

## **DANGEROUS DRIVERS' BEHAVIOR IN ROAD TRAFFIC - REASONS, REASULTS, PREVENTION**

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### **Abstract**

*Driving a car is a task demanding particular competencies, which include: knowledge, skills and specific personality and mental traits. Every driver should possess: knowledge about traffic law regulations, practical skills of driving a vehicle, ability to predict traffic situations and, what is especially important, self-diagnosis ability. Those skills determine driving safety. Paper presents dangerous and aggressive driving behaviour on the roads. It describes characteristic features of drivers and type of offenses committed by them, as well as recognition of the scale and reasons for aggression in the road traffic. Paper includes detailed research results analyses of aggressive behaviour and its evaluation by road traffic controllers - police (408 persons), and by drivers participating in the demerit points reduction scheme (504 persons). Survey results indicate that drivers consciously break traffic law, underestimate danger, overestimate their own abilities, feel unpunished and they don't know traffic regulations well. All results show that aggression is a frequent problem, especially concerning 18-39 year old group with wrong attitudes towards other road users. Importance of psychological testing of drivers, necessity of psycho-educational and preventive actions was pointed out in view of these circumstances. Research has allowed determining psychological reasons of the drivers' attitude and behaviour. Conclusions suggest undertaking activities and campaigns whose purpose is to change dangerous attitudes and habits and create re-education systems for the drivers who regularly break road traffic regulations.*

**Keywords:** *drivers, aggression, psychological tests*

### **1. Introduction**

Motor vehicle traffic crashes are complex events that are a culmination of various drivers, vehicle or environment - related factors. Driver - related factors that contribute to accidents are mostly behavioural in nature. Human behaviour is clearly shaped by the external forces collectively known as culture. All forms of human behaviour, including driving style, are influenced by external forces that define what is appropriate and what is not, and the definitions change over time.

World Health Organization (WHO) indicates risk factors influencing crash involvement. Among them are: inappropriate or excessive speed; presence of alcohol, medical or recreational drugs; fatigue; being a young male; being a vulnerable road user in urban and residential areas; travelling in darkness; vehicle factors - such as braking, handling and maintenance; defects in road design; inadequate visibility due to environmental factors; poor road user eyesight [7]. One of the most important factors that affect a person's risk of injury in a vehicle crash is the age of the person. The crash involvement rate for young drivers is much higher than that for older adults.

The primary responsibility of the driver is to operate a motor vehicle safely. The task of driving requires full attention and focus. Speeding reduces a driver's ability to steer safely around curves or objects in the roadway, extends the distance necessary to stop a vehicle, increases the distance a vehicle travels while reacting to a dangerous situation. Annually about 1/3 of all fatalities in accidents on the road were speeding - related, at least one of the drivers involved in the crash exceeded the imposed speed limit or was driving too fast for the prevailing conditions.

Driving a car is a task demanding particular competencies which include: knowledge, skills and specific mental abilities and personality traits [4]. Psychological tests of drivers are introduced in Poland as an element of preventive actions increasing road traffic safety. The reason for the obligatory test of professional drivers is to eliminate from road traffic those, whose psychical condition cannot guarantee safe behaviour. In Poland according to the law, there is an obligation of testing drivers who violated road traffic law (demerit points), drivers detained for driving under influence of alcohol or intoxicating substances, drivers who caused road accidents (with serious injury or death). From the traffic psychology point of view driver assessment evaluate: visual perception and observation capacity, attention and concentration, reaction capacity as well as stress resistance, sensory-motor coordination, intelligence, memory capacities, distance judgment, speed judgment, night and dusk vision, personality traits and temperament. All the above mentioned aspects are evaluated based on different sources: performance tests, personality tests and personal interview [6].

## 2. Motor Transport Psychology Department Researches

Driving a car is a social activity. According to that every driver should recognize and consider others needs and also correctly estimate risk, own skills and difficult situations management abilities. During driving courses every driver learns necessary skills for safety driving participation. Those skills are technique and driving tactic in different whether conditions, road situation prediction, prediction of other road users behaviours, self-diagnose. Those competencies are only partly subject of driving lessons [1]. There is a lack of knowledge concerning self-diagnosis, emotions, coping with stress, fatigue, influence of alcohol and drugs.

Studies conducted in Motor Transport psychology Department shows that drivers estimate own skills much higher than competencies of other road user (Fig. 1).

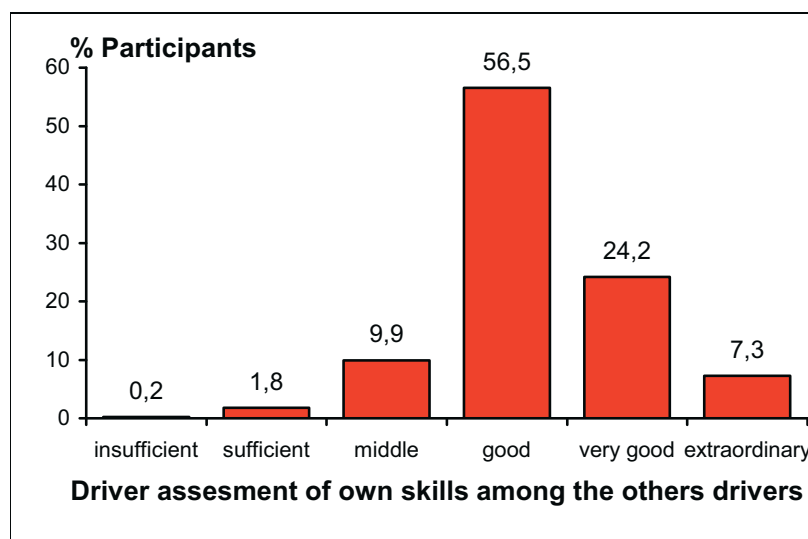


Fig. 1. Driver evaluation of own driving skills compared of other drivers

When driver assesses others skills the evaluation is lower (Fig. 2). In that case all drivers are good or very good in their own eyes, and it especially, concerns young drivers 18-24 years old.

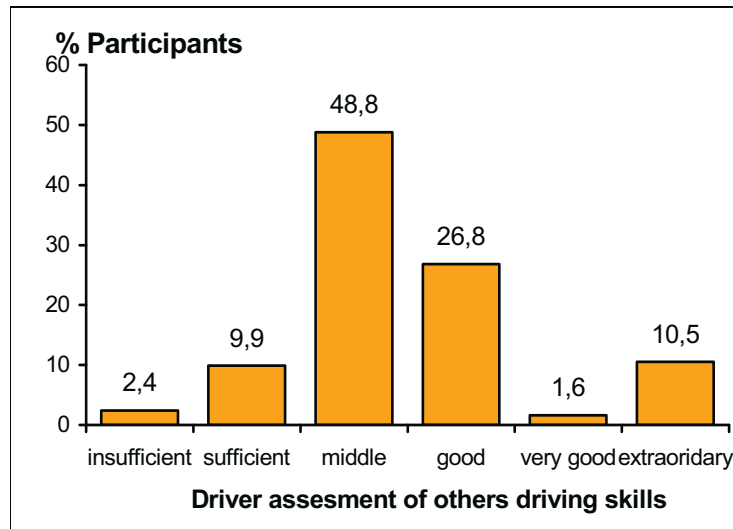


Fig. 2. Driver assessment of other drivers' skills

Lack of ability to self-diagnose own behaviour is especially dangerous in a context of the occurrence which disorganizes drivers ride plan. Driver rushing to destination point may find traffic jam, a nuisance, and other participants correctly spacing may be involved in a collision with him as this driver will be trying to use that space for incorrect overtaking etc. Every disruption or holdback may cause drivers disorganization and resignation from the correct behaviour. In the extreme conditions, it can almost totally disorganize all plans [2]. Because of that, one of the important rules that should be included into driving courses is positive motivation and respect for the relevant highway laws and ability of recognizing own emotions and correct, safe behaviour.

Our research concern also phenomenon of aggression on the Polish roads. Aggressive driving becomes a serious problem on our highways. NHTSA (National Highway Traffic Safety Administration) defines aggressive driving as occurring when „an individual commits a combination of moving traffic offenses so as to endanger other persons or property” [8]. The perceived increase in aggressive driving is largely explained by demographic changes: rapid population growth with even greater increases in individual mobility (number of licensed drivers and number of vehicle). Some behaviours typically associated with aggressive driving include: exceeding the imposed speed limit, following too closely, erratic or unsafe lane changes, improperly signalling lane changes, failure to obey traffic control devices (stop signs, give way signs, traffic signals, crossing signals etc.). Sociologists points to the fragmentation of society and the disintegration of shared values, sense of community. Many psychologist blame the intoxicating combination of power and anonymity provided by motor vehicles. Driving involves a unique combination of public and private behaviour. Some people feel less constrained in their behaviour when they cannot be seen by others and when it is unlikely that they will ever again see the witnesses to their behaviour.

Traffic congestion is one of the most frequently mentioned contributing factors to aggressive driving. On - the - road delays caused by highway maintenance, a collision, or high traffic volumes are frustrating for all drivers. Driver impatience and anger are particularly revealing when considered in the context provided by running late, anonymity, disregard for others and disregard for the law [5].

In 2006 we conduct studies with 3 types of questionnaires concerning drivers dangerous behaviours.

- questionnaire for Police officers which consist questions concerning causes of police intervention on the road, number of drivers who breaking the traffic law, estimation of consciousness and admission to breaking the law, age of drivers who are stopped by

the Police officers, kind of committed offences, examples of aggressive driving behaviours etc. 408 participants - road traffic controllers - Police officers,

- questionnaire for the employee of Regional Road Traffic Centres (WORD) which consisted of questions concerning number of courses for drivers breaking the traffic law, number of persons who took part in it, frequency of the same persons returning for the courses, kind of the offences committed etc. 21 Centres,
- questionnaire for drivers who participated in courses reducing number of demerit points which include questions about: driving license category, drivers' age, frequency of car driving, characteristic of driving rout, kind of offences committed, estimation of the course importance etc. 504 participants.

The questionnaires gathered the pertinent information on the individual's driving behaviours and formed the initial basis for psychological intervention. We believe that structured interviews are to be preferred so that the same type of information is gathered on each participant.

Research shows that the most common cause of police intervention on the road is speeding (61% indications), noncompliance to traffic law (28%), dangerous overtaking (16%). Those kinds of offences are committed consciously by drivers (Fig. 3).

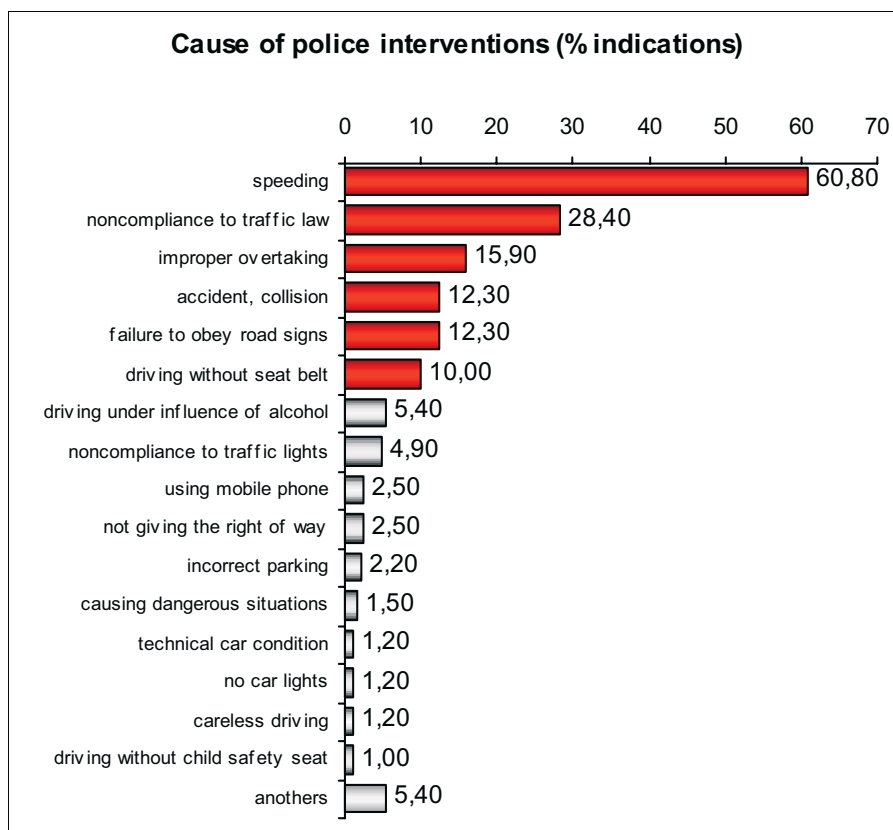


Fig. 3. Most common cause of Police intervention on the road

Young drivers are substantially overrepresented in police indication, road interventions and what is most important in motor vehicle crashes compared to all other age groups (Fig. 4). Studies show that young drivers (18-24) more likely engage in more risky behaviours such as faster driving, tailgating, and refraining from safety belt use. Drivers from 18 to 39 years old often overestimate their driving skills, and tend to perceive themselves as less vulnerable to a crash [3]. Relationship between sensation seeking and risky driving consistently demonstrated that high sensation seekers are more likely to be reported as impaired driving, non - use of belts, speeding, driving after drinking as well as getting involved in more violations and collisions.

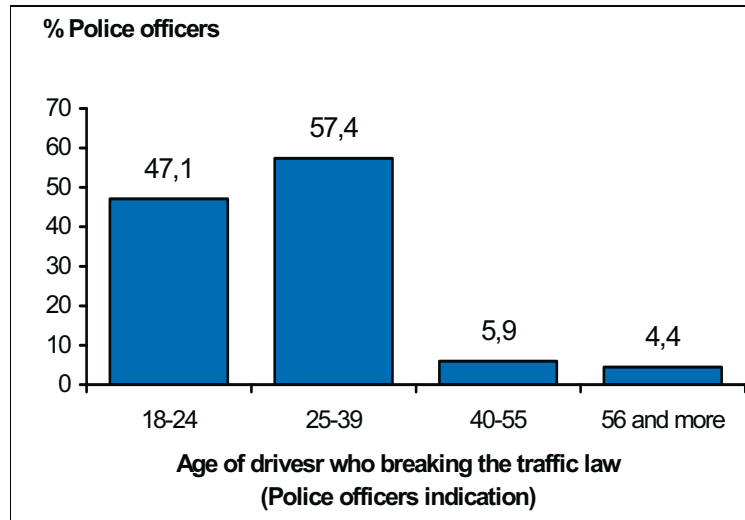


Fig. 4. Age of drivers who committed offences on the Polish roads

In 2007, most drivers involved in accidents were in the 18-24 and 25-39 year old age groups (9 260 and 12 867 accidents). The majority of traffic - related violations and accidents were for speeding (11 978), failure to obey give way sign (9 286), incorrectly executed overtaking and passing manoeuvres (4 142) [9].

According to the Police officers indications (Fig. 5) most common aggressive behaviours include: using vulgarisms (14.5%), forcing the right of way (14%), gestures, honking (6%) etc.

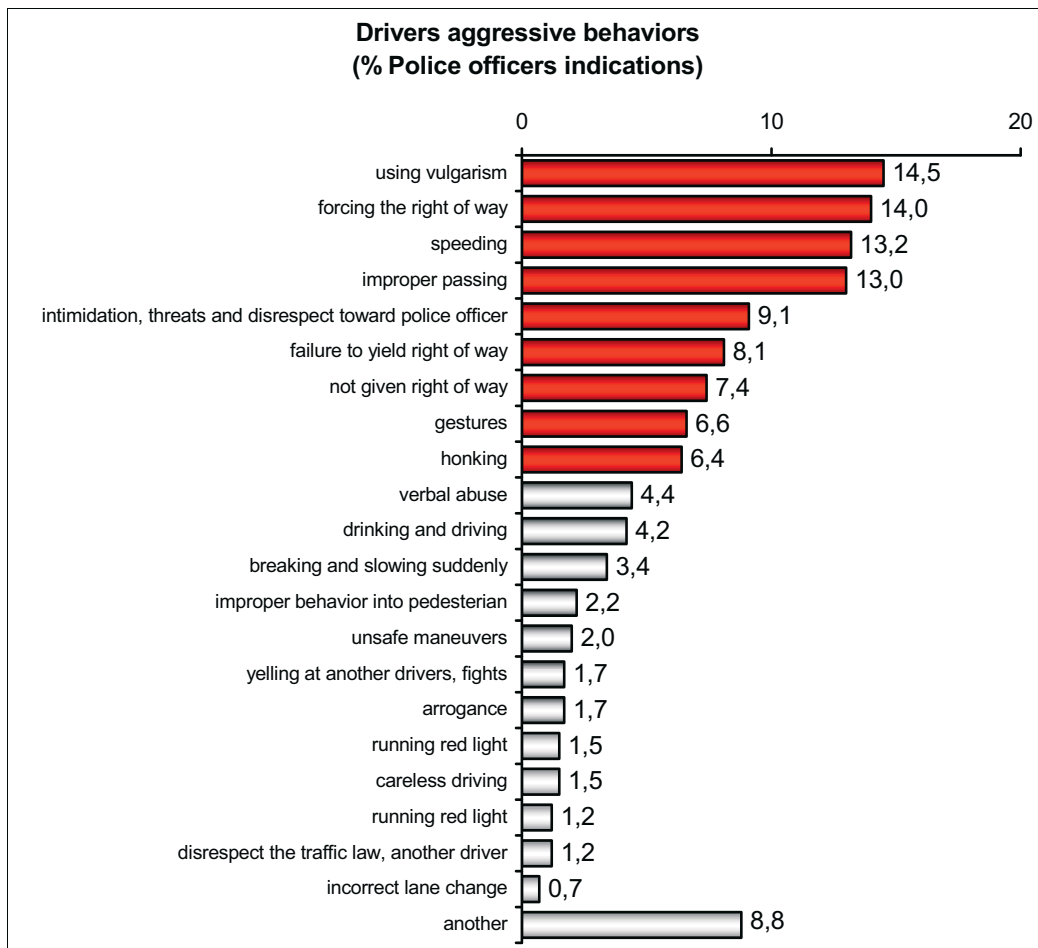


Fig. 5. Drivers aggressive behaviour on the road

### 3. Conclusions

Polish law should implement public information and driver education programs that cover aggressive driving and rage management training. Because of the consequences or potential consequences of aggressive driving it should have a high priority among law enforcement, prosecutors and judges. It should identify different groups to help educate the public and raise awareness of the aggressive driving issue, in the insurance consortiums, educators, medical community, entertainment and advertising, community - oriented policing, 18-24 years old, church and civil groups.

There is an urgent social need for increasing psychological help towards every traffic participant. Correct and safe behaviour of all road users starts with children education, continues in primary and high school. Road traffic safety depends on continuous education of habits and behaviours in all age groups, especially concerning 18-39 year group. Enhanced penalties should accompany repeat violations or those that cause serious injury or death. Conviction for an aggressive driving violation should involve a significant number of demerit points and/or a minimum license suspension.

Psychologists should take part in preparation and running re-education programs for drivers with demerit points over the limit, DWA license suspension. Transportation psychology's main target should be prevention (road accident aversion) through correct and safe behaviour popularisation. Help for road accidents victims and their families as well as for drivers who caused accidents becomes important element of transportation psychologists' activity.

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