

## REVIEW

By Prof. Vihra Krumova Milanova MD, PhD, Head of Psychiatric clinic at University Hospital "Aleksandrovska", Sofia, Member of the Scientific Jury under order No. R-109-270/25.05.2023 of the Rector of the Medical University – Varna regarding competition for the academic position of professor in the field of higher education 7. Health care and sports, professional direction 7.1. Medicine, scientific specialty Child and Adolescent Psychiatry. Candidate (single): Associate Professor Petar Milchev Petrov, MD, PhD.

### **I. Professional Development**

Assoc. Dr. Petar Petrov graduated from Mathematical Highschool, Varna, and higher education at the Medical University of Varna, Varna in 1989. After completing higher education, he worked as a doctor, a consultant in a pharmaceutical company, and a general practitioner until 2004. During the period from 2004 to 2008 he worked as a psychiatrist, from 2008 until now he has been successively head of the department and head of the Clinic for Child and Adolescent Psychiatry at the University Hospital "St. Marina", Varna. Since 2013, after passing a competitive exam, he has been selected as an Assistant Professor in the Department of Psychiatry and Medical Psychology at the Medical University - Varna. In 2012, he defended his doctoral thesis on the topic "Research of children with Attention Deficit Hyperactivity Disorder" to obtain the scientific and educational degree "Doctor" in the scientific specialty "Psychiatry". In 2015, he was elected Associate Professor of psychiatry and medical psychology. As a continuation of the first dissertation, the topic of the second dissertation work for obtaining the scientific degree "Doctor of Medical Sciences" is "10-year prospective follow-up of children with Attention Deficit Hyperactivity Disorder in Varna region" (2018). Assoc. Prof. Petrov has acquired specialties in "Psychiatry" (2000-2004), in "Child Psychiatry" (2008-2010), and "Forensic Psychiatry" (2014-2016).

Assoc. Prof. Petrov is a member of the Bulgarian Medical Association, the Bulgarian Psychiatric Association; is the president elected of the Bulgarian Association of Child and Adolescent Psychiatry and Allied Professions. Fluent in English - written and spoken.

### **II. Teaching activity**

Assoc. Prof. Petrov's study load for the period 2018-2022 is between 114-189 hours per year (normative for Medical University, Varna - 110 hours). His teaching activities include teaching psychiatry and child psychiatry to students from the Faculty of Medicine - lectures, seminars, exams, teaching and conducting colloquiums and seminars for specialists in psychiatry, child psychiatry and forensic psychiatry. Teaches foreign students in psychiatry - lectures and seminars. Participates in the author collectives of four textbooks on psychiatry. He was a member of a scientific juries and a reviewer of dissertation works. Supervisor of three doctoral students who have successfully defended their dissertations and two more doctoral students are in process of training in child psychiatry.

### **III. Scientific activity**

#### 1. Quantitative scientific indicators

The overall scientific activity of the candidate includes a total of 57 scientific works, of which: 2 independent monographs in Bulgarian; participation in 4 textbooks in Bulgarian with 10 chapters; 51 scientific papers. 29 were written in Bulgarian, 13 in English. He is the lead author in 12 of the scientific publications and in 6 of the chapters of the textbooks; participation in national and international congresses and conferences with 10 publications. The scientific directions of the published scientific works are in 5 scientific fields.

Most of the articles were published after the habilitation. A fact that proves that Assoc. Prof. Petrov's scientific activity and productivity continue to be very high even after habilitation. The relative share of his participation in the peer-reviewed publications is indicated by the fact that in most of them he is the lead author - first or second author. After his habilitation, there are also the publications in scientific journals with IF. According to the academic reference and information from Google Scholar databases, the number of citations to date is 340, h index is 10.

#### 2. Quality scientific indicators

The thematic distribution of the actual publications that the applicant makes is as follows:

1. Attention Deficit Hyperactivity Disorder (ADHD)
2. Eating disorders in children and adolescents
3. Multinational studies of certain problems in child and adolescent age in the general population
4. General presentation of the features in the field of child psychiatry
5. Others

## **ADHD**

In this section, the author presents two dissertations and has 8 scientific publications. Both theses of Associate Professor Petar Petrov are related in topic and are dedicated to the most common behavioral disorder in the field of child and adolescent psychiatry. The first dissertation presents the results of an epidemiological study on the prevalence of Attention Deficit Hyperactivity Disorder, which is the only one so far conducted in our country. The second dissertation is a continuation of the first - 10-year follow-up of patients and is devoted to the risks of late consequences of the untreated disorder.

In the peer-reviewed publications, a special place is devoted to the problem of timely diagnosis and development of a therapeutic approach in cases of ADHD, in order to avoid the late consequences, which have a serious social and economic burden. The importance of the problem is also indicated by the fact that international meetings and discussions are held every year in order to prevent the late consequences, for which the society pays a huge price.

## **Eating disorders in childhood and adolescence**

In this section, 5 scientific publications and one monograph are presented. One of the critical periods in human development is adolescence, when adolescents are most vulnerable and is a time when eating disorders can develop. Although data from recent years show a decrease in the death rate from anorexia nervosa, this death rate remains the highest among all psychiatric disorders. Knowing the factors for the development of eating disorders, as well as the active search for concomitant suicidal and non-suicidal self-injurious behavior, significantly improves the chances for timely diagnosis and therapeutic success. In recent years, a significant lowering in

the age of onset of eating disorders has been reported, with the youngest diagnosed patients in our country being only 10 years old.

The monograph of the candidate, which is also a habilitation thesis, focuses on standardized tools for the assessment of eating disorders in children and adolescents, as well as results of own studies of patients in this age group. The author has dedicated a special place to personal experience from clinical practice, work with children and their parents, some cultural characteristics and the search for help by parents.

As a significant contribution to the diagnosis of eating disorders, the performance of modern assessment tools can be assessed: EDI-3 (Eating Disorder Inventory (EDI-3)) (Garner DM, 2004) and the Bulgarian version of the Eating Disorder Inventory – third revision (Bulgarian version (Garner DM, 2020)) which was used multi-staged on all patients with evidence of eating disorders from the counseling period, through the treatment stage, to patient follow-up. The EDI-3 is a self-report questionnaire that captures the psychological traits and constructs associated with the development and maintenance of eating disorders.

The EDI-3 consists of 91 questions. In addition to the rating scales, there is also a patient information section where data on current weight and body mass index (BMI), past weight, history and amount of weight loss, and more are obtained. The instrument has been validated and standardized for Bulgarian population, and the obtained results on scales are comparable to the norms for the respective age and gender.

The processing of the data obtained from the questionnaire can also be carried out electronically (examinea.com), which greatly facilitates the process, especially when accumulating a larger amount of primary information, and also gives a very good graphical representation of the results. In the observation analyzed by Assoc. Prof. Petrov, mainly teenage girls of Bulgarian origin were included.

The percentage of other ethnicities in the clinical population is significantly lower than their percentage representation in the country's general population, and there is not a single female patient of Roma origin. Male adolescents are less than 10% studying in "elite" schools. It is usually about the most prestigious lower and secondary educational institutions according to the

place of residence, with high intelligence. The author has paid special attention to risk factors, such as perfectionism, self-criticism/low self-esteem, experienced violence in childhood, significant disruption in family interactions, ballet, gymnastics or athletics workouts (not even at a professional level), overweight as a premorbid condition.

Assoc. Prof. Petrov has presented the modern understandings regarding eating disorders in children and adolescents - the views on etiology and pathogenesis, the data on epidemiology, the evidence of the presence of risk factors, the most common triggers for the disorder, as well as some high-risk concomitant conditions .

### **Multinational studies of certain problems in childhood and adolescence in the general population**

Ten scientific publications in English in respected journals are presented here. The articles are part of international projects in collaboration with the ICMH Study Group (<https://www.icmhsg.org/index.php/publications/>) and involving 10 countries. The author's first monograph, as well as 1 publication in Bulgarian, are related to the mentioned research.

Research conducted in the general population is labor intensive and requires effort and resources. The participation of more countries also allows for cross-cultural comparison. Research within the framework of international cooperation includes topics such as:

- The relationship between Locus of control, negative life events and the manifestation of psychopathological symptoms in adolescents
- The relationship between Locus of control, exposure to cumulative traumatic events and post-traumatic stress symptoms in adolescents
- The relationship between alcohol and substance use and quality of life in adolescents
- The role of personal and family factors in the use of alcohol and drugs in adolescents
  
- Transcultural features in the use of some screening tools in a general population of adolescents were also the subject of research. The use of screening protocols in childhood and adolescence provides an opportunity for prevention and early diagnosis of mental disorders.
- Strengths and Difficulties Questionnaire

- Adolescent Self-Report on the Pediatric Quality of Life Inventory
- Revised Child Anxiety and Depression Scale
- ESSENCE-Q: Slavic language versions for developmental screening in young children
- UCLA PTSD reaction index for DSM-5 (PTSD-RI-5)

### **General presentation of the specifics in the field of child psychiatry**

Seven scientific publications and four textbook chapters are included in this scientific direction. Various aspects of child-adolescent psychiatry are examined - from its presentation as a separate specialty with its peculiarities in various study manuals for students, to more specific problems related to disease manifestations, such as neurodevelopmental disorders, anxiety and depressive symptoms in childhood and adolescence, non-suicidal self-harm in adolescents, adolescent alcohol and substance use.

### **Others**

Scientific publications dedicated to general psychiatry and forensic psychiatry are included in the scientific direction "Others". Topics related to clinical pathology of severe mental illnesses - schizophrenia, affective disorders, suicide, interdisciplinary problems in somatic diseases - oncological, rheumatological, COVID.

### *Summary*

Associate Professor Petar Petrov's research is at a high scientific level, distinguished by in-depth analysis and discussion of the results. The quantitative evaluation and the qualitative analysis of the publications in which the works of Assoc. Prof. Petrov are cited show that his scientific developments are current, significant and resonate in Bulgarian and international journals. The diverse topics included in the scientific publications show a significant breadth of the author's scientific interests both in the field of child and adolescent psychiatry, general psychiatry and forensic psychiatry. Participation in international research teams provides significant advantages in using standardized assessment tools and obtaining results that are comparable to results obtained by other author groups.

#### **IV. Therapeutic and diagnostic activity**

Associate Professor Petar Petrov is the head of a university clinic for child and adolescent psychiatry, with three clinical specialties. His interests are in the areas of child and adolescent psychiatry, clinical psychiatry and therapy. He successfully uses modern clinical methods for diagnosis and treatment in his daily practice, has special interests in the field of eating disorders - diagnosis, prevention, therapy; ADHD. He also actively applies psychological methods to assess the mental state, various psychological and psychotherapeutic methods. His medical skills are also highly valued by his colleagues. He is a responsible, ethical colleague, willing to pass on his knowledge and experience to the doctors in training.

#### **Conclusion**

The analysis of the presented materials shows that the candidate, Associate Professor Petar Petrov, PhD, fully meets the requirements for the academic position of "Professor" in the specialty "Child Psychiatry" at the Medical University, Varna, according to the Law on the Development of the Academic Staff in the Republic of Bulgaria, the regulations of Medical University – Varna and the Qualitative criteria for the development of the academic staff. Bearing in mind the above, I strongly recommend to the honorable members of the scientific jury to elect Associate Professor Petar Milchev Petrov as a professor of "Child Psychiatry" at the Department of Psychiatry and Medical Psychology, Medical University, Varna and for the needs of the Fourth Psychiatric Clinic at University Hospital "St. Marina" - Varna.

Reviewer:



Prof. Vihra Milanova MD, PhD

4.08.2023