DISTURBING FACTORS OF DYNAMICS THAT INTERFERE WITH DRIVING THE CAR

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The factors that disturb more or less the dynamics of driving behaviour can be divided into three groups: factors related to the driving route and traffic characteristics; factors related to the vehicle; factors related to the driver himself. The factors that are related to the route are: the poor condition of the road (deteriorated road bed, exaggerated contractions), very abrupt ramps and fastening bents; dangerous turns; undirected crossroads; incomplete or insufficient marking system; unfavourable weather conditions (fog, raining, glaze); large load of stimuli that distract the attention or over-rated monotony of the road; the excessive intensity of traffic. The factors related to the vehicle are: the faulty technique state of (especially related to direction mechanisms, breaks, signals, tires), shapes and sizes, and also misplacing measure and control apparatus (board ergonomics); incorrect driver’s position requested by the binacle’s construction, the seat, the window’s bending angle (Openheim, I., Shinar, D., 2011).

The factors related to the driver, as they are very diverse, are divided into three subgroups: internal structural factors, internal derived factors and external factors, integrated into the internal motivational structure. The internal structural factors include all elements and characteristics related to the internal organization of the driver’s personality system. Among the most important we mention: attention instability, emotional instability and low stress resistance, low self-control, high idleness of sensor – motor and decisional schemas, impulsivity and high aggressiveness, low responsibility, tendency to show-off behaviour, egocentrism and individualism, overestimating or underestimating one’s own level of competence in driving the car, underestimate risk. If the action of these factors can no longer be controlled and stopped through special compensatory procedures, then it will produce more or less significant deviations of the person’s driving behaviour (such as misidentification of signals, omission, confusion, rush decisions, blockage, early or tardive motor reactions, inversions in the order of operations, and others) (Blaj, C.D., 1978).
From the category of internal derived factors, we may encounter: tiredness and strong emotional states, caused by direct or indirect confrontation with critical situations, generated by accidents. Tiredness represents the physiological phenomena which interferes after any activity; the person in cause is under intense requirement, or under an overloading condition. It represents a process of gathering disturbing effects, expressed both in lowering the objective performance level in the given activity, and also in the appearance of specific subjective states, signalised through sensations and emotional feelings. Compared to the natural tiredness, the gathered one is characterized by the temporary sum of effects; as a result, it gathers persistence, extending its intensity after each new sequence (day, week, month, etc.) of work. The gathered tiredness thus becomes a background state with which the subjects starts the activity program. As it gets more accentuated, it gets more acutely experienced subjectively, and the efficiency rate gets lower faster and faster. Taking breaks and getting rest usually don’t help eliminating it, but even more, accumulated tiredness disturbs even sleep which becomes superficial, intermittent and marked by terrifying dreams. Thus, a complex neuropsychological burnout syndrome may interfere, requesting the medic’s intervention. Depending on the manifestation ways, tiredness may be physical or psychological. The first one mostly affects the muscles: it results in low muscular force and effort duration, increases the latency time of movement, lack of coordination interferes, limbs shaking, physical weakness sensation. Psychological or neuropsychological tiredness mostly manifest at the level of intellectual and emotional capacity, being characterised by deteriorating indicators of the main functions and psychological processes – perception, memory, thinking, attention, endurance, respectively emotional equilibrium. In peculiar cases, the neuropsychological tiredness can be provoked only by one cause or several, conducted causes. The more causes cumulate, the more the amplitude and effect of the tiredness rise. The neuropsychological tiredness cumulated more easily in time and manifests a more severe tendency of criticizing compared to the physical one. In the case of driving as an activity, the tiredness phenomena is associated to a special importance, because it’s disturbing influence affects safety while driving, as one of the most endangering (Blaj, C.D., 1982).

Research in psychophysiology firmly confirm that, while driving, the influence of tiredness manifest strongly. It is estimated that after driving for 400 km, the risk of producing an accident is doubled. Tiredness while driving reaches different degrees, such as:

a) Lower efficiency of controlling the vehicle and solving the usual or critical traffic situations;

b) specific tiredness is installed, being provoked by driving the vehicle during the night; the focus effort in this situation implies higher nervous energy requests, amplified by sleep deprivation, as the phenomena is mostly registered between 00 am and 6 am.
c) physiological states of discomfort occur, such as driving on routes with trees planted on equal intervals, on different speed and several angles of sun rays incidence, causing the so-called „flash” effect, which reaches a critical frequency of the visual fusion, generating dizziness and sometimes disorganising the entire behaviour dynamics;

d) sleepiness state occurs, and sensorial and motor deactivation, generated by driving for a long period of time on monotonous roads, poor in offering stimuli, and lacking curbs;

e) tiredness states occur, being determined by the action of various factors such as: the type and technical state of the vehicle, the engine’s noise, the heat, cigarette smoke, the smell and toxic effect of discharge, the poor condition of the road, the high intensity of the traffic;

f) emotional fatigue is installed, being determined by previous stress sources that may prolong their effects, continuing to request affective mechanisms of the driver and after getting in the car, or by the shock caused by critical situations that occur while driving;

g) fatigue is installed being provoked by the high responsibility involved by the given mission: people transportation, transporting valuable loads and special characteristics (Murray, W.J. et al., 2008).

The external factors integrated in the internal motivational structure, or the external stimuli that the driver self-administers and gets somehow addicted to motivationally, more or less, are: alcohol, drugs (psycho-stimulating or psycho-inhibitory) and smoking. Alcohol is the most dangerous enemy of the person who is driving, judging by the temptation is produces among many drivers and the poorly controllable effects produces over the dynamics while driving. The disturbing influence of alcohol on the driving behaviour is divided into two phases: the primary arousal phase and the secondary inhibiting phase. In the first phase an euphoria state is installed which lowers censor, liberates impulsivity, aggressiveness and considerably diminishes the evaluation and anticipation capacity of the critical situations, of risk. This makes the person in the car drive with excessive speed, disrespect the traffic rules, make imprudent manoeuvres, which most of the times lead to severe accidents. In the second phase, which starts from 1 to 2 hours after the alcohol is ingested, the inhibition state is easily installed, when vigilance gets lower, the sensor and motor reactivity also, reaching sleepiness and falling asleep while driving (Posner, M.I., Peterson., S.E. 1990).

The drugs with psycho - stimulating or psycho - inhibitory effects also have a disturbing influence, which should not be underestimated by the driver. The ones in the first category indicate euphoria, exaltation, which lead to hasty effectuation of maneuvers, passing the legal limits of speed, underestimating the risk, and also they can accelerate the tiredness installation. The ones in the second category determine the reduction of general level of vigilance, discernment and perception operability.
and acuity, reaching the appearance of sleepiness state and falling asleep. Smoking is also a disturbing factor of the efficiency of activity in driving. Among the most common effects of smoking, we mention: reducing the working capacity of the brain, higher latency periods of the motor reactions, lower focus capacity, lower resistance to tiredness. Also, the movements made by the driver during driving to light his cigar distract him from paying attention to the route and execution of commands (Murray, W.J. et al., 2008).

**BIBLIOGRAPHY**


