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R E V I E W

by Prof. DSc Antoineta Hristova

on the competition for the academic position of "associate professor"

by professional direction 3.2. Psychology (Transport Psychology) for the needs of the "Personality Psychology and Cognitive Psychology" section, on the basis of Art. 4 and Art. 25 of ZRASRB, art. 28 par. 1, 2, 3 and 4 of the Regulations on the terms and conditions for holding an academic position at the Institute of population and human studies - BASc and in accordance with the decision of the SC of the IPHS – BASc and protocol No. 5 of 19.07.2023

Only one candidate took part in the announced competition for the academic post of associate professor for the needs of the "Personality Psychology and Cognitive Psychology" section at the Institute for population and human studies of the Bulgarian Academy of Sciences - Assistant Professor. Zornitsa Totkov.

Since 2012, the candidate's professional development has been linked to Transport Psychology. Initially in practice as a psychologist DZZD Reflex Astarta, where he daily conducts psychological research necessary for professional drivers to acquire a category and exercise the activity, checking and analyzing results and concluding on the psychological fitness of individuals. Zornitsa Totkova is defending her doctoral thesis at the Institute of population and human studies - BAS and since 2015 has been a senior assistant at the same institute, where she is part of the team of a project to develop methodologies for assessing the professional suitability of professional drivers and develops her skills as a researcher.

In order to acquire the academic position of "Associate Professor", Zornitsa Totkova submitted a basic habilitation thesis "TRANSPORT PSYCHOLOGY: PERSONALITY AND DRIVING BEHAVIOR", which is a natural continuation of her previous research work on the issue. If we exclude the beginning of research on the problem in the 70s of the 20th century,

there is no academic development of the field, and it can be said that the author is reviving and placing in the research field this very significant problem area.

The presented monograph examines driving behavior in Bulgaria, emphasizing the role of personality and driving style. The research conducted and the results presented by them manage to identify some of the personality factors of dangerous drivers and their driving style, which is of utmost importance for a better understanding of the psychological aspect of the reasons that lead to various negative results from the process of driving. The monograph is the first modern scientific development in our country on transport psychology and opens doors to a little-studied field of psychological science in our country, laying good foundations for subsequent research in the field.

The text covers 175 pages, organized into three chapters, which cover the research problem logically and well systematized. 316 literary sources are included, of which 5 are in Bulgarian. The latter is sufficient evidence that the topic is not advocated in the Bulgarian research field.

The importance of the problems related to road transport accidents is daily visible without any effective attempts to deal with them. The absence of institutional measures is a sign of the absence of evidence-based policies, namely the use of systematized knowledge in the noted problem area. The monograph is the first, in my opinion, successful attempt to systematize and present a work that would present not only the experience in different countries, the modern research in the field of transport psychology, but also current, significant research carried out by the assistant professor. Totkova. The monograph provides an opportunity not only for the colleague to specialize in this modern, significant, scientific-applied field of psychology, but also to establish transport psychology as a research field at IPHS-BASc.

The first chapter presents the nature of transport psychology as a discipline, as well as some of the problems it faces today. Classic research models in transportation psychology are reviewed and classified according to the research focus at their core. Some of the modern research models are also presented, which gives clarity regarding the searches of researchers these days and the direction in which studies have taken in recent years. The chapter briefly presents the state of transport psychology in Bulgaria, the main areas of its application in our country and the possibilities for the development of the discipline. It would be good in the

subsection on transport psychology in Bulgaria to include a more specific critical analysis of the problems of the direction in our country, based on the comparison with good practices in other countries.

The second chapter is devoted to two empirical studies on driving behavior in our country. The first study presented analyzes the influence of some personality factors related to dangerous driving behavior by tracking individual differences in terms of negative driving outcomes. In addition, driving behaviors, which represent established habits known in world science as driving styles, are also the focus of researchers. This direction of research is the basis of the second study, the main objective of which is to present the driving style construct, some personal factors that influence its formation and follow the relationship and influence of the constructs on negative driving results. The contribution of the monograph lies in the research conducted and presented in this chapter.

Chapter three examines the subjective assessment of compliance with road traffic rules and its relevance to negative driving outcomes. The results of two studies on the subjective assessment of compliance with road traffic rules are presented and its relationship with the commission of violations and involvement in traffic accidents is analyzed. The third chapter provides a profile of the dangerous driver in Bulgaria, summarizing all the results obtained from the conducted research. Personality factors and driving styles directly related to negative driving outcomes are summarized and demographic characteristics of dangerous drivers are outlined in terms of gender, age and experience. The created profile of the dangerous driver is a summary that enables a quick transition of the research to a specific practice aimed at counseling the road transport problems related to their main factor – the person on the road.

I would like to especially emphasize the excellently developed methodological tools, as well as the correct statistical processing, which shows a professional approach and skills.

The presented monograph, along with other articles and studies in the field of transport psychology, outline serious scientific and scientific-applied contributions, in addition to the above-mentioned resumption of research in this scientific field. The contributions can be summarized as follows:

1. Research contributions:

- The influence of factors such as anxiety, sensation seeking, anger while driving, aggressive and risky driving behavior, impulsivity and locus of control on negative driving outcomes related to registered violations of traffic rules, revocation of driving licenses was tracked driving a motor vehicle and participating in traffic accidents.

- Cognitive factors related to the driving process such as attention, memory, executive functions, visual-spatial orientation have been studied with new methods and reliable methods for their assessment have been developed.

- A definition of the psychological construct driving style was derived and eight driving styles in Bulgaria were outlined.

2. Applied contributions:

- The profile of drivers with dangerous driving behavior is outlined (registered violations, revoked driver's license and participation in road accidents), and the characteristic personal factors, demographic factors and driving styles are inferred.

- The subjective assessment of compliance with traffic rules has been inferred as an indicator of dangerous driving behavior, as it has been shown to be associated with breaking the rules and being involved in traffic accidents.

- Possibilities for practical application of the conducted research are proposed in the form of information campaigns, preventive programs in the form of training aimed at different groups of drivers and interventions aimed at drivers with established risky behavior on the road.

3. Methodological contributions:

- Methods for reliable assessment of personal factors related to dangerous road behavior and driving style in Bulgaria have been created and adapted.

On the subject of the announced competition, 30 publications (author's and co-author's) are presented, of which: 1 scientific monograph in Bulgarian; 1 book based on the defense of a dissertation for the award of an educational and scientific degree "Doctor" in Bulgarian; 4 scientific articles in English, referenced in global databases; 3 studies, 2 of which in English, published in non-refereed journals with scientific review and in edited scientific volumes; and 21

scientific articles, of which 1 in English, published in non-refereed peer-reviewed journals and edited scientific volumes.

The scientific works presented cover the period after 2012 and can be summarized in the following directions: I. Transport psychology; II. Developmental Psychology; III. Child and adolescent psychology.

The presented scientometric data correspond to the minimum requirements, which confirms the fulfillment of all the conditions for occupying the academic position "associate professor".

In addition to publishing activities, Zornitsa Totkova is the head of scientific projects with significant contributions:

Personality and risky behavior on the road

The main scientific contributions of the project are in the created reliable methods for assessing personal factors that are relevant to driving behavior and establishing their influence. In practical terms, the main contribution is the derived profile of drivers with actual risky behavior on the road according to their manifestations (registered violations and participation in road accidents). These results are a good basis for developing programs for the prevention of risky behavior on the road with an emphasis on the personality of the driver, as well as intervention programs aimed at drivers who are found to be offenders and/or involved in road accidents.

Driving style and risky behavior on the road

As a result, a methodology for assessing the driving style in Bulgaria (MDSI-BG) was constructed and adapted, the driving styles of the drivers in our country were identified and the relationship of the construct with certain personal and demographic characteristics was clarified. The obtained results have their benefits both in scientific and practical terms. The derived definition of driving style and the adapted methodology lay a good foundation for future studies in this area. In addition, driving styles characteristic of Bulgarian drivers are outlined and the relationships with the actual risky behavior on the road, as well as with some demographic (gender, age, education) and personal factors (impulsivity and locus of control) are analyzed. In

practical terms, the research allows work in the direction of preventive programs and interventions directly related to driving style in the form of different training modules. In conclusion, the Project has its contribution to the development of transport psychology in our country.

Driving anger, the role of emotion regulation, and the relationship to actual risk-taking behavior on the road

The project "Anger while driving, the role of emotional regulation and the relationship with actual risky behavior on the road" is implemented for a period of 36 months in the period 2022-2025. The project is led by Ch. Zornitsa Totkova, assistant professor, and a member of the team is ch. Assistant Professor Rositsa Racheva, PhD. The main purpose of the study is to conceptualize and explore the construct of anger while driving, delineate the role of emotional regulation and the relationship with actual risky behavior on the road.

Zornitsa Totkova is an active member of the interinstitutional council on road safety.

She is a scientist who received a nomination for a competition for young scientists "prof. Marin Drinov" for 2019 of the Bulgarian Academy of Sciences, award for achievements of a young scientist in the field of psychology for 2018. Institute for Population and Human Studies, nomination in a competition for young scientists "prof. Marin Drinov" for 2017 of the Bulgarian Academy of Sciences, nomination in the competition for scientific achievements in dissertations for 2015 of the Union of Scientists in Bulgaria.

The scientific production, creative activity and professional qualities of the assistant professor Zornitsa Totkova fully correspond to the criteria approved by the Law and imposed in the scientific field for the occupation of the academic position of "associate professor". In my capacity as a member of the Scientific Jury under the present procedure, I declare that I will vote "YES" for awarding the chief assistant. Zornitsa Totkova in the academic position of "associate professor" in the field of higher education 3.2. Psychology (Transport Psychology).

15.09.2023

Prof. DSs Antoaneta Hristova