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THE IMPORTANCE OF DRIVERS' AGE AND EXPERIENCE IN ENSURING ROAD SAFETY

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Abstract:
This article analyzes road traffic accidents recorded across the Republic of Uzbekistan during 2023–2024, with a particular focus on the relationship between drivers' age and driving experience and their impact on road safety. The study provides data-driven insights into the correlation between age groups and the types of traffic rule violations that commonly lead to accidents. Additionally, international best practices are examined, and practical recommendations are proposed to reduce accidents involving inexperienced or high-risk drivers. The article emphasizes the need for progressive training, enhanced responsibility awareness, and tailored preventive strategies based on age-specific risk profiles.

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Keywords: driver, road traffic accidents, age experience, skill, inexperience, risk tendency, sense of responsibility, step-by-step

Introduction

The rapid development of the global automotive industry, the increasing production of small-capacity freight vehicles, and the continuous growth of the world's population are contributing to a steady rise in the number of road users. As a direct consequence, the frequency of road traffic accidents (RTAs) has also increased.

Driving is considered one of the most complex forms of human activity. Operating a vehicle—a high-risk source—imposes a significant responsibility on the driver, not only for their own safety but also for the well-being of others. However, not all drivers are capable of ensuring road safety to the same degree. This depends heavily on the driver's skills and individual psychological and cognitive characteristics. In particular, a driver's age and level of experience play a decisive role in their ability to operate a vehicle safely.

The primary aim of this study is to analyze the correlation between road traffic accidents and the age and driving experience of drivers in Uzbekistan. To achieve this objective, the research focuses on the road traffic accident statistics recorded throughout the country during the years 2023 and 2024.

Materials and methods

This study is based on the statistical analysis of road traffic accidents (RTAs) that occurred in Uzbekistan during the years 2023 and 2024. Official data obtained from national traffic safety authorities were used to evaluate the number of accidents, fatalities, and injuries.

In 2023, a total of 9,839 road traffic accidents were recorded. Among these incidents, 2,282 people lost their lives, and 9,209 individuals sustained injuries. In comparison, in 2024, the total number of RTAs slightly decreased to 9,364, with 2,203 fatalities and 8,901 injuries reported.

These figures form the empirical basis for assessing trends and variations in accident outcomes, with particular attention given to the age and experience of drivers involved. The dataset is further categorized by age groups, experience

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levels, and types of traffic rule violations that contributed to the accidents. This approach allows for a more precise evaluation of the impact of human factors on road safety outcomes.

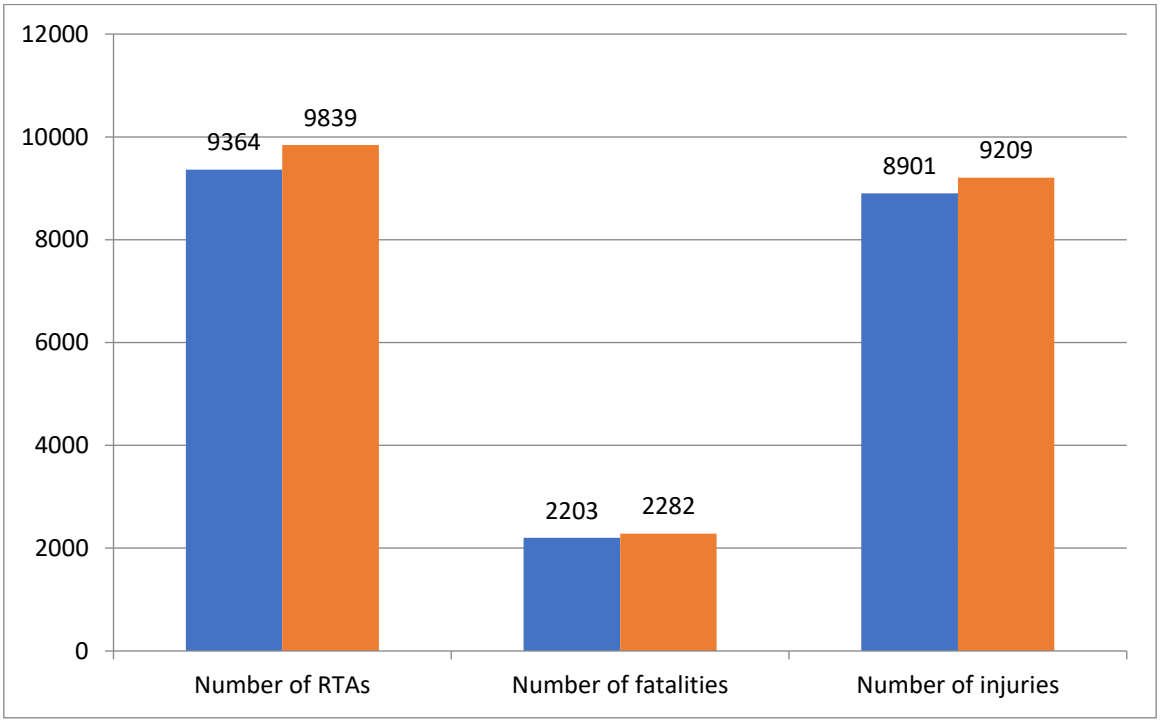

Figure 1. Number of traffic accidents in 2023-2024

Also, 20.1 percent of traffic accidents were caused by problems with traffic organization, 20.1 percent by failure to comply with the posted speed limit, 13.8 percent by pedestrians crossing at unmarked intersections, 9.1 percent by driver inexperience, 5 percent by leaving children unattended, and 1.4 percent by driving under the influence of alcohol [1].

As a driver's experience increases, the number of accidents begins to decrease, but this process does not occur evenly. In most cases, inexperienced drivers with up to 2 years and 5±1 years of experience are involved in road accidents.

If the wrong skills and knowledge were formed during the training of a driver candidate, an increase in driving experience may not lead to an increase in his reliability. Regularly making mistakes while overestimating his skills can lead to negative consequences. Therefore, it is necessary to regularly increase the

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number of advanced training courses with the involvement of experienced teachers. Studies show that the increase in accidents among drivers with up to 2 years of experience is associated with a lack of professional knowledge and skills, while with 5±1 years of experience, the increase in accidents among drivers is associated with an overestimation of their capabilities and a decrease in caution [2].

Along with experience, the driver's age also affects the likelihood of getting into an accident. The relationship between the driver's age and the accident is most pronounced for drivers under 25 and over 60. From 25 to 60 years old, the individual safety of the driver remains almost the same. In the group over 60 years old, the age-related decline in operating skills is irreversible. Due to the accumulated knowledge and experience, the driver is able to compensate for this decline in most cases, but it is difficult to maintain his safety while driving a vehicle at a safe level. It has been established that the same skills accumulated in different age groups can have different effects on behaviour on the road. Studies show that inexperienced drivers aged 45 to 60, who are just starting to drive, have fewer accidents than younger drivers. This is expressed through increased responsibility, the ability to consciously anticipate dangerous situations, and driving with less risk [3].

Data on traffic accident statistics for different age groups of drivers show that the following are the most common types of traffic violations: failure to yield, which is common to all age groups, and speeding inappropriately for specific conditions (with the exception of drivers over 60 years of age) [4]. The specific indicators of failure to yield increase with age, while the indicators of speeding inappropriately for specific conditions decrease.

Below are the age-related indicators of the most common violations.

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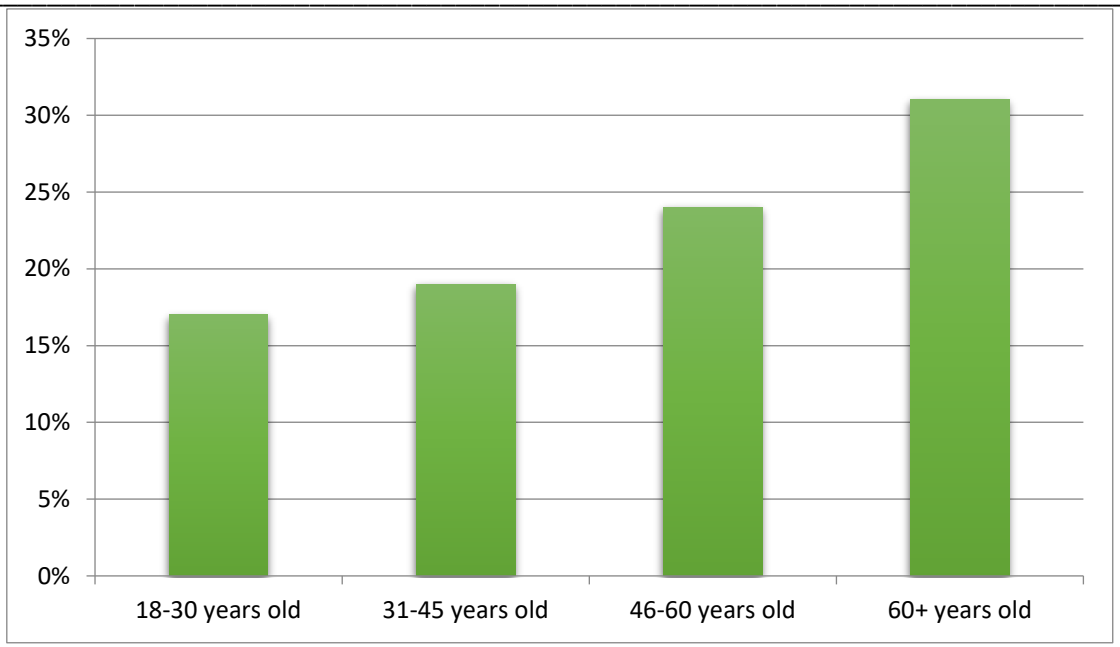

Figure 2. Histogram of the dependence of the driver's age on the failure to comply with the turn to pass

By driversSpeed mismatches in relation to specific conditions are most often observed in people under 45 years of age (Figure 3).

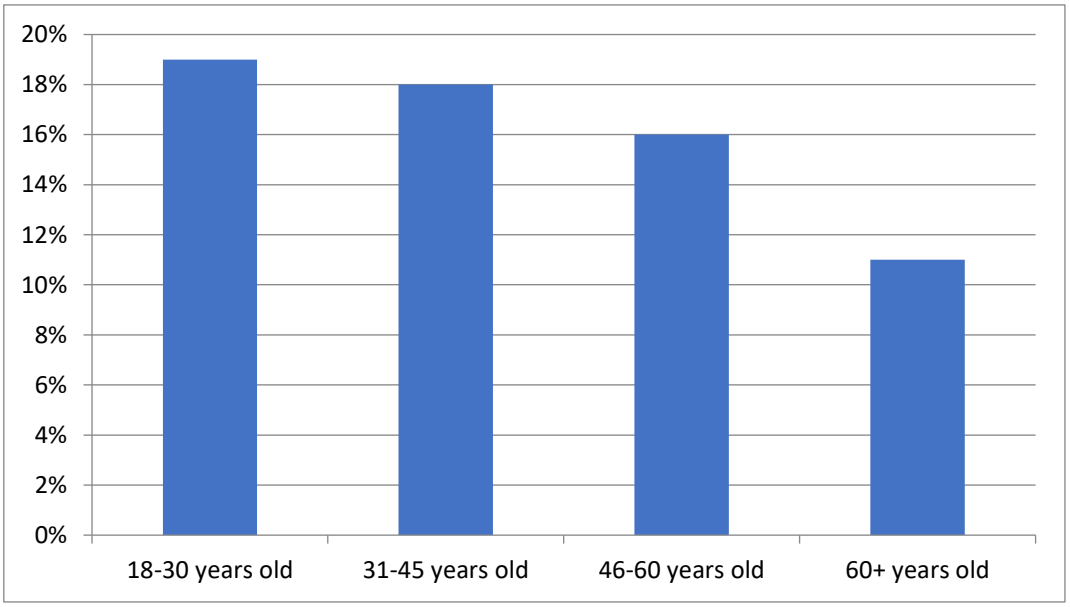

Figure 3. Speed discrepancy histogram against specific conditions

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Going in the opposite direction is more common in drivers between the ages of 18 and 30 (Figure 4).

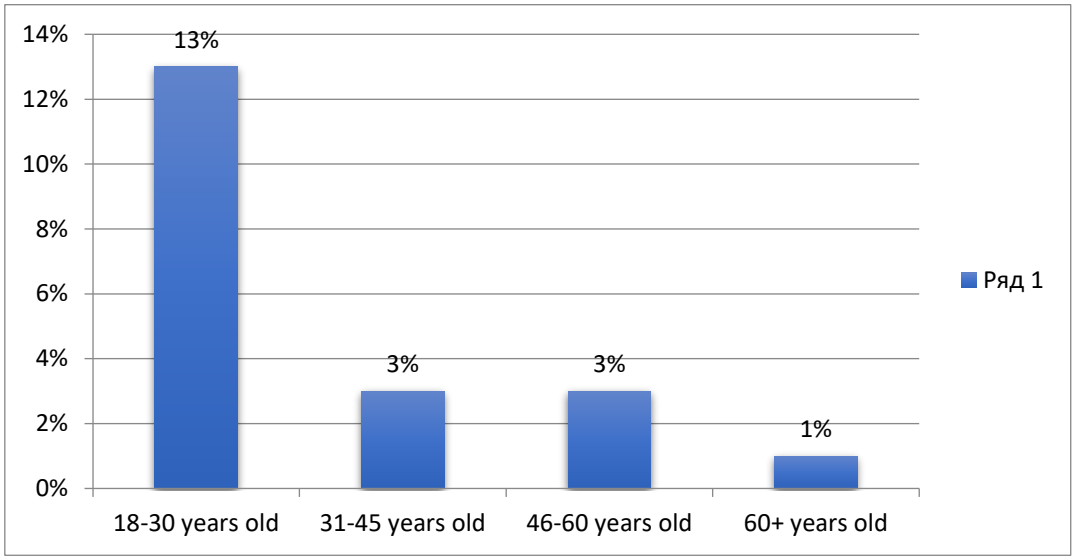

Figure 4. Histogram of the relationship between driver age and oncoming traffic

Crossing at pedestrian crossings is also a violation of the requirements observed in drivers over 60 years of age (Figure 5).

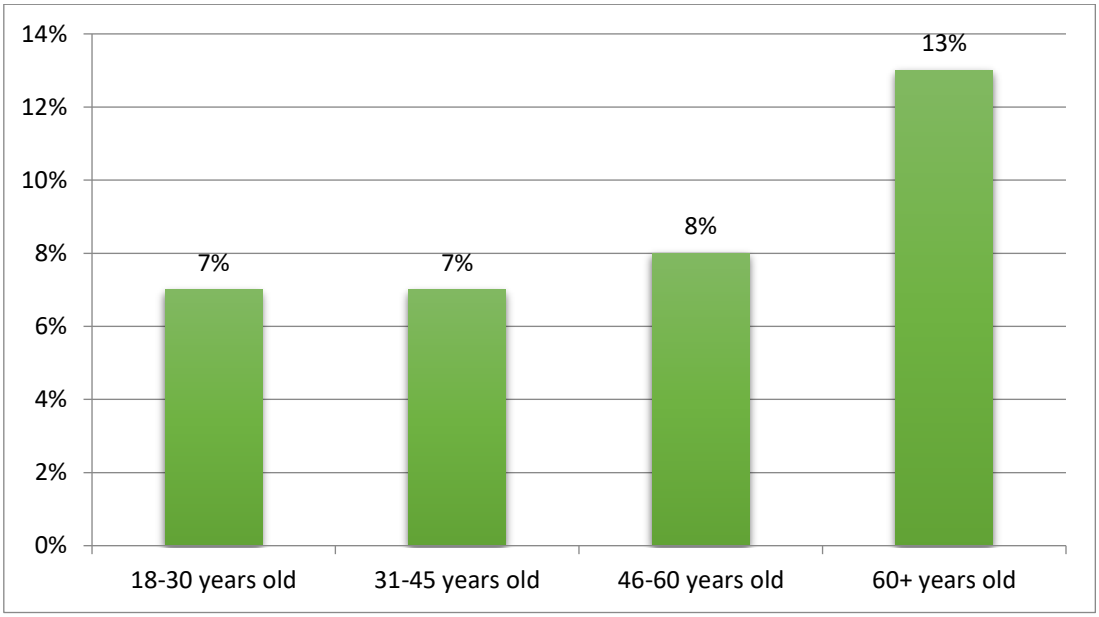

Figure 5. Histogram of the relationship between driver age and pedestrian crossing violations

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It has been revealed that overtaking violations, one of the most common violations among drivers, are also common among drivers between the ages of 18 and 30. (Figure 6).

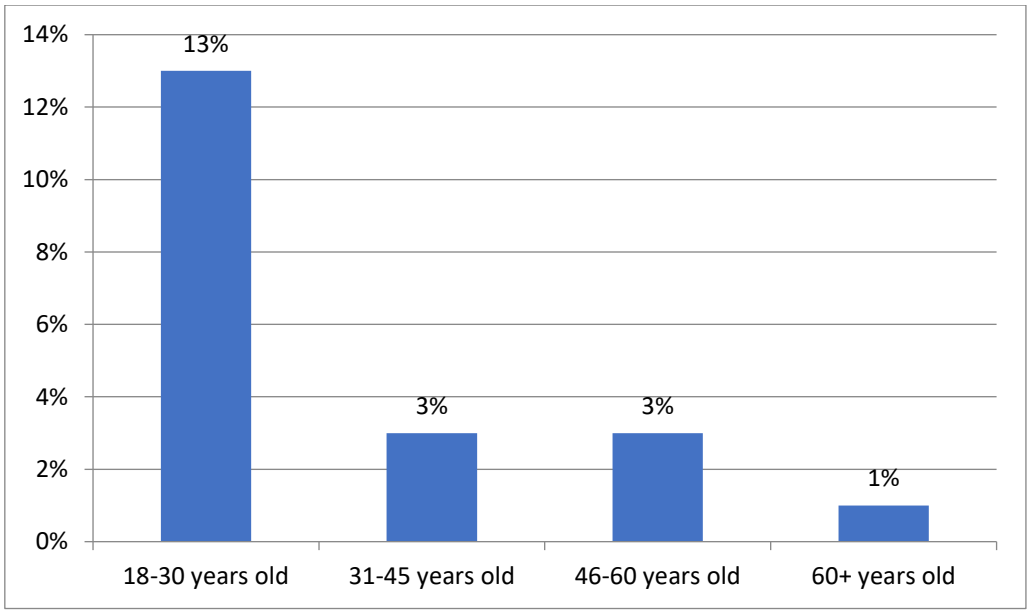

Figure 6. Histogram of the relationship between driver age and overtaking violations

Incorrect choice of the intermediate distance was observed mainly in drivers over 60 years of age (Figure 7).

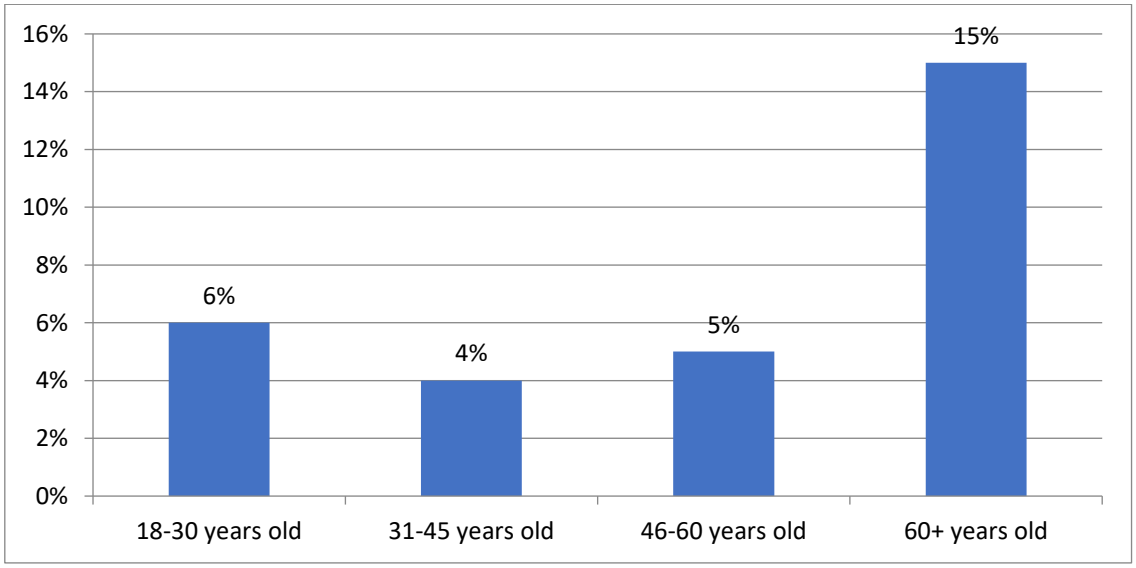

Figure 7. Histogram of the relationship between driver age and incorrect choice of the intermediate distance

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Also, mistakes such as speeding are common among drivers aged 18-30. (Figure 8).

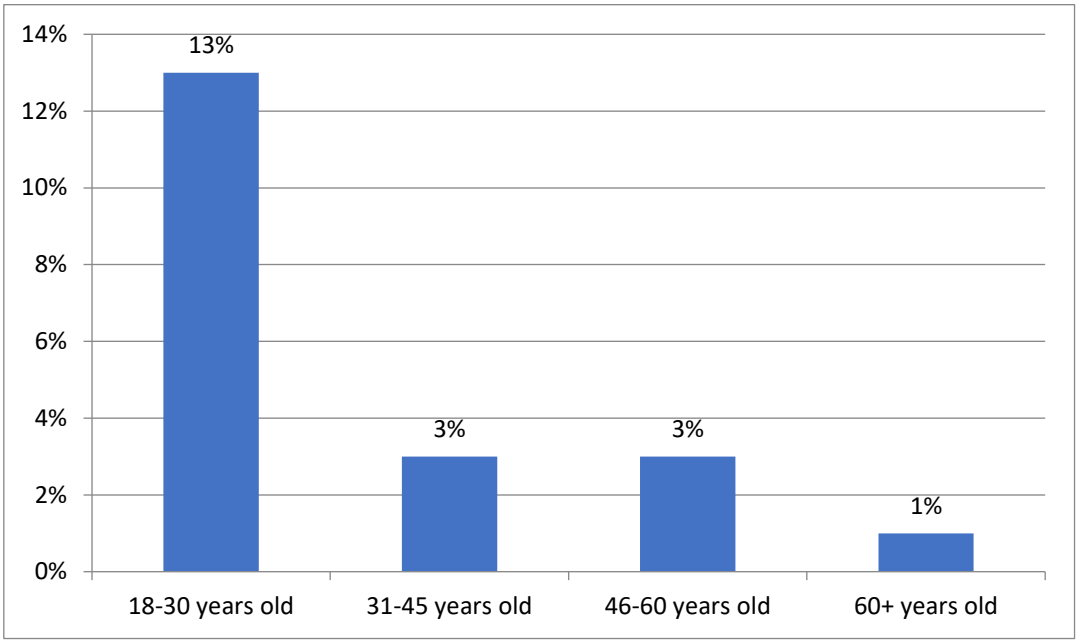

Figure 8. Histogram of the relationship between driver age and speeding

In addition to the above-mentioned violations, the 18-30 age group often commits violations such as driving in the opposite direction, driving while intoxicated, exceeding the speed limit, driving in the left lane when the right lane is empty, and driving in the opposite direction, which ultimately leads to the vehicle skidding, leaving the roadway, and overturning [5]. This is characterized by an increase in speed according to the situation or the pace of movement, in which the danger is not only not felt or unknown, but also not properly assessed.

According to drivers aged 18-30, insufficient driving skills, inability to correctly assess the risk, distraction, and incorrect interpretation of the traffic situation are the main factors that accompany a traffic accident. A young driver, based on his personal experience and criteria for driving on the road, drives with a desire to experiment and make mistakes, disregarding generally accepted standards. This is explained by the tendency of young drivers to increase speed, go in the opposite direction of traffic, and drive a vehicle while intoxicated.

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The risk-taking tendency of young drivers is expressed in their apparent display of courage and, at the same time, their conscious (with a sense of fear) failure to correctly assess objectively existing dangers.

The most common violations in the 31-45 age group are violations of the rules of overtaking and reversing. In general, the inability to correctly assess one's own mistakes, obstructing traffic, misinterpreting the traffic situation, and failing to correctly assess the actions of other road users in advance are the main factors leading to traffic accidents for this age group.

Violations of traffic light requirements and lane change rules are more common among drivers aged 46-60. Violations of pedestrian crossing rules and incorrect choice of intermediate distance are more common among drivers aged over 60, which is explained by the deterioration of their perception and target acquisition functions.

Studies show that as drivers age, the average number of accidents decreases, despite the decline in functional abilities, which is expressed in the fact that, due to age, the frivolity and susceptibility to external influences of youth are replaced by a sense of responsibility, prudence and composure. Therefore, the main determinant of safe driving is not only the operator's skills but also the ability of drivers to control themselves in traffic situations. This is due to the individual psychophysiological characteristics that are characteristic of each age group.

Therefore, it is necessary to pay attention to these aspects of drivers during their training and retraining.

It is necessary to study the positive experience of Canada, where courses on safe driving are held for drivers over 60 years old, and during these courses, drivers are explained about age-related changes in them, what situations on the roads they should avoid (not driving at night), and what medical medications they are taking affect their ability to operate.

The classification of drivers according to their level of driving experience and age creates sufficient conditions for a sufficiently broad categorization of dangerous situations and an understanding of the consequences of reckless driving in complex traffic situations.

At the stage of training and retraining of drivers, it is important to be able to correctly and timely analyze and understand information about road traffic

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situations in each age group. It is necessary to study the positive experiences of countries with a low accident rate: Canada, Australia, New Zealand and other countries and gradually implement them into a system of issuing driving licenses that take into account the experience and age of driving a vehicle. New (young) drivers should have clear restrictions, in particular, restrictions on driving vehicles at night and in difficult weather conditions, on highways with high speed. To monitor compliance with such restrictions, vehicles can be equipped with vehicle monitoring systems via a GPS satellite system.

Conclusions

The system should provide for the transition from one stage to another, depending on the driver's experience and additional training through periodic re-testing. After that, some restrictions on driving may be removed. The system should also work in the opposite direction, that is, in case of gross violations of traffic rules, the driver should be transferred to a lower stage or, with a more severe penalty, deprived of his driving license.

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