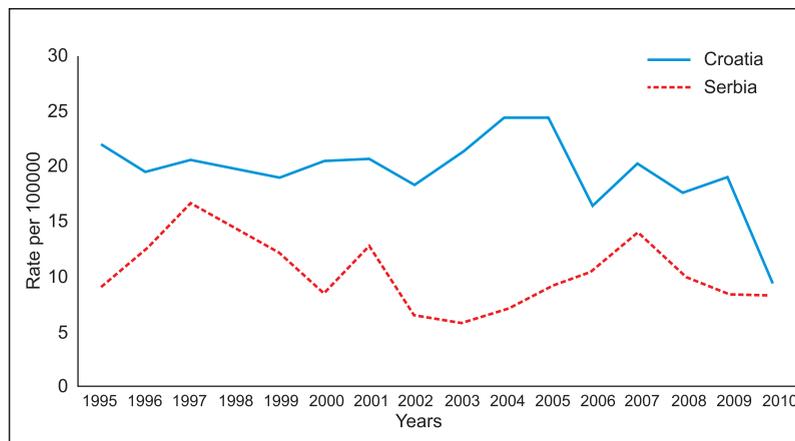


Fig. 4 Death rates (crude rates per 100 000 population) by transport-related external cause by year (age 15-19).

Table 2 Differences between Croatia and Serbia in percentage of deaths caused by traffic accidents from total number of accidents

Year	Croatia			Serbia			Difference (%)	95% CI of difference	p*
	Number of traffic accidents	Total number of accidents	%	Number of traffic accidents	Total number of accidents	%			
1995	127	224	56.70	100	204	49.02	7.68	-2.109% - 17.324%	0.135
1996	95	180	52.78	118	203	58.13	-5.35	-4.964% - 15.568%	0.343
1997	99	170	58.24	139	236	58.90	-0.66	-9.313% - 10.71%	0.975
1998	92	159	57.86	124	213	58.22	-0.35	-10.06% - 10.855%	0.970
1999	82	139	58.99	99	164	60.37	-1.37	-10.068% - 12.859%	0.899
2000	96	162	59.26	77	181	42.54	16.72	5.729% - 27.29%	0.003
2001	94	140	67.14	111	179	62.01	5.13	-5.922% - 15.905%	0.406
2002	73	111	65.77	65	134	48.51	17.26	4.241% - 29.607%	0.010
2003	88	134	65.67	54	123	43.90	21.77	9.09% - 33.748%	<0.001
2004	102	136	75.00	60	125	48.00	27.00	14.78% - 38.43%	<0.001
2005	85	122	69.67	59	117	50.43	19.24	6.294% - 31.603%	0.003
2006	71	90	78.89	81	137	59.12	19.76	6.858% - 31.534%	0.003
2007	76	119	63.87	91	141	64.54	-0.67	-11.419% - 12.86%	0.986
2008	59	92	64.13	69	121	57.02	7.11	-6.827% - 20.584%	0.363
2009	64	87	73.56	66	108	61.11	12.45	-1.566% - 25.72%	0.092
2010	39	62	62.90	55	105	52.38	10.52	-5.95% - 26.073%	0.245

*Chi square test.

in Serbia was in 1997 (16.63/100 000), also significantly reducing (with variations) by the year of 2010 (death rate 8.27/100 000).

Differences in percentage of traffic crashes out of total number of crashes between Croatia and Serbia are shown in Table 2.

Compared to Croatia, Serbia had significantly lower percentage of traffic crashes out of total number of crashes in year 2000, 2002, 2003, 2004, 2005 and 2006. Although these differences are significant, Croatian data still remarks that the lowest percentage of traffic crashes out of total number of crashes occurred in 1996 (52.8%) – meaning that more than half of death cases caused by external causes in the whole analyzed period were due to traffic crashes. The lowest percentage for Serbia was in year 2000 (42.5%) and had some fluctuations from that point.

After the analyzed period preventive actions have been continued in both countries. In the year 2009/10 the project “Prevention in traffic for primary school” was implemented in Croatia (16). In 2011 the similar project for secondary school has started and is still running. In 2013 the project for kindergartens was started and finished (17). Since 2012 Croatian automobile club organizes action “See and click” for oldest groups in kindergarten and for pupils of first grade of primary school. In Serbia in September 2011 a preventative campaign “Attention now” started, with the aim to improve traffic safety for children 7-10 years old. The campaign includes promotion in the media and in schools. Ministries of interior, education and infrastructure are included in this campaign. This campaign emphasized presence of police officers in school areas during September that

is period when school year starts (18). The Automobile Association in Serbia is included in another global campaign – “Make the road safe”, which started in May 2011 through public campaign, which included various ministries, Red Cross, and other stakeholders (19). It was followed by campaign “Let’s walk upright”, which started in December 2012, with the aim to improve pedestrian safety (20). During July and August 2012, campaign “Action for safe trip” was organized by the Agency and Ministry of Interior, targeting drivers on the most frequent roads (21). In summer 2013 the Agency started the campaign for promoting usage of safe belt, with the president of Serbia acting as promoter. In 2013 a campaign “When you drive park your phone” started, supported by Telecom Serbia, involving as promoters two famous Serbian athletes, Ivana Spanović and Emir Bekrić (22). The aim of this campaign is to increase awareness of drivers about the dangers of using a mobile phone while driving.

The global United Nations campaign “A decade for action for road traffic safety” also took part in Croatia, with the Ministry of Interior and the Croatian Automobile Association, as well as in Serbia, with the Institute of Public Health of Belgrade (23). The world Memorial Day for victims of road crashes was also used to promote road safety in both countries (24, 25).

Discussion

Traffic injuries are a growing public health issue, disproportionately affecting vulnerable groups, including children. Traffic crashes account for a large percentage of children’s deaths, while millions of other children sustain injuries, some suffering permanent disabilities. No country is spared from this toll in lives and suffering. Enormous human potential is being lost, with grave social and economic consequences. Road safety is

thus a major public health issue throughout the world. Children’s ability to estimate the speed at which the vehicle is moving, as well as its distance from them, is reduced in comparison to adults, children still don’t have a fully developed ability to direct attention to traffic, they often react unexpectedly and impulsively and they haven’t yet fully developed ability to assess risk (26). From the police view, the main reasons that children are more vulnerable to traffic crashes is that they are lower in growth that makes it impossible for them to have good visibility in traffic. They also have limited field of vision, and due to lower growth they are harder to spot to other road users, especially drivers.

But traffic injuries are preventable. In high-income countries, an established set of interventions contributed to significant reductions in the incidence and impact of road traffic injuries. These include enforcement of legislation controlling speed and alcohol consumption, mandating the use of seatbelts and crash helmets, and the safer design and use of roads and vehicles. Different activities and projects were launched in Croatia and Serbia to decrease the burden of traffic injuries for children during the analyzed period. Croatian automobile club is very active in the field of road safety. From 1992 they organize initiative named “Safe in traffic”, raising awareness on traffic rules and safety in bicycle use. Consecutive national programs for road safety are implemented in Croatia since 1994. In 2011 the fifth one was launched for the period between 2011 and 2020. The best-known Croatian preventive action for road traffic safety called “Respect our signs”, has been implementing every September by the Croatian police since 1995. September is the month in which the school year begins and around the country this preventive action is carried out, aiming at achieving protection of the most vulnerable group of participants in the traffic– children. This action also reminds

adults, especially drivers of various vehicles, to pay attention to children in traffic (26). The Croatian police is undertaking various preventive and repressive actions for years in order to positively impact the protection of children, our youngest road users. This action has proven its effectiveness by the fact that the number of killed and injured children on Croatian roads since the beginning of it was significantly reduced. In 1994 57 children aged 0 to 14 years were killed in traffic crashes, while in 2013 11 children in the same age group were killed on Croatian roads. Fifteen years ago most children were suffering mostly as pedestrians, while today they are mostly killed as passengers in vehicles, parents transporting children in the front seats, on back seats without seat belts or in inadequate seats that do not meet the basic safety requirements. The situation is similar in the analyzed countries (27). In our analysis we didn't have full data that would allow us to confirm these trends.

Based on these facts, articles of the Croatian Law on Road Traffic Safety from 2008 states that all children under the age of 12 years who are transported in vehicles, must be in the rear seats, secured in a proper manner, and children aged up to five years have to be seated in a special car seat, also properly secured (28). The similar law regulation exists in Serbia. Many preventive actions implemented by the Croatian police are focused on compliance with traffic culture, with emphasis on the safe and proper participation of children in traffic, such as "Safe cycling in traffic" in 2008 (29), "Children - friends in traffic" 2009 (30), "With a 'glowworm' (reflector for pedestrians) safer in the dark" in 2009 (31) and "My friend policeman and I, in traffic" in 2009 (32). In 2015, Save Kids Lives calls upon world leaders to make road safety a priority. It is unacceptable that so many children and youth are killed on the roads. The Child Declaration launched by

Save Kids Lives, and delivered during UN Global Road Safety Week (May 2015), is a call for the actions needed to save lives on the roads. These measures are already well known but too often they are not put in place. They must become a priority for decision makers in their agenda for future development with the aim to stop road deaths (33).

In Serbia, legislation changes in 2002 resulted significant changes in road traffic safety (34). Strict penalty policy followed by obligatory use of safety belts, was promoted the same year. Other legislation changes in Serbia regarding road traffic safety, took place in 2009 (35). A year later, in 2010, the National agency for traffic safety was established. It became a leader in the road traffic safety prevention. Since its establishment the Agency introduced several campaigns, including the campaign "Be a man, drive safe!" promoting usage of car winter equipment.

The study of Vincenten and coauthors (36) that looked at parents perceptions, attitudes and behaviors towards child safety, conducted in 14 European countries (Austria, Belgium, Denmark, Finland, France, Germany, Greece, Italy, Ireland, Netherlands, Portugal, Spain, Sweden and Great Britain), has shown that the primary concern for parents of young children was the risk of their child being hit by a car, followed by crash while they are riding a car. But, when asked what they personally do to prevent crash injury, only 30% said that they use a car seat for their children under the age of 5 and just 23% said they put their child in back seat of car. Study investigating child safety seat knowledge among parents in Southern California in 2000 showed that 86% reported owning a child safety seat or booster seat, and 81% of parents were aware the danger of an airbag for infants in rear-facing child safety seats (37). Thomas's study showed that children wearing bicycle helmets have lower risk for head injuries, because bicycle helmets re-

duced the risk by 63% and loss of consciousness by 86% (38).

Significant decrease in child traffic injuries mortality rates was achieved in both countries with Serbia in the analyzed period, with generally lower rates throughout the whole period, despite the fact that GNI in Croatia is doubled comparing with Serbia. It is in accordance with the data from the European Health for All database (HFA-DB) where the standard death rate (SDR) for external causes of injury and poisoning for all ages per 100 000 population for 2012, is 52 for Croatia and 37 for Serbia (39). In the future studies it would be interesting to analyze death cases caused by traffic in more details, because one possible explanation of the difference between Croatia and Serbia could be the difference in travelled distance. Also the recommendation for future investigation would be to involve more Central and Eastern European countries.

Conclusion

In both countries the most vulnerable population is the age group 15 - 19 years, and especially male sex. Recommendations for future are to reduce further the mortality rate in all child age groups with special attention to the age group 15-19 years. Because many actions were launched after the analyzed period the further decrease could be expected to narrow the gap in mortality rates between Croatia and Serbia and the most developed countries.

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References

1. World Health Organization, UNICEF. World report on child injury prevention. Geneva: WHO; 2008.
2. European Association for Injury Prevention and Safety Promotion (EuroSafe). Injuries in the European Union – summary of the injury statistics for the years 2008-2010. Amsterdam: EuroSafe; 2013.
3. Anderson RN, Miniño AM, Fingerhut LA, Warner M, Heinen MA. Deaths: injuries, 2001. *Natl Vital Stat Rep.* 2004;52(21):1-86.
4. Garzon DL. Contributing factors to preschool unintentional injury. *J Pediatr Nurs.* 2005;20(6):441-7.
5. Miller TR, Lestina DC, Galbraith MS. Patterns of childhood medical spending. *Arch Pediatr Adolesc Med.* 1995;149(4):369-73.
6. World Health Organization. World Health Statistics 2018. Geneva: WHO; 2018.
7. World Health Organization. World Health Statistics 2014. Geneva: WHO; 2014.
8. World Development Indicators [database on the Internet]. Washington: World Bank. c2014 - [cited 2014 Oct 23]. Available from: <http://data.worldbank.org/country/croatia>.
9. UNDP Croatia. Reduce child mortality. [cited 2013 Nov 20]. Available from: <http://www.hr.undp.org/content/croatia>.
10. Duric P. Child mortality in Serbia – shall we improve child safety? Typology for healthy learning environment Symposium. Faculty of Architecture Zagreb and School of Public Health 'Andrija Štampar'; Zagreb: Oct 23-27, 2014.
11. Injac D, Duric P, Rajcevic S. External causes of deaths for children in AP Vojvodina, in period 2006-2010. In: Dikic B, Dikic S, eds. Fifth international congress Ecology, Health, Work, Sport (conference proceedings). Banja Luka, 2012, September 6-9.
12. Sidebotham P, Fraser J, Covington T, Freemantle T, Petrou S, Pulikottil-Jacob R, et al. Understanding why children die in high income countries. *Lancet.* 2014;384:915-24.
13. The report about causes of death in Croatia in 2013 [Croatian]. Zagreb: Hrvatski zavod za javno zdravstvo; 2014.
14. Mujkić A, Peek-Asa C, Young T, Rodin R. Effect of war on weapon-related deaths in Croatian children and youth. *Arch Pediatr Adolesc Med.* 2008;162:140-4.
15. World Bank. Country and Lending Groups [cited 2015 July 23]. Available from: <http://data.worldbank.org/indicator>.
16. Ministarstvo unutarnjih poslova Republike Hrvatske [homepage on the Internet]. Preventative

- action: Child seat for vehicles [Croatian]. [cited 2014 Jan 10]. Available from: <http://www.mup.hr/11688/421.aspx>.
17. Ministarstvo unutarnjih poslova Republike Hrvatske [homepage on the Internet]. Preventative action: Children – friends in traffic [Croatian]. [cited 2014 Jan 8]. Available from: <http://www.mup.hr/14141.aspx>.
 18. Agency for Road Safety [homepage on the Internet]. Campaigns [Serbian]. [cited 2014 Jan 6]. Available from: <http://www.abs.gov.rs/kampanje.html>.
 19. Automobile and Motorcycle Association of Serbia [homepage on the Internet]. Make roads safe [Serbian]. [cited 2013 Dec 10]. Available from: http://www.amss.org.rs/index.php?option=com_content&view=article&id=459&tmpl=component&Itemid=207.
 20. Automobile and Motorcycle Association of Serbia [homepage on the Internet]. AMSS campaign “Walk safely” [Serbian]. [cited 2013 Dec 20]. Available from: http://www.amss.org.rs/index.php?option=com_content&view=article&id=448&Itemid=203.
 21. Automagazin [homepage on the Internet]. Action for safe and happy journey [Serbian]. [updated 2011 July 18; cited 2013 Dec 20]. Available from: <http://www.automagazin.rs/vesti/224/9832/saobracaj-akcija-za-bezbedan-i-srecan-put>.
 22. Telekom Serbia [homepage on the Internet]. When drive, park your phone [Serbian]. [cited 2013 Dec 22]. Available from: <http://www.telekom.rs/Media/>.
 23. Republic of Serbia, Ministry of Health [homepage on the Internet]. Decade of the action for the road safety 2011-2020, Instructions for the event organizers [Serbian]. [cited 2014 Jan 4]. Available from: http://www.zdravlje.org.rs/index.php?option=com_content&view=article&id=223%3Adekada-akcije-za-bezbednost-na-putevima-2011-2020&catid=51%3Apogledajte&lang=sr-lat.
 24. Safety in the traffic [homepage on the Internet]. Celebrating World day of remembrance of the victims of traffic crashes in Croatia [Croatian]. [cited 2014 Dec 4]. Available from: <http://www.mup.hr/main.aspx?id=198023>.
 25. Automobile and Motorcycle Association of Serbia [homepage on the Internet]. Celebrating World day of remembrance of the victims of traffic crashes [Serbian]. [cited 2013 Dec 20]. Available from: http://www.amss.org.rs/index.php?option=com_content&view=article&id=513%3Aobeleen-svetski-dan-seanja-na-rtve-automobilskih-nesrea&catid=67%3Avesti&Itemid=90.
 26. Republic of Croatia, Ministry of Interior [homepage on the Internet]. Respect our signs! [Croatian]. [cited 2014 Jan 4]. Available from: <http://www.mup.hr/104284.aspx>.
 27. RODA (Parents in action) [homepage on the Internet] Results of research about child safety in the cars [Croatian]. [cited 2015 May 25]. Available from: <http://www.roda.hr/article/category/sigurno-u-prometu>.
 28. Anonymous. Law about road safety. Official Gazette of Republic of Croatia. 2008;67. [cited 2015 May 25]. Available from: <http://narodne-novine.nn.hr/clanci/sluzbeni/339713.html>.
 29. Republic of Croatia, Ministry of Interior [homepage on the Internet]. Preventative action: Safety cycling in traffic [Croatian]. [cited 2014 Jan 6]. Available from: <http://www.mup.hr/8884.aspx>.
 30. Republic of Croatia, Ministry of Interior [homepage on the Internet]. Preventative action: Child seat [Croatian]. [cited 2014 Jan 6]. Available from: <http://www.mup.hr/25895.aspx>.
 31. Republic of Croatia, Ministry of Interior [homepage on the Internet]. Preventative action: Glowworm [Croatian]. [cited 2013 Dec 12]. Available from: <http://www.mup.hr/MainPu.aspx?id=28118>.
 32. Republic of Croatia, Ministry of Interior [homepage on the Internet]. Preventative action: My friend policeman and I, in traffic [Croatian]. [cited 2014 Jan 4]. Available from: <http://www.mup.hr/14277.aspx>.
 33. Save kids lives [homepage on the Internet]. Child declaration. [cited 2015 June 4]. Available from: <http://www.savekidslives2015.org/>.
 34. Lipovac K, Bilić Đ, Vemić D. Usage of the safety bells in the Republic of Serbia. In: Prevention of the road traffic crashes on the roads in 2002: Proceedings of the 6th symposium with international participation; 2002, Oct 11-12; Novi Sad, Serbia.
 35. Anonymous. Road safety law. Official Gazette of the Republic of Serbia. 2009;41. [cited 2015 May 25]. Available from: <http://www.mup.gov.rs/cms/resursi.nsf/Zakon%20o%20bezbednosti%20saobracaja%20na%20putevima.pdf>.
 36. Vincenten JA, Sector MJ, Rogmans W, Bouter L. Parents’ perceptions, attitudes and behaviors towards child safety: a study in 14 European countries. *Int J Inj Contr Saf Promot.* 2005;12(3):183-9.

37. Vaca F, Anderson CL, Agran P, Winn D, Cheng G. Child Safety Seat Knowledge Among Parents Utilizing Emergency Services in a Level I Trauma Center in Southern California. *Pediatrics*. 2002;110(5):e61.
38. Thomas S, Acton C, Nixon J, Battistutta D, Pitt WR, Clark R. Effectiveness of bicycle helmets in preventing head injury in children: case-control study. *BMJ*. 1994;308(6922):173-6.
39. World Health Organisation, Regional Office for Europe. Health for all database [homepage on the Internet]. Copenhagen: World Health Organization, Regional Office for Europe. c2014 - [cited 2014 Oct 23]. Available from: <http://www.euro.who.int/en/data-and-evidence/databases/european-health-for-all-database-hfa-db>.