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SOCIO-DEMOGRAPHIC CHARACTERISTICS OF TRAFFIC OFFENDERS

ABSTRACT: The human factor is regarded as the most significant element in traffic safety. Its complexity and impact on delinquent traffic behavior bring this issue into focus, especially in developing countries. In criminological studies of the causes of traffic delinquency, it is crucial to identify the personality traits of traffic participants that lead to behaviors deviating from socially desirable norms. In other words, it is necessary to point out those characteristics of traffic participants (personality traits, demographic characteristics, attitudes, habits) that contribute to socially deviant behavior and the commission of traffic offenses. The importance of studying these characteristics lies in their application to find adequate measures to influence the behavior of traffic participants and prevent traffic delinquency.

This paper analyses the socio-demographic characteristics of traffic offenders in the Republic of Serbia (age, education level and marital status), based on statistical data on traffic offenses for the period 2010-2019. These characteristics are essential for understanding the social and

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demographic structure and specific social peculiarities of traffic offenders. Numerous studies have shown that socio-demographic characteristics are significantly positively correlated with safe road user behavior. The results of this research on the socio-demographic characteristics of traffic offenders in Serbia for the period 2010–2019 confirm this conclusion, which is presented in this paper.

Keywords: traffic offenders, socio-demographic characteristics, traffic safety.

1.Introduction

The improvement of traffic safety on the roads presupposes looking at the causes that lead to more and more frequent traffic accidents, which are accompanied by human and material losses. By their nature, these causes are very diverse, and therefore efforts aimed at their removal are directed in different directions. The results of scientific and professional research dedicated to this issue, almost without exception, indicate that the main problems are neither defective vehicles nor defects on the roads, but, as in some other areas, the human factor appears as primary, which certainly makes the problem very complex (Scott-Parker, Goode, Salmon & Senserrick, 2016, p. 88). The problem of traffic safety has been followed for decades by the question: "How to drive with as few negative effects as possible?" (Lipovac, Jovanović & Vujanić, 2014, p. 16).

The research of the criminal personality belongs to the criminological direction, which is based on a multidisciplinary approach to the study of the determinants of delinquent behavior in traffic. The Italian doctor Cesare Lobroso was one of the first to point out that the criminal should be studied, not the crime. These postulates directed many later criminological studies to the study of delinquent personality (Nikolić-Ristanović & Konstantinović-Vilić, 2018, p. 31). Criminological studies of the traffic delinquent cannot be based only on the biological and psychophysical structure of man, but also on the influence of social factors on human behavior, because there is a strong mutual interaction of bio-psychological and social factors. Therefore, the scientific analysis of the bio-psychological structure of man must be seen in the context of the society in which he lives. The task and goal of such analyzes is to penetrate into the depth of the entity of the human personality in the social conditions in which it develops today, and to discover the laws and tendencies of its further changes.

2. Subject and research methods

Socio-demographic characteristics are important for understanding the social and demographic structure and certain social peculiarities of traffic delinquents. These characteristics cannot be considered as the cause of delinquent behavior in traffic – but only as an intermediate factor, a condition that acts on the etiological factors, which influence the commission of traffic offenses.

This paper analyzes the results of research on the influence of age, marital status and education on the delinquent behavior of road users. The subject of research includes a significant spatial and temporal dimension. For the purposes of this work, statements in the literature, results of empirical research and statistical data on the sociodemographic characteristics of traffic delinquents for the period 2010-2019 were collected and analysed in the Republic of Serbia (Data basis of the Traffic Safety Agency of the Republic of Serbia and Republic Institute for Statistics of the Republic of Serbia). After reviewing the statistical data, a qualitative and quantitative content analysis was performed. In addition to statistical methods, content analysis methods, empirical methods, descriptive methods, comparative methods, as well as deduction and induction methods were also used during the research.

In the continuation of the paper, statements in the literature and the results of empirical research on the influence of sociodemographic characteristics (age, marital status and education) on the safe behavior of road users, as well as statistical data on the sociodemographic characteristics of traffic delinquents in the Republic of Serbia in the observed period (Petrović, 2021a, pp. 244–246).

3. Age

Criminological findings indicate that there is a connection between the age of life and the manner of human behavior, and thus deviant behavior. It can be said that criminality and delinquent behavior are characterized by age conditioning, that is, there is a certain proportionality between human vitality and deviant behavior. Such rules also apply to the behavior of different age categories in traffic. Age is related to the level of psychophysical abilities of road users and is another demographic variable often reported to be associated with risky driving. Early young and old age are ages that are characterized by reduced abilities to participate in traffic, and are reflected in different ways on the behavior of traffic participants (Lyon et al., 2020, p. 213).

It is pointed out that young drivers don't have driving experience which are necessary to develop skills needed for identifying and responding adequate on different hazards on the road. (Fisher, Caird, Horrey & Trick, 2016). There are several characteristics of young drivers that influence safe driving behavior. Tendency to risky behavior while driving, inexperience and immaturity, poor risk perception, driving at night, under the influence of alcohol, tiredness, susceptibility to influence (by fellow passengers) to take greater risks while driving, and the fact that they consider themselves safe drivers (Stanojević, 2013; Bates, Davey, Watson, King, Armstrong, 2014; Halpern-Felsher, Ramos, Exley & Aggarwal, 2016).

In the other hand, researches show that, older drivers also have high risk to be involved in traffic accidents, because od the factors related to the ageing-related factors, especially because of decreasing motor, cognitive, perceptual skills critical for driving safety (Clarke, Ward, Bartle & Truman, 2010). It is emphasized that the "U curve" that characterizes the degree of decline in psychophysical ability (early and late life) does not mean that older drivers introduce a risk in traffic due to their reduced driving skills (as is the case with young drivers). Research shows that older drivers are aware of their reduced psychophysical abilities and adjust their driving behavior to that circumstance. For example, they decide on shorter journeys, avoid driving in risky conditions (avoid driving at night, driving during rush hours, take more frequent breaks, etc.). Their greater suffering in traffic accidents, compared to other age categories of road users, is not related to reduced driving skills, but to other reasons (for example, less mileage, reduced tolerance to injuries) (Mayhew, 2007; Rakotonirainy, Steinhardt, Delhomme, Darvell & Schramm, 2012).

One research in USA showed that there are up to six times increased possibility for involvement younger and elder drivers in road crashes than middle-age drivers (based on mileage) (Insurance Institute for Highway Safety, 2017).

The influence of age on delinquent behavior is most significant among younger and older road users (the so-called U curve). Data on age categories of participants in traffic accidents and traffic accidents with fatalities in the Republic of Serbia for the period 2010–2019. year, confirm these statements in the literature (table 1).

Table 1. Structure of participants in traffic accidents and in traffic accidents with fatalities by age category in the Republic of Serbia for the period from 2010 to 2019

Age	Participants in traffic accidents		Traffic accidents with fatalities	
Years	Total	%	Total	%
0-14	17896	2.73	336	3.09
15-24	82490	12.60	1473	13.54
25-34	154722	23.63	2013	18.50
35-44	147683	22.56	1833	16.85
45-54	113513	17.34	1749	16.08
55-64	88976	13.59	1676	15.41
over 65	49396	7.55	1799	16.54
Total	654676	100.00	10879	100.00

Data source: Traffic Safety Agency of the Republic of Serbia

The largest percentage of participants in traffic accidents is the age category of 25-34 years of age (23.63%). At the same time, this age category accounts for the highest percentage of traffic accidents with fatalities (18.50%). The age category over 65 makes up 7.55% of participants in traffic accidents, but the percentage of accidents with fatalities in this category is significant (16.54%), especially considering the percentage of participation in traffic accidents of this age category.

In the structure of adults convicted of crimes against public traffic safety, the highest percentage of those convicted are in the age category 21-29 (26.39%). The age category over 60 years makes up 10.02%, while the age category 18-20 years makes up 5.79% in the structure of convicted adults (table 2).

Table 2. The structure of adults convicted of crimes against public traffic safety in the Republic of Serbia by age and gender in the period from 2010 to 2019

Age	18–20 years of age		21–29 years of age		30–39 years of age		40–49 years of age		50–59 years of age		60 and more years of age	
	F	M	F	M	F	M	F	M	F	M	F	M
Total	131	1496	569	6843	641	6116	463	4798	258	3869	155	2665
%	0,47	5,32	2,07	24,32	2,28	21,74	1,65	17,05	0,92	13,75	0,55	9,47
% (М+Ж)	5,79		26,39		24,02		18,7		14,67		10,02	

Data source: Republic Institute for Statistics of the Republic of Serbia

Based on the data presented in the table, it is possible to determine the interaction of gender and age of adults convicted of traffic crimes. The highest percentage of convicted adult males is aged 21-29 (24.32%). This number makes up a quarter of the total number of convicted adult men. The highest percentage of convicted adult women is aged 30-39 (2.28%), which makes up close to a third of convicted adult women. Based on these data, it can be concluded that there is a connection between younger age and delinquent behavior in traffic.

4. Education level

It is considered that the degree of educational level of an individual is correlated with positive attitudes towards traffic, willingness to obey traffic rules, etc. It is assumed that a low level of education has a negative effect on safe behavior in traffic, due to difficulty in navigating and mastering complex traffic tasks. Research shows that drivers with a higher education are less likely to cause traffic accidents than drivers with a lower education level. It can almost be said without any doubt that the difficulties in mastering elementary school and the family's failure in education influence the absence of an appropriate level of traffic education. Among such drivers, there is no interest in eliminating knowledge gaps, so it is assumed that they will not be able to successfully adhere to the basic principles that apply to safe behavior in traffic. In this regard, the unfavorable situation in the category of professional drivers is highlighted, because they are more exposed to traffic and, as a rule, have a lower level of general education and in addition, they often drive a motor vehicle in a tired state (Petrović, 2021b, p. 120).

Observing the educated level of the population, numerous studies show that among the drivers who caused traffic accidents, there is a relatively large percentage of those with a low educational status, as well as that these road users have the highest rate of casualties in traffic accidents, especially if they are young women aged 20-29 years old (Ashkan, S at all, 2013., p. 281). Several studies in different countries have determined that the level of education is an important factor that has a significant impact on the involvement of traffic accidents (Lourens, Vissers & Jessurun, 1999; Martínez-Gabaldón, Martínez-Peréz & Méndez, 2019; Shinar, Schechtman & Compton, 2001).

Research done earlier in our country shows that among the traffic delinquents in Novi Sad, there were 44.61% with incomplete primary and elementary school, and 49.02% with those who did not complete high school. These data support the assumption that a low educational status has an unfavorable outcome due to

slower adaptation in traffic, as well as the speed of decision-making in complex traffic situations (Jovanović, 2003, pp. 106–107).

One of the important prerequisites for the successful and safe performance of complex traffic activities is education in the field of traffic. The influence of the general level of education, i.e. schooling, is a prerequisite for the successful acquisition of knowledge in the field of traffic. This is another possible influence of the educational level of road users on safe behavior. Experiences show that for safe participation in traffic, basic knowledge of traffic regulations is required, that is, it is necessary to have at least a minimum level of traffic knowledge (Inić., 2004, p. 340). The basic goals of various types of education and training in traffic is safe participation in traffic, that is, awakening, acceptance, implementation, improvement and expansion of basic knowledge about traffic. This knowledge is acquired in all periods of the life cycle, and based on that, the level of knowledge of individual traffic participants changes during the life period.

Traffic safety is influenced by the volume and structure of knowledge – traffic education of traffic participants. The lack of minimum knowledge increases the risk of participation in traffic accidents for all categories of traffic participants (drivers, cyclists, pedestrians). Better training of all road users, especially drivers, reduces the severity and frequency of traffic accidents. The demands of modern traffic point to the need for better preparation of people for traffic (in addition to knowledge of basic traffic regulations and management skills), and this implies traffic education and raising the general level of traffic culture in a society.

Statistical data on the education of convicted adults (table 3) show that the highest percentage of convicted persons had completed secondary school, 64.42%. A significantly smaller percentage of convicts have primary school 15.03% and higher school 11.02%, incomplete primary school 2.74% and no school 0.52%.

Table 3. The structure of adults convicted of crimes against public traffic safety by level of education in the Republic of Serbia in the period from 2010 to 2019

Education level	No education	Incomplete elementary school (1–7 grades)	Elementary school	High School	Higher education
Number	147	770	4229	18127	3102
%	0,52	2,74	15,03	64,42	11,02

Data source: Republic Institute for Statistics of the Republic of Serbia

The total number of convicted adults with secondary education and educational levels lower than secondary (primary school, incomplete primary school or no school) constitutes 82.71% of convicted persons, which indicates a significant representation of this demographic factor in the structure of traffic crime.

5. Marital status

By examining the correlation of marital status and traffic accidents, it was determined that this sociodemographic characteristic has a certain influence on the safe behavior of road users, as well as on the rate of traffic accidents. Studies have shown that single men have a higher rate of traffic accidents than married men of the same age. An even greater and more systematic effect was found in women. The traffic accident rate of unmarried women exceeds the traffic accident rate of married men at all ages. However, the results of these studies are somewhat influenced by the higher representation of married than unmarried women in the driver population (Evans,1991).

Table 4 shows the marital status of adults convicted of crimes against public traffic safety in the Republic of Serbia in the period 2010-2019. year. The statistical data presented in Table 4 show that more than half of the convicted persons (53.55%) belong to the married category, while a third of the convicted persons (32.46%) belong to the category of single persons. The divorced category makes up 7.20% of convicted persons and widows/widowers 2.12%.

Table 4. Structure of adults convicted of crimes against public traffic safety by marital status in the Republic of Serbia in the period from 2010 to 2019

Year	Single	Married	Widower/Widow	Divorced
2010	1058	1648	53	152
2011	1224	2042	58	217
2012	1097	1803	63	216
2013	1130	1877	70	238
2014	1060	1893	83	267
2015	816	1366	61	220
2016	682	1165	46	183
2017	738	1140	61	202
2018	637	992	55	178
2019	705	1161	63	241
Total	**8442**	**13926**	**550**	**1873**
%	32.46%	53.55%	2.12%	7.20%
Women	**617**	**921**	**143**	**266**
%	2.37%	3,54%	0,55%	1,02%
Men	**7825**	**13005**	**407**	**1607**
%	30,09 %	50,01%	1,56%	6,18 %

 Data source: Republic Institute for Statistics of the Republic of Serbia

According to previous claims, married women have less exposure in traffic as drivers of motor vehicles than unmarried women. Earlier research in our country, which was carried out in the territory of Novi Sad, showed that there are twice as many divorcees among returning traffic delinquents. Another analysis of professional drivers in Novi Sad showed that divorced drivers were involved in an average of 2.3 accidents, unmarried drivers in 2.2, while married drivers had an average of 1.8 accidents each. As a rule, unmarried men are also young drivers with short driving experience, so the influence of all these circumstances as a whole contributes to the mentioned results. A number of studies in France and the USA have shown that young drivers who are married are more responsible and show safer driving behavior (Inic, 2004, p. 310). Research in Switzerland has shown that married women are more than 50% of the victims of traffic accidents on the roads (Spoerri, Egger & von Elm, 2011, p. 43). On the other hand, some studies have shown that marital status does not significantly affect the risk of participating in traffic accidents (Sehat, Naieni, Asadi-Lari, Foroushani, & Malek-Afzali, 2012, p. 186).

5. Conclusion

Socio-demographic characteristics are important for understanding the social and demographic structure and certain social peculiarities of traffic delinquents. This results from the results of numerous studies, in which it was determined that sociodemographic characteristics (gender, age, driving experience, education, marital status, etc.) are significantly positively correlated with the safe behavior of road users. The results of the research on the socio-demographic characteristics of traffic delinquents in the Republic of Serbia for the period 2010-2019 point to the same conclusion. year. The population aged 25–34 makes up a quarter of the participants in traffic accidents. A quarter of adults convicted of traffic offenses are men aged 21–29. Data on other socio-demographic characteristics of adults convicted of traffic offenses show that the highest percentage of those convicted according to: educational level – with high school education (64.42%), and according to marital status – married (53.55%). This research confirms the correlation between the analyzed sociodemographic characteristics of traffic delinquents and delinquent behavior in traffic. Although age, education, marital status cannot be considered as the cause of delinquent behavior in traffic – but only as an indirect factor, a condition that acts on etiological factors, which affect the commission of traffic offenses, these results can significantly contribute to the selection of adequate preventive measures to prevent traffic offenses.

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SOCIODEMOGRAFSKE KARAKTERISTIKE SAOBRAĆAJNIH DELINKVENATA

APSTRAKT: Ljudski faktor se smatra najvažnijim faktorom bezbednosti saobraćaja. Kompleksnost ljuskog faktora u bezbednosti saobraćaja i njegov uticaj na delinkventno ponašanje u saobraćaju, stavlja ovo pitanje u središte pažnje, posebno kada su u pitanju zemlje u razvoju. U kriminološkim istraživanjima uzroka saobraćajne delinkvencije, posebno je značajno utvrditi karakteristike ličnosti učesnika u saobraćaju, koje prouzrokuju ponašanja koja odstupaju od društveno poželjnih. Rečju, potrebno je ukazati na one karakteristike učesnika u saobraćaju (crte ličnosti, demografske karakteristike, stavove, navike), koje vode u socijalno devijantna ponašanja i vršenje saobraćajnih delikata. Značaj proučavanja ovih karakteristika ogleda se u njihovom korišćenju za pronalaženje adekvatnih mera kako bi se uticalo na promenu ponašanja učesnika u saobraćaju u cilju sprečavanja saobraćajne delinkvencije.

U ovom radu su analizirane sociodemografske karakteristike saobraćajnih delinkvenata u Republici Srbiji (starosno doba, nivo obrazovanja i bračni status), prema statističkim podacima o saobraćajnim deliktima za period 2010–2019. godine. Sociodemografske karakteristike su značajne za sagledavanje socijalne i demografske strukture i određenih socijalnih posebnosti saobraćajnih delinkvenata. Rezultati brojnih istraživanja, pokazuju da su sociodemografske karakteristike u značajnoj pozitivnoj korelaciji sa bezbednim ponašanjem učesnika u saobraćaju. Na isti zaključak upućuju i rezultati istraživanja sociodemografskih karakteristika saobraćajnih delinkvenata u Republici Srbiji za period 2010–2019. godine, koji su izloženi u ovom radu.

Ključne reči: *saobraćajni delinkventi, sociodmografske karakteristike, bezbednost saobraćaja.*

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