SOME INDIVIDUAL DETERMINANTS OF BEHAVIOUR OF 18-YEAR-OLD DRIVERS DURING THE DRIVING (ACCORDING TO THE INSTRUCTORS)

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Abstract: *In this report we make an attempt to determine the views of the active and experienced instructors about the influence of personality features of 18-year-olds who train to become drivers and which have a significant influence on the style of behaviour. We make a comparative analysis of the results of similar studies by some demographic characteristics - age, location, and number of deceased or injured due to road accidents. They are analyzed the results obtained from 256 respondents from different size and geography settlements. The results are processed as we searched the influence of age and professional experience as instructors and number of inhabitants of the settlements where they practice their profession for determining the significance of features of 18-years old young people who are related to the dangerous driving. The analysis of the results shows that instructors of all age groups have ranked on first and on second place low self-control and aggression, such as a low self-control was ranked on the first place by five age groups and aggression - on the second place. The respondents based on their experience and perception have indicated the second position the aggression in men drivers, they associate it with the aggressive driving style, lack of tolerance towards other participants in traffic and non-recognition of potential risks and formation of undesirable behavioural models.*

Keywords: *personality features, aggression, low self-control, low social closeness, low traditionalism, alienation.*

1. INTRODUCTION

The analysis of road accidents shows that the factors that influence upon the occurrence of an accident can be assigned to three main groups - environment, vehicle and human factors and any possible combinations. Researches and analyzes of various incidents showed that the beneficial effects on the safety can be achieved through behavioural changes of drivers. In this report we make an attempt to determine the views of the active and experienced instructors about the influence of personality traits of 18-year-olds who train to become drivers and which have a significant influence on the style of behaviour.

We make a comparative analysis of the results of similar studies by some demographic characteristics - age, location, and number of deceased or injured due to road accidents. It is a good practice to summarize the statistics on causes of death among the highest risk groups of drivers, such statistics are made in the USA by the National Centre for Health Statistics. Vehicle crashes are the leading cause of death among people from 16 to 20 years old, according to the National Centre for Health Statistics of the United States.

Figure 1. Injured and killed men and women drivers of vehicles

The percentage of death drivers in Organisation for Economic Co-operation and Development countries also support the claim, as the mortality among young male drivers is 3 times greater than that of women. (Source: Organisation for Economic Co-operation and Development, 2006). Statistics on road accidents in Bulgaria in 2015 showed a similar trend.

Figure 2. Injured and killed drivers of vehicles (distribution by age)
(According to police reports for 2015)

The smaller number of injured and killed in the 18-20 age group can be explained due to the fact that according to Bulgarian legislation, a driving license can be obtained after reaching 18 years, and not all 18-year-olds are drivers. There is a tendency for later social maturation of young people, so some authors accept that the risk group is from 18 to 24 years old.

2. THEORETICAL TREATMENTS

When considering and explaining the behaviour of young drivers we can differentiate two main trends; the first examines and emphasizes on the learning process and the formation and development of psycho-motoric and building automated model of behaviour. The second pays attention to the personal characteristics and social conditions and factors of the future drivers and whether and how they affect their behaviour while driving. [6]

Different researchers relied primarily on three scientific theories in explaining the problems of behaviour and risks of accidents among young drivers. In the theory of problem behaviour [11], is a leading thesis of the tendency or propensity of young people to deviant behaviour, leading to a dangerous and risky driving. Such behaviour is deployed as an overall model in the individual and socio-psychological context. It is more likely such behaviour of young future drivers to be monitored when impaired interaction with older members of the family, lack of affection, social proximity and recognition of authority and other. Factors that cause deviant behaviour in young people are associated with low internal locus of control, low self-esteem and high levels of social alienation.

The second theory - for the social learning emphasizes on the impact of the environment on the human behaviour, but also according to the actions of human on the environment. For the preparation of "responsible" drivers it is important that the positive model of behaviour is supported by both: the family and the instructor and also by the community. We wish to emphasize that this theory assumes that is not enough positive reinforcement but is also necessary and internal motivation and development of self-control.

As a theoretical basis by which we can explain the model of behaviour when driving and involvement in accidents of 18-year-old male drivers, we use elements of social cognitive theory and the theory of planned behaviour. Socio- cognitive theory proposes a dynamic model of interaction and influence between behaviour, personal factors and environment, and the theory of planned behaviour [7] reveals the transformation of the behavioural intentions as a result of a personal beliefs that turn into an action plan and achieving the goals of driver training as a result of the evaluation of the behaviour and the result, as existing social norms and internal motivation for drivers to comply with laws and moral norms. A significant emphasis we put on the feeling and the degree of internal locus of control the behaviour that involves the development of self-awareness and self-assessment and self-monitoring of young drivers. This our assertion is supported by the model of Shope [15] in which behaviour, personal factors and the environment interact, ie are classified in categories the main influences on the behaviour of young drivers. From this model and our observations can be seen how wide the spectrum of situational factors that influence driver behaviour is. In his studies Gregersen [8] has set up two major categories of factors that are related to the difficulties of young drivers caused by the lack of skills and by the lack of enough own experience in driving and attitude and model of behaviour that drivers choose. Both we and the author assume that the selection of an individual model of behaviour is influenced by both sexes and emotional status. In this report we focus on the importance of individual factors related to the attitude and values system and accepting the norms of the society, that influence on the driving style and the participation of a male drivers (18 years) in a road accidents.

3. DESIGN OF THE STUDY

In the presented report we analyze the results of a survey conducted during the courses of periodic training of instructors from around the country in which were switched on the question for ranking features of 18-years old young people who are related to the dangerous driving according to the experience and perception of the trainers and number of inhabitants

of the settlements where they practice their profession. The survey was conducted through questionnaires as a part of the questions require answers for ranking according to their importance and according to personal professional and social experience of the instructors. Were analyzed the results obtained from 256 respondents from different size and geography settlements. Were included data from the survey of Varna, Veliko Tarnovo, Blagoevgrad, Yambol, Kyustendil, Lovech and Dupnitsa. The results are processed as we searched the influence of age and professional experience as instructors and number of inhabitants of the settlements where they practice their profession for determining the significance of features of 18-years old young people who are related to the dangerous driving. The data on demographic indicators were converted into results, the respondents were divided into age groups according to the classification developed by the researchers of the career Levinson (Levinson et al. 1986), Arnold and Feldman (Arnold and Feldman, 1986) and Shane (Schein, 1978) and summarized by D. Iskrev: pre-career - 15-22 years, early career - trial 22-30 years, early career - setting 30-38 years, middle career - transition 38-45 years, middle career - growth 45-55 years, later career - keeping 55-62 years, late career - discontinuance 62-70 years. According to the number of residents, cities are grouped: up to 50 000 inhabitants (Kyustendil, Lovech, Dupnitsa) to this group are 30.08% of the respondents; up to 100 000 inhabitants (Blagoevgrad, Veliko Tarnovo, Yambol) - these include 23.05%; over 100 000 inhabitants (Varna) - 46.87%.

The majority of respondents were in the age of the average career - growth (43,75%), followed by instructors - later career - maintenance (23,05%) , late career - discontinuance from active professional activity (12,5%). There is a trend that instructors remain active acting and over 62 years – they are the third largest group of the investigated. It is worrying the fact that a minimum number from the graduated young people with professional qualification "instructor" are at the stage of early career - "trial" and "establishment" and they are included in driver's training. The first two age groups (22-30 years and the 30-38 years) are only 12,89%. If we assume that the professional and social experiences are important for the enhancement of competence and the increase the effectiveness of training, the positive is the fact that the group of representatives of the average career is prevalent. The research tool contains determining the significance of features of 18-years old young people who are related to the dangerous driving, and the respondents had to rank on the first place the most significant feature of 18-years old young people according to their opinion and on 5-th place - the least important. The whole dataset is processed by software STATISTICA 7, as calculated the mode, and the median central tendency of each of the 5 assertions and was made frequency analysis of the places that received each of them. The respondents had the opportunity to mention other important features of 18-year young people that are related to the dangerous driving.

4. ANALYSES OF THE RESULTS

The analysis of the results shows that instructors of all age groups have ranked on first and on second place low self-control and aggression, such as a low self-control was ranked on the first place by five age groups and aggression - on the second place. These results are consistent with research on the Age Psychology and Psychology of Development, where the period of adolescence, to which can we incorporate the 18-year-olds is characterized by not well developed ability to assess the hazards and their consequences, insufficiently precise and objective self-assessment [4] of personal characteristics and features that are important for driving.

Figure 3. Ranking of the characteristics of 18-year-old drivers (distribution of instructors according to their age)

There is a trend in considering the behaviour of young drivers to use different age intervals, but lately are taken 18-24/ 25 years since the levels of road accidents in this group are higher. Although the 18-year-olds have adults and full legal citizens noticeable incomplete formation of value system and insufficient social maturity associated with low internal locus of control and disclaimer for the consequences of decisions taken under control, making them one of the most risk groups for possible induction and participation in road accidents. [1, 2]

The obtained results from our study that show leading position of low self-control and aggression are similar to data from studies of other researchers. Our opinion, and the opinion of respondents in interviews with them is associated with definition of the concept aggression, and aggression while driving we refer to such a driving style that knowingly endangers in some form other traffic participants. Such a definition gives Ellison-Potter, Bell, and Deffenbacher specifying that intentional aggression that endangers the other can be psychological, physical, or both. [5] During the interviews with respondents, and based on publications in the media indicate that aggression on the road is often expressed in its stronger form as fury, followed by physical violence. Studies of other researchers for the manifestation of aggression proves that drivers who [14] indicated that manifested verbal aggression and nonverbal threatening gestures is more likely to be involved in traffic accidents.

When completing the questionnaire, respondents have supplemented as personal characteristics of the 18-year-old drivers high self-esteem, self-confidence and unawareness and underestimation of risk in aggressive driving. These data support the conducted by other authors studies, that show optimistic adopting a more critical situations, be underestimated probability of negative consequences for the young driver to overestimate the degree of formed skills for independent driving, and as a consequence adopting more higher risks

when driving. Other authors have concluded that the excessive confidence of young drivers increases the ability to accept mistakes and actions of other traffic participants as more stressful and intentional that causes in them annoyance and anger. We have not found statistical data on participation or for induction of traffic accidents by drivers in this age category, which we believe is a significant gap in order to make comparative analysis and process the data for the most vulnerable groups drivers.

Psychological research with battery of tests to measure perception of risk show that scores above the norm were obtained mainly for young men, which included 18-year-olds. [17] This explains the fact that male drivers from this age group show more often in comparison with investigations of women above normal levels and there is a tendency towards durable personality trait "sensation seeking". Studies in the US through Experience sampling method (ESM) [13] again reported more pronounced emotional and mood changes, particularly related to annoyance, anger and others who are in the negative side of the scale and increase the probability of participation in road accidents and this applies to extreme positive emotions. It was validated our hypothesis that young people tend to take more risks as they seek to avoid the boredom, to experience exciting, romantic and new experiences through who want to express their own "I" and to gain recognition and increase the status among peers. [16] It was found that the aggressive driving style at young drivers is associated with certain personality characteristics as a sensation-seeking, risk-taking or use of alcohol and others. [10, 12, 14]

Figure 4. Ranking of the characteristics of 18-year-old drivers (distribution of instructors professional experience)

The respondents based on their experience and perception have indicated the second position the aggression in men drivers, they associate it with the aggressive driving style, lack of tolerance towards other participants in traffic and non-recognition of potential risks and formation of undesirable behavioural models. The culture of the community and advertised media heroes and psychological understanding of masculinity in Bulgaria as well

as in American society is associated with the manifestation of physical force, risky driving, participating in races and more.

On third place with equal values or with minor differences the respondents indicated low social closeness and low traditionalism in the group of 18-year-old drivers. The low social closeness is seen as elements relating to surveyed - adults (instructors, parents and others.). This fact has a logical explanation from a psychological perspective as young people strive to achieve more freedom for adults and significant others about them are their peers, classmates, friends, etc. During this period of their development the young people who are drivers are looking for, and want to find social closeness with representatives of his generation, as have similar and related attitudes and ideas about the hierarchy of values. This trend, however, is dangerous because the probability the peers - companions in the vehicle, to support and stimulate more extreme and risky driving is greater than if passengers are adults.

Expected are the results in ranking the low traditionalism as it is associated with the rejection of established and approved by representatives of older generations' norms and rules from the young drivers who have the opinion that most of them do not correspond to the changed conditions, to the ability of modern vehicles and their own possibilities.

A large number of scientific studies confirm the availability of companions' peers who exert pressure on the driver while driving increases the likelihood of traffic accidents. Also the research and our observations confirmed that positive effect on driver behaviour while driving can have older and experienced drivers-parents that impress with their authority.

The data analysis shows that in the opinion of the instructors low traditionalism is not listed as a leading characteristic that is a factor for more aggressive driving. Perhaps they understand that despite the desire for more freedom and autonomy, the young drivers perceive a part of the traditions and values that have formed over a long period of development of society by denying some of them and seek to establish new traditions. The respondents suggested that the low traditionalism of young drivers is connected with the dialectics of the development process of traditions, as it kept the significant values and are born the new ones that meet the needs and interests of young people.

The surveyed instructors have ranked on lower positions the alienation, as a manifestation of introspection, unwillingness for social contacts and unwillingness for communication.

The data processing in accordance with the size of the settlement, which employs the respondents' shows that in settlements of up to 50,000 inhabitants on the first place is, displayed the aggression as a feature of 18-year-olds. We can interpret this result with the presence of fewer possibilities for professional and social realization and dissatisfaction with it and search for self-expression and self-assertion through attracting the attention with risky hazard driving. Regardless of the size of the settlement another leading feature is the low self-control, which is associated with emotional intelligence and the conscious volitional efforts to manage interactions with other road users. According to the respondents 18-year-old drivers fail to master nervousness or frustration in stressful situations when driving, and hard accept the failures, are not always able to choose adequate model of behaviour depending according to the situation. Psychological characteristics of this age group of drivers are connected with a number of physiological and biochemical processes that affect the activity of the brain and lead to impulsive reactions, especially in unfamiliar or complex situations they often occur during driving. The lack of traditionalism, although occupies lower positions in ranking is associated with the dynamics of the relationships and changing of the hierarchy of values, which leads to reduction of social contacts of the young people with adults and their wish to form and join to the social community of peers. Probably due to concerns of 18-year-old drivers that cannot be represented in the best possible light and sometimes uncertainty that can cope with the changing situations can also lead to alienation.

Figure 5. Ranking the characteristics of the 18-year-old drivers in the opinion of the instructors (grouped according to the number of inhabitants in settlements)

5. CONCLUSIONS AND RECOMMENDATIONS

Based on the results and best practices in Europe could be drawn the following conclusions and recommendations:

- It is necessary to be prolonged studies through self-assessment questionnaires and interviews about the role of social influence and interaction between novice drivers and passengers in the car.
- In collecting statistical data on the causes of the traffic accidents to differentiate a special group of young drivers males 18-24 years, and for women drivers. On the base of obtained data to develop number of new policies to reduce the risk of road accidents.
- In addition the measures to improve safety among this group of drivers to update the content, forms and methods of preparation not only in basic training, but also after the obtaining of a license in order to preserve the lives of young people.
- To move to a multi-phase model of training, and additional courses to improve driving skills in the first months of independent driving.

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