

Influence of Driver's Psychophysiological Characteristics on Vehicle Management

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Abstract: *This article examines the influence of driver psychophysiological characteristics, such as attention, quick reaction, stress resistance, fatigue, and emotional state, on vehicle control. It also analyzes how these factors affect road safety, their role in reducing the risk of road accidents, and preventive measures. Based on theoretical and practical data, recommendations have been developed for assessing the condition of drivers and their psychophysical training.*

Keywords: *driver, road safety, stress, reaction rate, fatigue, attention, emotional state, human factor.*

Introduction. When obtaining a driver's license, theoretical knowledge and practical driving skills are assessed. However, one of the factors that plays an important role in the driver's participation in road traffic is their psychological stability and psychophysiological state. It is for this reason that the inclusion of psychological tests in the process of obtaining a driver's license serves not only individual safety, but also road safety of the whole society.

The following abilities can be identified through psychological tests:

- Reaction speed - the ability to react quickly in a dangerous situation;
- Concentration - the ability to maintain control by paying attention to the road for a long time;
- Stress resistance - the ability to behave in situations such as traffic jams, aggressive drivers, and time pressure;
- Emotional stability - control of one's actions without nervousness;
- Evaluating the situation and making the right decision - adequately reacting to sudden situations.

Result and discussion. In many developed countries, psychological examinations are mandatory, especially for professional drivers (truck, bus, taxi drivers). It will also be beneficial for Uzbekistan to gradually implement this practice, especially testing it for young and new drivers.

As a practical recommendation:

- Psychological tests can be conducted during driving school training, before final exams, or as part of a medical examination;
- If tests are compiled electronically, based on modern methods, the results will be evaluated automatically and will be free from subjectivity;
- If this system is regularly applied to professional drivers, it will serve to increase work efficiency and reduce the number of accidents.

The psychophysiological basis of driver activity is the driver's perception of the surrounding situation, reactions, attentiveness, perception, and operational thinking. Sensations, as one of the psychophysiological aspects, manifest themselves in the driver's consciousness through the reflection

of the characteristics of individual phenomena and objects that affect their sensations. Thus, they are distinguished from: auditory, motor, visual, skin, vibrational, and olfactory reactions. Perception - control of sensations, correct assessment of spatial relationships, speed of information processing.

Determination of precise psychomotor coordination of movements. Caution is manifested in the ability to quickly shift attention from one topic to another and evaluate them comprehensively. Emotional-voluntary reaction is a high level of such qualities as stress resistance, self-control, perseverance, determination. Operational thinking is manifested in the ability to assess the state of road traffic, make quick and adequate decisions, and predict the situation. Physical education, technical knowledge, and especially psychophysiological knowledge are important for a driver. In psychological matters, special attention is paid to the driver's activity, and the study of these moments cannot be ignored. Of course, a driver's driving skills are acquired through experience and time, but the presence of certain character traits determines a person's psychological readiness for difficult tasks, such as driving.

The ethical foundations of the driver's profession are compliance with traffic rules, the ability to use them in various situations, strict adherence to them, and respect for other drivers and pedestrians. Thus, a person's character traits are very often encountered and manifest themselves in their actions on the road.

- The driver must respect the pedestrian passing by. This is especially important at unregulated intersections and during turns. It should never be forgotten that every driver is from time to time a pedestrian, like his loved ones and children.
- Don't dazzle your colleagues with long beams. Every driver knows how unpleasant and dangerous it is to blindly turn around with the headlights of an approaching or overtaking car.
- Do not race or obstruct the passage of another car, and even if the driver is in a hurry, give way to him without creating an emergency situation on the road.
- There is no need to oscillate on the road, move from one lane to another, strictly observe traffic rules, and warn other drivers about approaching maneuvers.
- If you see a car in a difficult situation and parked on the side of the road, do not pass by.
- When preparing to park a car, you should not think only about your own comfort, occupying more space than is allocated for one car, or blocking access to another.

The concept of "caution" defines the driver's ability to focus on the hazardous object, quickly assess the situation, and evaluate it as a whole. At low and medium speeds, the driver can easily assess dozens of surrounding situations and objects. A very important quality for a driver: the ability to focus attention on the most important object or emergency situation and quickly find the most convenient way to avoid it or cause minimal damage, as well as the ability to predict the possible development of events. The driver's attention can be simultaneously scattered and distributed. In standard and non-hazardous situations, the driver's attention is divided. He can calmly assess the environment in his own way. Concentration is manifested when a dangerous situation arises. The driver focuses all their attention on only one thing or situation.

Perhaps the most important psycho-physiological foundations of driver activity are rapid reactions. Since detecting, assessing, and predicting the situation is not enough, it is very important to quickly respond to the decision made to become an action and achieve its main goal - the elimination of an emergency or potentially dangerous situation.

Not only a driver's ability to cope with a road situation, but also their experience in a dangerous situation can be decisive. The tests provided to you at the end of the course "Psychophysiological Foundations of Driver's Activity" will help determine your psychological readiness to be on the road as a driver.

It is also important not to ignore the basic safety rules related to a person's physical condition. If a driver experiences bad or unpleasant sensations in their body, they should stop and pay attention to their health condition to prevent sudden seizures, accidents, and death. Also, don't ignore the body's need to quench your thirst, as recent studies have proven that dehydration corresponds to intoxication. Don't ignore the need for rest or physical activity. If your limbs or muscles are cloudy and tired, you should stop and stretch a little. These actions will help prevent road accidents and human casualties.

The basics of the psychophysiology of labor are not difficult to understand and follow. Every correct action and observance of traffic rules will save not only your life, but also the lives of passengers sitting nearby, as well as pedestrians and other drivers.

Studies show that a large number of road accidents are caused by the human factor, especially the psychological and physical state of the driver. Therefore, it is necessary to train drivers psychologically and physically, pay constant attention to their health and psychological stability, reduce stress factors, and create ergonomic working conditions.

Conclusion. The psychophysiological state of the driver and its influence on management activities were thoroughly studied, and the role of these factors in improving road safety was practically substantiated. In the future, it is necessary to further deepen scientific research and practical measures in this area.

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