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UPOTREBA MOBILNOG TELEFONA U VOŽNJI?

Sažetak: Upotreba mobilnog telefona u toku vožnje postaje sve rasprostranjenija. U anonimnim anketama čak 47,2% vozača prijavljuje da nekada tokom vožnje upotrebljava mobilni telefon, a u nekim studijama ovaj broj prelazi 50%. Rezultati publikovanih studija su pokazali značajno povećanu stopu saobraćajnih udesa kod vozača prilikom upotrebe mobilnih telefona zbog nepažnje, nesigurne brzine, vožnje na pogrešnoj strani puta, udara u nepokretni predmet, prevrtanja vozila, prevrtanja pre nesreće i povređivanja pešaka. Ovi vozači imali su povećane izgleda za letalni ishod. Muškarci upotrebljavaju mobilne telefone u toku vožnje znatno češće od žena i tom prilikom izazivaju teže saobraćajne udesa. Stope nesreća i smrtnih slučajeva povećavaju se s povećanjem starosne dobi, osim vozača u dobi od 20 do 24 godine. Osnovno pravilo, koje postoji u gotovo svim zakonodavstvima i preporukama, treba da bude zaustavljanje vozila zbog razmene informacija i upotrebe mobilnog telefona. Ovo pravilo se, međutim, masovno krši.

Radnjom najvećeg rizika smatra se slanje SMS poruka. U eksperimentu izvedenom 2013. god. otkriveno je da su ljudi koji su se bavili mobilnim telefonom u toku simulirane vožnje propustili duplo više simuliranih saobraćajnih signala u odnosu na simulaciju bez upotrebe mobilnih. Ispitivana je i povezanost saobraćajnih udesa i razgovora mobilnim telefonima sa i bez upotrebe ruku (hands-free). Preliminarna istraživanja govore da je na incidencu udesa povezanih sa upotrebom mobilnih telefona više uticao broj i dužina razgovora nego prisustvo ili odsustvo hands-free sistema. Kako se ispostavilo da hands-free sistemi ne doprinose poboljšanju sigurnosti upotrebe mobilnih telefona u toku vožnje, njihovo dalje usavršavanje verovatno vodi povećanju rizika od saobraćajnih udesa.

Ključne reči: mobilni telefon, vožnja, saobraćajni udesi, hands-free, rizik

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Prema NHTSA (National Highway Traffic Safety Administration), SAD, svaka radnja vozača koja odvlači pažnju od vožnje, kao što je slanje poruka, konzumiranje hrane i pića, razgovor sa putnicima u vozilu, slušanje radija, bilo kakva upotreba mobilnog telefona predstavlja umeren do najviši rizika po bezbednost saobraćaja. U skladu sa ovim, radnjom najvećeg rizika smatra se slanje SMS poruka. Uopšte, četiri najčešće radnje koje u velikoj meri ometaju vozača su slanje i primanje poziva i slanje i primanje pisanih poruka u toku vožnje. Nema sigurne vožnje dok ona ne zaokuplja potpunu pažnju vozača, navodi se u smernicama NHTSA. Po podacima ove organizacije za 2017. god. bilo je 377 smrtnih slučajeva, a 391.000 ljudi je povređeno u udesima motornih vozila kojima je uzrok bila ometenost vozača upotrebom mobilnog telefona. Po istoj grupi podataka, čak preko 660.000 vozača svakodnevno koristi mobilni telefon u toku vožnje, što stvara velike izgleda za povređivanje i nesreće sa smrtnim ishodom na putevima SAD (NHTSA 2018)¹. Po podacima raznih zemalja, procenat vozača koji koriste mobilne telefone u toku vožnje se stalno povećava u poslednjih 5–10 godina i iznosi 3–21% u zavisnosti od zemlje, načina anketiranja i stepena kontrole. Istraživanja ukazuju da upotreba mobilnih telefona od strane vozača, osim skidanja očiju sa puta, ruke sa upravljača i skretanja misli sa vožnje, uzrokuje i teže distrakcije, tzv. kognitivnu mahnitost, vidljivu npr. kod narkomanskih zavisnika, koja se može manifestovati očajem, histerijom, manijom, znaacima delirijuma, što, sledstveno, ima uticaja na obrasce vožnje. Zabeleženi su slučajevi definitivnog uticaja sadržaja koji se u toku vožnje razmenjuje mobilnim telefonom, što utiče na slabu procenu prave strane puta kojom se vozi, udaljenosti od drugih vozila, predmeta i prepreka i sveukupno suženje svesti o situaciji i okolnostima u toku vožnje. Neke studije pokazuju da je od četiri saobraćajna udesa bar u jednom učestvovao vozač čija je pažnja bila podeljena između vožnje i mobilnog telefona. To znači da vozač ne mora nužno aktivno da razmenjuje sadržaje mobilnim telefonom, ali da je bar delimično fokusiran na zvonjavu, zujanje i drugu signalizaciju telefona.² Ukupni rezultati višegodišnjeg istraživanja navode da redovna upotreba mobilnog telefona u toku vožnje stvara kognitivnu ometenost, pa i zavisnost, te progresivno vodi mogućnosti dešavanja ozbiljnih nesreća, bilo da se za upotrebu telefona koristi ruka ili ne (hands-free)- (VHO – very high output- NHTSA 2011)¹

Upotreba mobilnog telefona u celini smanjuje performanse vozača. Prema publikovanim studijama, veća je verovatnoća da će mladi vozači upotrebljavati mobilne telefone u toku vožnje i, takođe, dovesti do nesreća sa težim posledicama (Bates, 2014). Upotreba mobilnih telefona je u poslednjih 5–7 godina izbila na jedno od prva tri mesta kada se razmatraju radnje vozača koje ometaju vožnju. U anonimnim anketama čak 47,2% vozača prijavljuje da nekada tokom vožnje upotrebljava mobilni telefon, a u nekim studijama ovaj broj prelazi 50%. Kao mere opreza, ovi vozači navode smanjivanje brzine i povećanje rastojanja od vozila ispred u toku komunikacije.² Konstatovano je da vozači koji namerno koriste razne strategije izbegavanja

otkrivanja nebezbedne vožnje gotovo dva puta češće upotrebljavaju mobilni telefon u toku vožnje. U nekim zemljama (SAD, Kina) upotreba mobilnog telefona od strane izazivača saobraćajnog udesa utiče na visinu isplate štete oštećenom i visinu naknade od strane osiguravajućeg društva izazivaču nesreće.

Koristeći podatke dobijene iz saobraćajnih nezgoda prijavljenih između 1992. i 1995. u državi Oklahoma, SAD, jedna studija je ispitivala statističku stopu nezgoda između vozača sa ili bez mobilnih telefona. Izračunate su i cene štete između udesa sa učešćem vozača koji su koristili mobilni telefon neposredno pre i u momentu udesa i prijavljenih uzroka nesreće bez učešća mobilnih telefona, vrsta sudara, analizirane su akcije vozača neposredno pre nesreće, lokacije nesreće, broj smrtnih slučajeva i udesa sa smrtnim ishodom, starosna dob i pol vozača. Rezultati su pokazali značajno povećanu stopu udesa kod vozača koji su koristili mobilni telefon, zbog nepažnje, nesigurne brzine, vožnje na pogrešnoj strani puta, udara u fiksni predmet, prevrtanja njihovog vozila u toku ili neposredno pre nesreće, povreda pešaka i bežanja sa mesta nesreće. Ljudi sa telefonima imali su povećan rizik od smrtnog ishoda u nesreći u odnosu na osobe bez telefona.³ Muškarci s telefonima imali su znatno višu stopu smrtnosti i teških povreda od žena u pomenutim mehanizmima nastanka nesreće. Koeficijenti stope nekih tipova saobraćajnih nesreća i smrtnih slučajeva povećavali su se s povećanjem starosne dobi, osim vozača mlađih od 20 godina, koji su imali najveću stopu smrtnosti. Studija je sprovedena u cilju rasprave o zabrani ili ograničenju upotrebe mobilnih telefona u toku vožnje i mogućim alternativama prevencije.⁴

Postoje i kritičari ograničenja ili zabrane upotrebe mobilnih telefona tokom vožnje. Oni se pozivaju na pravo da se ključne informacije prenesu ili saznaju odmah, pa i u toku vožnje. Ipak, ovom prilikom treba uzeti u obzir da upravo ključne informacije imaju veći potencijal oduzimanja pažnje, pa, sledstveno, izazivanje udesa sa težim posledicama, te baš njih treba izbeći u toku vožnje. Osnovno pravilo, koje postoji u gotovo svim zakonodavstvima i preporukama, treba da bude zaustavljanje vozila zbog razmene informacija i upotrebe mobilnog telefona. Ovo pravilo se, međutim, masovno krši.

Imajući u vidu navedene činjenice, oko 40 zemalja, među kojima je i Srbija, zabranile su upotrebu mobilnih telefona u toku vožnje.⁵ Kao argument protiv zabrane upotrebe mobilnog telefona kritičari navode podatak da mnogi vozači tokom vožnje puštaju glasnu muziku, što bi ih moglo sprečiti da čuju okolne zvuke. Iako je, međutim, dokazano da glasna muzika ima udela u povećanju rizika u toku vožnje, ostaje činjenica da, za razliku od muzike, ma kakva realizacija pozivanja ili prijema poziva zahteva veću pažnju i koncentraciju od muzike u vozilu. Ovom prilikom treba napomenuti da muzika u vozilima ne sme blokirati okolne zvuke, a da je treba potpuno prekinuti u uslovima bilo kakvog povećanog rizika u vožnji (gužve, loši vremenski uslovi, loši putevi...). Sa druge strane, u vozilu svakako treba imati mobilni telefon

radi brze reakcije u slučaju potrebe (npr. realizacije poziva policije, hitne pomoći ili pomoći na putu).

Zbirno gledano, ne samo vozači, nego i saputnici treba da imaju visoku svest o vrlo ograničenoj potrebi upotrebe mobilnih telefona u toku vožnje, jer su minusi njegove upotrebe tokom vožnje mnogo veći u odnosu na pluseve.

Standardizacija propisa o upotrebi mobilnih telefona tokom vožnje neizbežna je potreba da se obezbedi sigurnost u prevoznom sektoru. Vozači komercijalnih motornih vozila i profesionalni vozači treba da podležu zakonskim ograničenjima u korišćenju mobilnih telefona tokom vožnje na strogo definisane situacije. Nepoštovanje odredbi zakona trebalo bi da povuče sankcionisanje komercijalnog vozača po višestrukim prekršajima za kršenje bezbednosti saobraćaja u slučaju upotrebe mobilnih telefona.⁵

Uzimajući kao ciljnu grupu profesionalne vozače koji koriste mobilne telefone, nametanje ograničenja njihove upotrebe tokom obavljanja poslova u međudržavnoj trgovini dodatno bi ojačalo propise pojedinačnih zemalja, za šta je potreban međunarodni konsenzus (FMCSA Federal Motor Carrier Safety Administration – 2016). Sigurnost na autoputevima poboljšala bi se standardizacijom propisa koji se odnose na upotrebu mobilnih telefona tokom vožnje. Sudari vozača na autoputevima, sa smrtnim ishodom i teško povređenima znatno bi se smanjili (Villie, 2007). Ova potreba naročito dolazi do izražaja kada se ima u vidu da profesionalni vozači vrlo često voze masivna, velika vozila.⁶

Pitanje za donosiocje odluka u pravosuđu, ali ne samo za njih, nego i za psihologe, prosvetne radnike, pa i lekare je da li maloletnike koji vrše krivična dela uopšte, pa i oni koji skrivaju saobraćajnu nesreću prilikom upotrebe mobilnih telefona (kao vozači motornih vozila, pešaci, biciklisti, motociklisti) treba suočiti sa istim zakonskim obimom sankcionisanja koji je zakon nametnuo odraslima.⁷

Opšti stav je da je potrebno pronaći načine i sredstva za procenu nivoa kompetentnosti maloletnika u celom procesu, uključujući pravosudni. Ovo nameće izradu standardizovanog protokola koji bi pomogao procenjivanju nivoa kompetencije maloletnika u postupanju (MacArthur Foundation Studi, 2003). Detaljno razmatranje trenutnog i prošlog stanja mentalnog zdravlja i razvoja maloletnika od vitalnog je značaja za evaluaciju nasilnog događaja u kome je maloletnik učestvovao, pa i u nesreći sa upotrebom mobilnog telefona. Ova tema istraživanja se nameće i u razmatranom sektoru zbog rastuće zabrinutosti za razvoj maloletnika (Hile, 2019).^{5,7}

Od sredine 2003. do kraja 2019. god. u SAD se beleži eksplozivan rast saobraćajnih udesa. Neki podaci publikovanih studija i osiguravajućih društava navode učešće neke vrste upotrebe mobilnih telefona u ovim udesima čak oko 34%! Iste studije navode da bar 85% vlasnika mobilnih telefona ove upotrebljava makar povremeno u toku vožnje, što daje broj od preko 500. 000 vozača koji u bilo koje doba dana na putevima upotrebljavaju mobilni u toku vožnje.⁸

Redelmeier i Tibshirani su uradili detaljnu studiju na 699 vozača sa mobilnim telefonima, koji su učestvovali u sudarima i zaključili da je rizik od sudara, ako vozač koristi mobilni telefon tokom vožnje, bio između 3 i 6,5 puta veći nego kada telefon nije korišćen. Ovaj nivo rizika sličan je, u navedenoj studiji, riziku vožnje sa nivoom alkohola u krvi iznad zakonske granice.

U eksperimentu izvedenom 2013. god. Straier i Johnston otkrili su da su ljudi koji su se bavili mobilnim telefonom u toku simulirane vožnje propustili duplo više simuliranih saobraćajnih signala u odnosu na simulaciju bez upotrebe mobilnih. Poređenje sa rezultatima stvarnih akcidentalnih situacija govori da svest o tome da situacija u eksperimentu simulirana, dakle, bez stvarnih negativnih posledica, daje tek nešto više od 6% lošijih rezultata u simulaciji, u odnosu na stvarnu situaciju. Nalazi studije iz 2013. „potvrdili su da vozači koji razgovaraju mobilnim telefonom u vozilu imaju konzistentni obrazac sporijeg vremena reakcije”.⁸

Za sada su uzroci saobraćajnih udesa, kao što je neprimereno velika brzina, alkoholisanost ili akutni zdravstveni problem vozača (infarkt, cerebralni insult), mnogo više obrađivani nego upotreba mobilnih telefona. Ovo se naročito odnosi na mlađe vozače. Jedna studija iz SAD (dve srednjozapadne i dve južne države) navodi podatak da 13,6% vozača sa vozačkom dozvolom pripada uzrasnom dobu od 18 do 24 godine, ali da oni učestvuju u 25,9% saobraćajnih nesreća sa smrtnim ishodom. Kako ova populacija najviše upotrebljava i mobilne telefone u toku vožnje, moglo bi se zaključiti da ova starosna grupa ima veći udeo u ovim nesrećama od starijih vozača. Takođe je ispitivana i povezanost saobraćajnih udesa i razgovora mobilnim telefonima sa i bez upotrebe ruku (hands-free). Preliminarna istraživanja govore da je na incidencu udesa povezanih sa upotrebom mobilnih telefona više uticao broj i dužina razgovora nego prisustvo ili odsustvo hands-free sistema.⁹

Umesto zaključka

- Mnogi vozači u toku vožnje upotrebljavaju mobilne telefone, što dokazano smanjuje vozačke sposobnosti.
- Epidemiološke studije su dokazale vezu između upotrebe mobilnih telefona i toku vožnje i povećanog rizika od saobraćajnih udesa sa značajnim brojem povređenih koji zahtevaju hospitalizaciju.
- Upotreba hands-free uređaja izgleda da ne doprinosi smanjenju rizika.
- Zakone koji limitiraju ili zabranjuju upotrebu mobilnih telefona u toku vožnje nije lako sprovesti. Eventualna varijanta tehnološkog rešenja mobilnog telefona koji ne bi mogao da se upotrebljava dok je vozilo u pokretu za

sada postoji samo kao ideja i nema izgleda da će biti prihvaćena u industriji mobilnih telefona.

- Kako se ispostavilo da hands-free sistemi ne doprinose poboljšanju sigurnosti upotrebe mobilnih telefona u toku vožnje, njihovo dalje usavršavanje verovatno vodi povećanju rizika od saobraćajnih udesa.

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USING CELL PHONES WHILE DRIVING?

Abstract: The use of a cell phone while driving is becoming widespread more and more. In anonymous surveys, as many as 47.2% of drivers report using a cell phone while driving, and in some studies this number exceeds 50%. The results of published studies have shown a significantly increased rate of traffic accidents among drivers when using cell phones due to carelessness, unsafe speed, driving on the wrong side of the road, hitting a stationary object, overturning a vehicle and injuring pedestrians. These drivers had an increased chance of a lethal outcome. Men use mobile phones while driving much more often than women, causing more serious traffic accidents. Accident and death rates increase with age, except for drivers aged 20–24. The basic rule, which exists legislation and recommendations in almost all countries, should be to stop the vehicle due to the exchange of information and the use of a mobile phone. This rule, however, is being violated.

Sending SMS messages is considered to be the biggest risk. In an experiment conducted in 2013, it was found that people who dealt with a cell phone during a simulated drive missed twice as many simulated traffic signals, compared to a simulation without using a phone. The connection between traffic accidents and cell phone conversations with and without hands-free was also examined. Preliminary research shows that the incidence of accidents related to the use of cell phones use was influenced more by the number and length of calls than by the presence or absence of a hands-free tool: so, it seems that hands-free systems do not contribute to improving the safety of cell phone use while driving. Thus, their further improvement is likely to increase the risk of accidents.

Key words: mobile phone, driving, traffic accidents, hands-free, risk

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According to NHTSA (The National Highway Traffic Safety Administration), USA, any driver's distraction, such as texting, consuming food and drink, talking to passengers in the vehicle, listening to the radio, any use of a cellular phone carry a moderate to highest risk for safety in traffic. According to this fact, sending SMS messages is considered to be the highest risk. In general, these four most common actions greatly disturb the driver: sending and receiving calls and sending and receiving text messages while driving. There is no safe driving until it captures the full attention of the driver (NHTSA guidelines). According to the data of this organization for 2017, there were 377 deaths and 391 000 people were injured in motor vehicle accidents caused by driver disability. Following the same group of data, as many as 660 000 drivers use a cellular phone every day while driving, which creates great chances for injuries and deaths on US roads (NHTSA 2018). Collected data from various countries show that the percentage of drivers who use cellular phones while driving has been constantly increasing in the last 5–10 years, amounts to 3–11% depending on the country, the method of surveys and the degree of control. Research indicates that the use of cellular phones by drivers, in addition to taking their eyes off the road, hands off the steering wheel and diverting thoughts from driving, also causes more severe distractions, the so-called cognitive frenzy, visible e.g. in drug addicts, manifested by despair, hysteria, mania, signs of delirium, which, consequently, has an impact on driving patterns. Impact of content exchanged while driving on a cellular phone is obvious, affecting the poor assessment of the right side of the road, distance from other vehicles, objects and obstacles and overall narrowing of awareness of the situation and circumstances while driving. Some studies show that at least one of the four traffic accidents involved a driver whose attention was divided between driving and a cellular phone action. That means that the driver does not necessarily have to actively exchange content by a cellular phone, but that he is at least partially focused on ringing, buzzing and other signalling of the phone. The overall results of many years of research indicate that regular use of a cellular phone while driving creates cognitive impairment and even addiction, and progressively void the possibility of serious accidents, whether using a hand or not (hands-free) – (VHO – very high output – NHTSA 2011)¹.

Overall, the use of a cellular phone reduces the performance of the driver. According to published studies, young drivers are more likely to use cellular phones while driving and also lead to accidents with more serious consequences. (Bates, 2014). The use of cellular phones in the last 5–7 years has come out in one of the first three places when considering the actions of drivers that interfere with driving. In anonymous surveys, as many as 47,2% of drivers report that they use a cellular phone while driving, from time to time; in some studies this number exceeds 50%. As a precautionary measure, these drivers cite a reduction in speed and an increase in distance from the vehicle in front during communication². It was also found that drivers

who intentionally use various strategies to avoid official detecting unsafe driving use a cellular phone almost twice as often while driving. In some countries (USA, China), the use of a cellular phone by the person who caused the accident affects the amount of compensation paid to the injured person and the amount of compensation by the insurance company to the person who caused the accident.

Using data obtained from traffic accidents reported between 1992 and 1995 in the state of Oklahoma, USA, one study examined statistical data on accident rates between drivers with or without cellular phones. Amount of damage costs between accidents involving drivers who used a cellular phone immediately before and at the time of the accident and reported causes of the accident without the participation of cellular phones, type of collision, driver action immediately before the accident, accident location, number of deaths and fatal accidents were calculated, as the outcome, age and sex of the driver. The results showed a significantly increased accident rate among drivers who used cellular phones, due to carelessness, unsafe speed, driving on the wrong side of the road, hitting a fixed object, overturning a vehicle during or immediately before the accident, pedestrian injuries and fleeing from the site of accident. People with phones in use while driving had an increased risk of death in an accident compared to people without phones³. Male with phones had a significantly higher mortality and severe injury rate than female in the aforementioned accident mechanisms. The rate coefficients of some types of traffic accidents and deaths increased with increasing age, except for drivers under the age of 20–24 years old, who had the highest mortality rates. The study was conducted to discuss permitting or restricting the use of cellular phones while driving and possible prevention alternatives⁴.

There are also critics of restricting or banning the use of cellular phones while driving. They are invited to right to get key information or find out immediately, even while driving. However, on this occasion, it should be taken on mind that the key information has a greater potential for distraction, and, consequently, causing accidents with more serious consequences, so such information should be avoided while driving. The basic rule, which exists in almost all legislation and recommendations, should be to stop the vehicle due to the exchange of information and the use of a cellular phone. This rule, however, is being massively violated.

Having in mind the stated facts, about 40 countries, including Serbia, have restricted the use of cellular phones while driving⁵. As an argument against the restriction, critics cite the fact that many drivers play loud music while driving, which could prevent them from hearing the surrounding sounds. Although it has been proven, however, that loud music has a role in increasing the risk while driving, the fact remains that, unlike music, any realization of calling or receiving calls requires more attention and concentration than listening to music in the vehicle. Up to that, it should be noted that the music in the vehicles must not block the surrounding sounds, and that it should

be completely interrupted in conditions of any increased risk while driving (crowds, bad weather conditions, bad roads). On the other hand, you should definitely have a cellular phone in the vehicle for a quick response in case of need (e.g. making calls to the police, ambulance or roadside assistance).

Not only drivers, but also passengers at all should have a high awareness of the very limited need to use cellular phones while driving, as the disadvantages of its use while driving are much greater than the pros.

Standardization of regulations on the use of cellular phones while driving is an inevitable need to ensure safety in the transport sector. Drivers of commercial motor vehicles and professional drivers should be subject to legal restrictions on the use of cellular phones while driving in strictly defined situations. Non-compliance with the provisions of the law should lead to the sanctioning of a commercial driver for multiple offenses for violating traffic safety in the case of the use of cellular phones⁵.

Taking as a target group professional drivers who use cellular phones, imposing restrictions on their use while doing business in international trade, would further strengthen the regulations of individual countries, which requires international consensus (FMCSA – Federal Motor Carrier Safety Administration – 2016). Road safety would be improved by standardizing regulations regarding the use of cellular phones while driving. Collisions of drivers on highways, with fatalities and serious injuries would be significantly reduced. (Villie, 2007). This need is especially evident when you keep in mind that professional drivers very often drive massive, large vehicles⁶.

The question for decision makers in the judiciary, but not only; also for psychologists, educators, and even physicians - is whether juveniles who commit delicts in general, and those who are responsible for a car accident when using cellular phones (as motorists, pedestrians, cyclists, motorcyclecyclists) should face the same legal scope of sanctions that the law has imposed on adults⁷.

The general view is that it is necessary to find ways and means to assess the level of competence of juveniles in the whole process, including judicial. Thus, it is necessary to develop a standardized protocol that would help assess the level of competence of this population (MacArthur Foundation Study, 2003). A detailed consideration of the current and past state of mental state and development of the juvenile is vital for the evaluation of the violent event in which the juvenile participated, even in the accident with the use of a cellular phone. This research topic is also imposed in the considered sector due to the growing concern for the level of development of minors (Hile, 2019)^{5,7}.

Since mid-2003. by the end of 2019. the number of traffic accidents increases rapidly in the United States. Some data from published studies and insurance companies state that the share of some type of cellular phone use in these accidents is as

high as 34%! The same studies state that at least 85% of cellular phone owners use these occasionally while driving, which gives a number of over 500,000 drivers who use cellular phones while driving at any time of the day⁸.

Redelmeier and Tibshirani conducted a study on 699 drivers with cellular phones, who participated in the collisions and concluded that the risk of a collision if the driver uses a cellular phone while driving was between 3 and 6,5 times higher than when the phone was not in use. This level of risk in the mentioned study, is similar as the risk of driving with a blood alcohol level above the legal limit.

In an experiment conducted in 2013, Straier and Johnston found that people who dealt with a cellular phone during a simulated drive missed twice as many simulated traffic signals compared to a simulation without the use of cellular phones. The result of this experiment shows that the awareness that the situation was simulated (without real negative consequences) gives only slightly more than 6% worse result, compared to the actual situations. The findings of the 2013 study “confirmed that drivers talking on a cellular phone in a vehicle have a consistent pattern of slower response times”⁸.

For now, the risk factors for traffic accident, such as inappropriately high speed, alcoholism or driver’s acute health problem (heart attack, cerebral insult) have been much more investigated in literature than cellular phones using. This is especially refer to younger drivers. One study from the USA (two midwestern and two southern states) states that 13,6% of driver licenses belong to the age group of 18-24, but that they participate in 25,9% of fatal traffic accidents. As this population mostly uses cellular phones while driving, it can be concluded that this age group has a higher share in these accidents than the elderly. The connection between traffic accidents and cellular phone conversations with and without the use of hands (hands-free) was also examined. Preliminary research shows that the frequency and length of conversations has more impact on the traffic accidents than the presentation or absence of a hands-free tool⁹.

In brief

- Many drivers use a cellular phone while driving, which has been proven to reduce driving capabilities.
- Epidemiological studies have proven a link between cell phone use while driving and increased risk of traffic accidents, associated with a significant number of injured requiring hospitalization.
- Using the hands-free devices does not seem to contribute to reducing the risk.

- Laws that restrict or prohibit the use of cellular phones while driving are not easy to investigate. A possible kind of the cellular phone technology that could not be used while the vehicle is in motion currently exists only as an idea and there is no chance that it will be accepted in cellular phones industry.
- As it turned out that hands-free tool do not contribute to improving the safety of mobile phone use while driving, their further improvement is likely to increase the risk of accidents.

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